

*Full Length Research Paper*

# Socio-economic evaluation of rural women and the estimation of profitability of fish marketing in four markets in Nigeria

Yisa T. A.\*, Tsadu S. M. and Mohammed I.

Department of Water Resources, Aquaculture and Fisheries Technology,  
Federal University of Technology, Minna, Niger State.

Accepted 19 May, 2017

The level of unemployment, poverty, hunger and disease is growing at an alarming rate in developing countries despite global technological and entrepreneurship development. Fish is known to be the most important food commodity handled by rural women in Katcha Local Government area of Niger State because of abundant water from River Niger and streams. This study examined the socio-economic characteristics of rural women involved in marketing; the problems and constraints associated with fish marketing, as well as its socio-economic benefits and profitability. Four markets randomly selected were used for data collection. Structured questionnaire was designed to elicit information from twenty (20) respondents in each selected market. Analytical tools used were simple descriptive statistics such as percentages and benefit cost ratio. The results showed that 32.5% of the respondents were within the age range of 36 to 45 years. The percentage profits margin were 10.33, 9.77, 8.48 and 7.26% for Katcha, Chapo, Dibbo and Ndalada markets while percentage of total profit were 32.23, 26.74, 22.34 and 18.68% respectively. Similarly, benefits/cost ratio for Katcha, Chapo, Dibbo and Ndalada markets were 1.10, 1.09, 1.08 and 1.07 respectively; indicating that fish marketing is a profitable venture. This index can be used as a tool for economic empowerment and poverty reduction among rural women.

**Key words:** Rural women, fish marketing, poverty reduction, economic empowerment.

## INTRODUCTION

Agriculture contributes more than 40% of the annual gross domestic product (GDP) and employs about 70% of the labour force in Nigeria (FMAWR, 2004). It is also responsible for more than 70% of non oil exports and most importantly supplies more than 80% of the food needs of Nigerians (Adegboye, 2004). Before independence, the Nigeria agricultural sector produced adequate food required to feed the Nigerian population both in quantity and quality but now there is reverse in the trend, as a result of shift to oil as main stay of our economy and teeming population. In many developing countries, the rural areas are where active agricultural production takes place. Marketing is the performance of all activities involved in the flow of goods and services

from the point of initial production to the consumer (Adegeye and Dittoch, 1985). They further stated that marketing provides employment for stimulation of research into the techniques of fish, food, meat preservation and preparation of various food items.

Marketing is an important aspect of agriculture through which agricultural products reach the final consumers. Fish as a source of protein is available in most market as fresh, smoked, dried, canned or frozen and with such; the problem of scarcity can be avoided. Eyo (1980) reported that fish is less tough and more digestible compared to beef, mutton, chicken and bush meat and that fish is usually recommended to patients with digestive disorders such as ulcers because of its greater digestibility. Women are either wholly involved or are seen to play complementary roles to men in sustenance of their household and obtaining leverage over harsh economic conditions. According to Alamu (1998), women contribution in fishery sub-sector is particularly important

\*Corresponding author. E-mail: [atyisa@yahoo.com](mailto:atyisa@yahoo.com) Tel: 08068169704.

**Table 1.** Socio-economic characteristics of the respondents.

<b>Social feature</b>	<b>Frequency</b>	<b>Percentages (%)</b>
<b>a) Age</b>		
16-25	8	10
26-35	23	28.75
36-45	26	32.5
46-55	21	26.25
56 and above	2	2.5
Total	80	100
<b>b) Marital status</b>		
Single	12	15
Married	66	82.5
Divorced	2	2.5
Total	80	100
<b>c) Level of education</b>		
No formal education	10	12.5
Primary education	30	37.5
Secondary education	14	17.5
Tertiary education	8	10
Adult education	5	6.25
Arabic education	13	16.25
Total	80	100
<b>d) Number of children</b>		
None	10	12.5
1	5	6.25
2	15	18.75
3	22	27.5
4 and above	28	35
Total	80	100

Source: Field survey (2010).

especially in the area of marketing and processing.

It was reported that the socio-economic potentials of women in riverine small scale fishery in Nigeria is significant (Williams, 2006). Women have been noted all over Africa to provide 60 to 80% of agricultural labour force (Sofranko, 1984). Rural women play a vital role in production and provision of food for household, post harvest activities and marketing of farm produce in order to supplement family income. Ladipo and Oshuntogun (1985) observed that most of the fish processors and sellers from the village level to the city merchants were largely women. Moreover, most of the women are found to be full time fish processors and sellers. The objectives of the study were: 1) identifying the socio-economic characteristics of the women involved in fish marketing; 2) to investigate the level of profitability of fish marketing; and 3) to examine the problems associated with fish marketing in Katcha Local Government area of Niger State.

## MATERIALS AND METHODS

### Study area

The study was carried out in Katcha Local Government Area of Niger State (Latitude 9° 41' N and Longitude 6° 31' E) within the Southern Guinea savanna vegetation zone with a sub-humid tropical climate. The local government is located on the flood plain areas of River Niger. Four (4) fish markets were randomly selected, this include Katcha, Chapo, Dibbo and Ndalada. Simple random technique as described by Loveday (1961) was used to select the sample for the study as a representative process that is a simple trial may result in any one of a number of possible outcomes each determined by chance. Eighty (80) fish marketers comprising of twenty (20) marketers from each selected market were interviewed using structured questionnaire. Percentages and benefit cost ratio were used for data analysis. Percentage profit margin, total profit and benefit/cost ratio were calculated using the formulae:

$$\% \text{ Profit margin} = \frac{\text{Profit}}{\text{Total cost}} \times 100$$

$$\% \text{ Total profit} = \frac{\text{Profit}}{\text{Total profit}} \times 100$$

and

$$\text{Benefit/cost ratio} = \frac{\text{Benefit}}{\text{Cost}}$$

## RESULTS AND DISCUSSION

The need to know the demographic characteristics of the fish marketers cannot be over-emphasized. This will enable deduction of reasons for some of the observed behavior and the level of influence these characteristics have regarding fish marketing. Table 1a shows that age group 36 to 45 years constitute the highest percentage (32.5%) of women fish marketers, while age group 56 years and above were the lowest percentage (2.5%). The 32.5% for age group 36 to 45 years might be attributed to the fact that they have a lot of responsibilities like catering for their aged parents, paying children school fees, feeding the family to mention a few. 15% of the respondents are single (Table 1b). 82.5% of them were married while 2.5% were divorced indicating that fish marketing by women cuts across all the status. Table 1c shows that 37.5% of the respondents had basic education at primary level while only 12.5% of the respondents had no formal education.

This implies that majority of the respondents had at least basic primary education which enhances their business. This corroborates the report of Pala (1976) that formal education is an important factor in the performance and management of fish marketing and fishery sector in general. Table 1d indicates that respondents with no children constituted 12.5% and are

**Table 2.** Categories of fish marketers.

Fishing/Producing	5	6.25
Wholesaling	11	13.75
Retailing	38	47.5
Wholesaling and Retailing	26	32.5
Total	80	100

Source: Field survey (2010).

**Table 3.** Type of fish sold by the respondents.

Type of fish	Frequency	Percentage
Fresh fish	13	16.25
Frozen or iced fish	2	2.5
Smoked fish	40	50
Dried fish	5	6.25
Fresh and Smoked fish	25	25.00
Total	80	100

Source: Field survey (2010).

**Table 4.** Standard units of measurement used by fish marketers.

Unit of measurement	Frequency	Percentage
Basket	25	31.25
Carton	3	3.75
Size	22	27.5
Quality and freshness	12	15
All of the above	18	22.5
Total	80	100

Source: Field survey (2010).

likely to be single. Thirty five percent (35%) of the respondents had a large household size with 4 children and above. With a large household size, the women have to play complementary role to men in sustaining their household and obtaining leverage over harsh economic conditions. Table 2 shows that 13.75% of the respondents are middlemen wholesalers who buy from the producers/fishermen and sell to retailers and other merchants. Under category of marketers, retailers constituted the largest percentage (47.5%) and this might be due to the small capital requirement for retailing when compared with wholesale. Table 3 shows that majority of the respondents (50%) are into the side of smoked fish, 16.25% sale fresh fish while 25% combined both fresh and smoked fish. This is probably due to the fact that smoked fish has a long shelf life due to its reduced moisture content.

This concurs the observation made by Yisa and Oyero

**Table 5.** Cost and return of fish marketing.

Items	Average costs per each market (^)			
	Katcha	Chapo	Dibbo	Ndalada
Fire wood	200.00	150.00	120.00	100.00
Average cost per basket	8,000.00	7,000.00	6,800.00	6,700.00
Market charges	20.00	20.00	20.00	20.00
Transportation	300.00	300.00	250.00	200.00
Total cost	8,520.00		7,470.00	7,190.00
Return	9,400.00	8,200.00	7,800.00	7,530.00
*Profit	880.00	730.00	610.00	510.00

Source: Field survey (2010). \*Daily.

**Table 6.** Problems and constraints of fish marketing.

Problems	Frequency	Percentage
Lack of power supply	26	32.5
High transportation cost	12	15
Inadequate storage facilities	10	12.5
Inadequate finance	15	18.75
All of the above	17	21.25
Total	80	100

Source: Field Survey (2010).

(2002), who revealed that reduced moisture content enhances shelf life of fish. Table 4 indicates that 31.25% of the marketers used basket as a unit of measuring the prize worth of fish bought or sold. 3.75% of the respondents used carton as their measure. Interestingly, 22.5% of the marketers use all the various units of measurement available to them. Table 5 shows that Katcha market had the highest profit while Ndalada had the least profit. This might be attributed to the fact that Katcha is a commercial centre where traders come from various places for commercial activities. Table 6 indicates that the major constraints in fish marketing are power supply, high transportation cost and inadequate finance which were 32.5, 15 and 18.75% respectively. Table 7 shows that Katcha market had the highest percentage profit margin, (10.33%) total profit and benefit/cost ratio of 32.33% while Ndalada market had the lowest 7.26 and 18.68% respectively. On the whole, fish marketing in the study area is profitable because benefit/cost ratio was greater than 1. Since fish is highly perishable, power supply ranked first as constraints especially for those who sell fresh/iced fish.

## CONCLUSIONS AND RECOMMENDATIONS

Fish marketing was profitable and had ultimately led to

**Table 7.** Percentage profit and Benefit/Cost ratio.

Market area	Profit (^)	% Profit margin	Benefit/Cost ratio	% Total profit
Katcha	880	10.33	1.10	32.23
Chapo	730	9.77	1.09	26.74
Dibbo	610	8.48	1.08	22.34
Ndalada	510	7.26	1.07	18.68
Total	2,730	35.84	4.34	100

Source: Field survey (2010).

improvement of the quality of life of women in the study area. The level of profitability was reduced by constraints such as erratic power supply, high transportation cost, inadequate storage facilities and finance. If these constraints are overcome, fish marketing by the women would provide a good avenue for reducing the level of poverty among rural women. In view of the importance of protein in human diet, financial institutions should aid fish processors and marketers by granting them credit facilities to be able to meet their demand. Marketing facilities like stalls, shops that are well equipped as well as conducive environment should be provided by relevant agencies.

## REFERENCES

- Adegboye RO (2004). Efficiency of Marketing in Vandekya Local Government Area of Benue State, Nigeria. In: Ayoola JB, Azever J J, Abu AG (2010). *Int. J. Agric. Rural Dev.*, 1(3): 16-20.
- Eyo AA (1980). Fish Handling, Preservation, Processing and Marketing. A Technical Paper Presented at the 5<sup>th</sup> Annual Conference of Fisheries Society of Nigeria (FISON).
- Ladipo OL, Oshuntogun AD (1985). Women and Fish Marketing in Lokoja and Kotonkarfi Local Government Areas of Kogi State, Nigeria. In: Ajayi OJ, Gana FS, Ojutiku RO (2007). *Nig. J. Fish.*, 4(1): 53-58.
- Loveday R (1961). *First Course in Statistics*. Cambridge University Press, NewYork. pp. 4-8.
- Sofranko AJ (1984). *Introducing Technical Change Agricultural Extension, A reference manual*, FAO, Rome. pp. 9-12.
- Pala AO (1976). African Women in Rural Development Research, Trends and Priorities, Overseas Liason Committee, African Council on Education. Paper, 12: 5-8.
- Williams SB (2006). Women in Fisheries: A case study of the Kainji Lake Basin, Nigeria. In: Wara A, Nyabeze GO, Tafida AA, Abubakar SM (2007). *Proceedings of the 22<sup>nd</sup> Annual Conference of Fisheries Society of Nigeria (FISON) held between 12<sup>th</sup>-16<sup>th</sup> November, 2007*, pp. 66-70.
- Yisa TA, Oyero JO (2002). Introduction of Solar Dryers around River Gbako at Bida and its Socio Economic Implications. A paper presented at the 17<sup>th</sup> Annual Conference of Fisheries Societies of Nigeria (FISON) held on 18<sup>th</sup>-22<sup>nd</sup> November, 2002 Governor's Office, Annex, Welling Bassey Way, Uyo, Akwa Ibom State, Nigeria.