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Research Article

Effectiveness and Community Based Organization of Fish Processors in Kogi State, Nigeria

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Abstract

The study examined the Effectiveness and Community Based Organization (CBOs) of Fish Processors in Kogi State, Nigeria. The specific objectives were to describe socio-economic characteristics of the fish processors, determine the factors influencing the effectiveness of CBOs in the study area, and identify constraints faced by fish processors in the study area. Multi-stage sampling technique was used to select 192 fish processors. Data were collected using questionnaires and interview schedules, and analysis was done using descriptive statistics and probitregression model. Results revealed that fish processing is a female dominated business in the study area and average household size was 4, motorable roads and household size had significant and positive influence on the effectiveness of CBOs activities. Some of the constraints faced by the respondents were inadequate capital (86.5%), unavailability of loan (68.8%) and high cost of transportation (41.7%). Based on the findings of the study it is recommended that money lending institutions should assist the CBOs by providing them with loans so as to support and empower them.

Keywords: Effectiveness, Activities, Constraints and Fish Processors

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Introduction

Community Based Organization (CBO) came into being as a result of inability of government in meeting the socio-economic needs of its citizen (Claudia, 2003). They are non-profit and non-governmental organizations because all members contribute economically towards the fulfilment of their responsibilities to the immediate environment and not depend on government solely before fulfilling these (Claudia, 2003). Fish processors also are members and most time depend on the effectiveness of their CBOs for progress. Fish is very rich in protein but has high rate of deterioration (Abowei, 2011). Most of the fishing communities in Nigeria are located at the coastal areas of the south, numerous rivers also are found in the hinterland where fishing activities

take place. These areas are usually far from the city centres where there are ready market and storage facilities. Fish processor cooperatives are viewed as possible solution to the problems of fish processing and maintaining equity in small scale fishing community (Abolagba and Akise, 2011). Adamu *et al.* (2005) reported that community Based Organizations in Nigeria includes town unions, women association, peer groups, credit groups, social clubs and committee of friends. Community developments is now recognized as an educational process in which groups of people, through the initiative and prompting of an internal or external leadership cadre, organize themselves, identify their development priorities and determine their strategies for meeting the needs identified (Adamu *et al.*, 2005) reported. CBOs

are seen as voluntary, non-profit, non-governmental and highly localized or neighbourhood institutions whose membership is placed on equal level and whose main goal is the improvement of the social and economic wellbeing of every member (Abegunde, 2004). It has been established that multinational companies and local governments assist in grassroot development and reduction of poverty, but the contribution of Community Based Organization (CBOs) seem not to have attracted much scholarly attention. This neglect if continued will make the communities lose contribution of CBOs in grassroots poverty reduction.

Arua (2004) viewed CBOs as an important tool of improving condition of farmers. According to Bhuyan (2007). CBOs are specially seen as significant tools for creation of jobs and for the harnessing of resources for income generation. Levis (2007) reported that CBOs employed more than 100 million men and women worldwide. In Nigeria, CBOs provide locally needed services, employment and input to farmers. CBOs also provides opportunities for farmers to organize themselves. Nweze (2002) said that cooperative societies serve as a medium for input distribution. Through their nationwide structure, they have developed a strong and reliable arrangement for the distribution of food crops, fertilizers, agro-chemicals, credits, seeds and seedlings. A study conducted by Abegunde (2004) on the activities of the CBOs in Atiba Local Government Area of Oyo State, Nigeria revealed that there were about 160 CBOs in the area. About 40% of these CBOs provided social facilities worth 17.56 million naira to their immediate community. In the same light, CBOs in the State were said to be economically buoyant enough to have constructed access roads within neighborhoods, built schools and health centres, provided potable water and saw to the general welfare of their members without government's assistance (Adejumobi, 1991). This study therefore aimed to evaluate the socio economic characteristics of fish processors, effectiveness of CBOs and constraints faced by fish processors in Kogi State, North Central Nigeria

Methodology

The research was carried out in Kogi State,

Nigeria. The study employed a multi-stage sampling technique. In the first stage, one Local Government Area (LGA) was purposively selected from each of the four agricultural zones (A, B, C and D) due to their high level of involvement in fish processing activities and the list was obtained from Kogi State Agricultural Development Project. In the second stage, four communities were randomly selected from each of the selected LGAs, giving a total of 16 communities. The communities include Aguda, Lokoja, Ajakuta and Abuyim from zone A, Shintaku, Ikende, Bagana and Kanga from zone B, Koton-Karfe, Giryra, Edeha and Gemata from zone c and Idah, Odekeafam, Alloma and Itobe from zone D. In the third stage, from a sample frame of 370 processors, a sample size of 192 fish processors was determined proportionately using Yamane's formula (1997):

$$n = \frac{N}{1+N(e)^2}$$

Where:

n = sample size

N = finite population

e = limit of tolerable error (level of significance = (0.05)

1 = constant

The primary data were obtained using questionnaire and interview schedules. The data collected were on socio-economic characteristic of the respondents (age, sex, level of education, size of family, years of processing experience, and membership of co-operative society) and constraints faced by the fish processors. Data were analyzed using descriptive statistics and probit model. Effectiveness of Community Based Organizations activities was measured using 3 point Liket rating scale of very effective=3, effective=2 and not effective=1. Based on the Liket scale, score < 2 was considered ineffective while score ≥ 2 was considered effective. While Probit model was used to analyze factors influencing the effectiveness of CBO's activities. The dependent variable which is the effect of CBOs (y) assumes only two variables: 1 if CBO is effective and 0 if CBO is ineffective.

Model Specification

The model is implicitly specified as follows:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, e_i)$$

However, the Probit model can be explicitly expressed as;

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e_i$$

Where:

Y = Effect of CBOs on the fish processors (effective = 1; ineffective = 0)

X₁= Access to motor able road (Yes=1, No=0)

X₂= Distance from CBOs (km)

X₃= Household size (number)

X₄=Annual income (₦)

X₅= Membership of association (male=0, female=1, adult=2, old=3, all=4)

X₆=Educational level ((years)

e = error term.

b₀ = constant/intercept

b₁-b₆ = regression coefficient

e = error term

Results and Discussion

The result of socio economic characteristics of the fish processors in Table 2 shows that the mean age of all the fish processors was 40 years implying that fish processors are in their most active and productive age. This implies likelihood of active participation in their various organizations. This result is in line with the findings of Komolafe (2012) who reported that majority of the fish processors in Obatoko were within the age of 30-40 years, and that all the sampled fish processors in the study area were female. The higher proportion (100%) of female in fish processing activities in the study area indicated that the business is gender biased and sensitive. The result is also in line with the findings of Komolafe (2012) who reported that all the fish processors in Obatoko were female. Majority (81.3%) of the fish processors were found to be married, 13.5% were widow, 3.6% were single, and 1.6% were separated. The highest percentage of the married fish processors could be as a result of the active age range of between 41-50 years of the majority of the respondents. The result is in consonance with the findings Olapade (2012) who revealed that majority of fish processors in Asejire were married. All the fish processors sampled had one form of education or the other (i.e informal and formal). Majority (58.9%) of the fish processors had Quranic education, 20.8% had primary

education while 20.3% had secondary education. This implies that majority of the fish processor have low level education. This finding agrees with that of Ibrahim *et al.* (2011) who reported low level of education among the fish processors. The finding is also supported by Aqeela *et al.* (2005) who reported that two third of the one billion illiterate persons in the world are women and girls. The mean household size of the fish processors was 4. The result suggests that the fish processors have small family sizes, which is in line with Komolafe (2012). It further revealed that the mean year of experience for the fish processors is about 18 years, which implies that fish processors in the study area are well experienced, thus they have adequate knowledge of fish processing activities. Olapade (2012) had earlier reported that fish processors have experience of between 6-15 years.

More so, Table 2 shows that majority (64.1%) of the fish processors had their capital through personal savings, 27.1% got their capital through friends while 8.9% got from CBOs. The result is supported by Olaolu *et al.* (2013) who reported that personal saving and cooperatives were the predominate sources of funding for food crop and livestock farmers. Akinleye (2013) also reported that fish processors had no access to bank credit. The inability of fish processors to borrow money from the bank may be attributed to the problem of collateral security and other bottlenecks. The mean amount of credit received by fish processors was ₦30, 177.08. This implies that the respondents received low credit from organizations and inadequate amount of loan granted to the respondents can lead to loan divert or limit their ability to finance their business plans thereby affecting their output and productivity negatively. This result is in accordance with the findings of Victor and Ineye (2011) who reported that farmers who receive less than ₦40, 000 as credit tends to divert the fund for other purposes while International Fund for Agricultural Development (IFAD, 2010) reported that women received less than a tenth of the credit received by men. Table 3 reveals the distribution of fish processors according to the effectiveness of the CBOs activities on them. Majority (309) of fish processors perceived credit as the most effective activity of CBOs in the study area with a mean

score of 2.57. Also, shops provided by the organizations were perceived as effective by fish processors. The shops provided by the organizations are located by the road side and at strategic places that can easily attract customers. Processing equipment with a mean score of 2.18 was also perceived to be effective by the fish processors. Furthermore, marketing information which gives fish processors information about the market was also perceived to be effective by them (fish processors). This result is in accordance with the finding of Adeyemo, (2010) who reported that access to information is one of the benefit of being a member of an organization. Training which gives fish processors opportunity to learn and do new things was not perceived to be effective by the fish processor in the study area. The reason could be that the training does not meet the needs of the fish processors. According to Table 3, access to motorable road was positive and significant at 5% (1.72) and has effect on CBOs activities. This implies that motorable road helps to increase CBOs activities as the CBOs find it easy to move about. The result agrees with that of Tunde and Adeniyi (2012) who reported that motorable roads do not only have impact on development of agricultural production but also on the socio-economic development of the people in all communities. Also, household size was positive and significant at 5% (2.33) which implies that increase in household size helps individuals to participate more in CBOs activities. The result is in agreement to the findings of Imohet *al.* (2009) who revealed that community members with small household size will participate more effectively in CBOs than those with large households because of the heavier burden of household activities. Furthermore, education had negative and significant effect on CBOs activities. This implies that there will be less participation in CBOs activities from fish processor as the level of their education increases. It is assumed that as the fish processors get more educated, they tend to leave the business for white collar jobs. The result is in disagreement with the findings of Nwaru (2004) who reported that education and training produce labour force that is mobilized, more skilled, amenable to risk taking, and adaptable to the needs of changing economy. The marginal effect further explains the

contribution of each variable to the over-all model as presented in Table 4. Motorable roads and household size were positive and contributed 33.2 % and 21.8% to the model respectively, while educational level was significant but negative and contributed 21.5% to the model. Table 5 reveals the distribution of fish processors according to constraints faced. The constraints encountered by fish processors among others were inadequate capital (86.5%), high cost of transportation (41.7%), time spent in processing (34.9%) and adequate attention needed during fish processing (30.2%). In ranking order, inadequate capital ranked 1st which suggest that majority (86.5%) of the fish processor in the study area lacked adequate capital to carry out or expand their businesses. Furthermore, unavailability of loan ranked 2nd and this might be attributed to the unwillingness of financial institution to grant loan to fish processors due to lack of collateral. The result is in line with the findings of Ibrahim *et al.* (2011) who reported that lack of collateral to obtain bank loan is one of the problems of fish processor in the study area. More so, high cost of transportation ranked 3rd this is probably due to the fact that most of the fish processors in the study area reside in the rural areas and will have to transport themselves to major road sides or township market in order to sell their products. Smoke pollution ranked 4th in the ranking of order of problems faced by the fish processors. Smoke pollution resulted from fish processor often cause redness/swollen of the eyes. Time spent in processing fish ranked 5th. This might be attributed to the fact that most fish processors still use the traditional method, in processing their fish. The identified constraints are in line with the findings of Oluwatoyin *et al.* (2010) who reported that processors in South-Western Nigeria identified unavailability of capital (86.5%), high cost of transportation (41.7 %) and smoke pollution (37.0%) as some of the constraints confronting them. Other constraints identified were adequate attention needed in fish processing (30.2%), high perishability nature of fish (25.5%) and high cost of fish (5.2%).

Conclusion and Recommendations

The study concludes that fish processing is a female dominated (100%) business in the study

area and had a mean household size of four. Access to motor able road and household size do influence effectiveness of CBOs in the area. Constraints faced by fish processors include inadequate capital (86.5%), unavailability of loan (68.8%) and high cost of transportation (41.7 %).

- i. Rehabilitation of feeder roads as well as construction of new ones should be embarked upon by both government and non-governmental organizations in order to aid easy movement of people and goods in the study area.
- ii. The CBOs should be supported and strengthened by government for effectiveness and wide coverage of more fish processors.
- iii. Improved processing equipment if made available, could boost their members' business while reducing poverty and pollution by smoke

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Zones(n)	Name of Communities	Local Government Area	No of members in each cbo (sample frame) (n)	Sampled fish processors
A-AIYETORO	Aguda	Ofu	30	67
	Lokoja	Lokoja	50	
	Ajakuta	Ajaokuta	30	
	Abuyim	Lokoja	20	
B-AYANGBA	Shintaku	Bassa	20	52
	Ikende	Omala	40	
	Bagana	Omala	20	
	Kanga	Kogi	20	
C-KOTON-KARFE	Koton-Karfe	Kogi	20	42
	Girya	Kogi	20	
	Edeha	Kogi	20	
	Gemata	Lokoja	20	
D-ALLOMA	Idah	Idah	30	31
	Odekeafam	Ibaji	10	
	Alloma	Ofu	10	
	Itobe	Ofu	10	

Table 1. Distribution of Fish processors in the study area

TOTAL	370	192
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Table 2. Socio-economic characteristics of fish processors in the study area

Variables	Frequency	Percentage	Mean
Age			
11-20	3	1.60	39.83
21-30	34	17.70	
31-40	59	30.70	
41-50	75	39.10	
>50	21	10.90	
Sex			
Female	192	100	
Total	192	100	
Marital status			
Single	7	3.60	
Married	156	81.30	
Widow/Widower	26	13.50	
Separated	3	1.30	
Total	192	100	
Level of Education			
Quranic	113	58.90	
Primary	40	20.80	
Secondary	39	20.30	
Total	192	100	
Household size			
0-5	148	77.10	3.84
6-10	44	22.90	
Years of Experience			
1-5	10	5.20	17.46

6-10	40	20.80	
11-15	47	24.50	
16-20	37	19.30	
>20	58	30.20	
Total	192	100	
Sources of capital			
Friends	52	27.10	
Personal saving	123	64.10	
CBOs	17	8.90	
Total	192	100	
Amount of credit received			
0-25000	80	41.70	30177.08
26000-50000	112	58.30	
Total	192	100	

Source: Field survey, 2015.

Table 3. Effectiveness of Community Based Organizations activities

CBOs activities	Very effective	Effective	Not effective	Mean Score	Remark
Training	49(147)	56(112)	87(87)	1.80	NE
Credit	130(309)	59(118)	20(20)	2.57	E
Market information	103(309)	42(84)	30(30)	2.38	E
Processing equipment	92(276)	42(84)	58(58)	2.18	E
Extension contact	62(186)	32(64)	98(98)	1.81	NE
Shops	115(345)	40(80)	37(37)	2.40	E
Storage equipment	30(90)	63(126)	99(99)	1.64	NE

Source: Field survey, 2015

NE: Not effective

E: Effective

Table 4. Probit model estimates of effectiveness of CBOs

Variables	Coefficient	t-value	P- Value
Access to motorable road	0 .091	1.72	0.089**
Distance from CBOs	- 0.005	-0.44	0.659
Household size	0.596	2.33	0.020**
Annual income	0.315	1.55	0.120

Educational level	-0.588	-2.70	-0.007***
Constant	-0.283	-0.85	
LR chi2(18.46)			
Prob> chi ² =0.0024			
Pseudo R ² = 0.0700			
Log likelihood= -122.589			
Source: Field survey, 2015 ** Significant at 5% *** Significant at 1%			

Table 5. The Marginal effect of probit model

Variable	Coefficient	Std error	t-value
Motorable road	0.332*	0.019	1.76
Household size	0.218**	0.896	2.43
Educational level	-0.215	0.075	-0.86

Table 6. Distribution of fish processors according constraints faced by fish processors

Constraints	frequency*	Percentage	Ranking
Inadequate capital	166	86.5	1 st
Unavailability of loan	132	68.8	2 nd
High cost of transportation	80	41.7	3 rd
Smoke pollution	71	37.0	4 th
Time spent in processing fish	67	34.9	5 th
Adequate attention needed during processing	58	30.2	6 th
High perish ability nature of fish	49	25.5	7 th
High cost of fish	10	5.2	8 th

Source: Field survey, 2015*Multiple responses recorded