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PROFITABILITY ANALYSIS OF FISH SELLING IN ISOKO SOUTH LOCAL GOVERNMENT AREA, DELTA STATE NIGERIA

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ABSTRACT

The study concentrated on the profitability of the fish selling business as its main objective. Multi-stage sampling procedure where used in purposive selection of 40 fish sellers in the study area. Data were collected with aid of structured questionnaire administered to fish sellers. Data obtained were analyzed using cost and return model and descriptive statistics such as mode mean, frequency and percentages. Young persons who were mostly married engaged in fish selling business. Fish selling business were mostly for women that took the business as a full-time and marketing experience of years 6 months. Both buying and selling price fluctuates revealing low standard price system. The revenue derived and cost incurred was ₦273,600 and ₦211,345 respectively. The gross margin and net return was ₦84,280 and ₦62,255 respectively indicating that there was profit in fish selling business. The benefits cost ratio of 1.30 revealing that for every 100k invested in the business 30k was realized also indicated profit. In brief fish selling business is profit oriented from the study. The study recommends that Government should have a uniform standard price, fixed and monitored by marketing boards. It also recommends that marketing training program should be carried out by NGOs and government for acquisition of marketing skills.

KEY WORDS

Analysis, fish, profitability, selling.

Fish are been found in vast flood-plains, inland waters network, natural lakes, reservoirs and man-made lakes (21). Nigeria expenditure on 1.9 tonnes fish importation is approximately ₦125.38 billion annually to meet consumption demand (8). This 1.9 tonnes of fish importation resulting to \$700 million foreign exchange annually.

Consumers of fish in Nigeria stance at 55% of total protein intake sources (1). Also findings of (15) stated that the cheapest ranked protein source is fish. (6) also collaborated that the contribution of fishing per capita animal intake is about 5% and about 8 million people engaged in fishing industry. (5) reported that good source of protein a mineral is fish which provide about 50% of mineral and protein for Africa and south Asian. The fisheries industries enhance people's incomes, livelihood, nutrition and families health and act as social change and economic development (4).

Fish protein nutrients and vitamins assist in control of heart related diseases such stroke and heart failure, moreso, help in lowering of high blood pressure, hence fish is recommended by American Heart Association to be taken minimum two times weekly (23).

Acceptable standard of profitability analysis includes the determination of cost and benefit of returns overtime adopting appropriate standard (12 and 3) in this findings asserted that the gross finding is a proof for marketing efficiency. (16) reported that marketing efficiency is usually adopted in marketing process for evaluation and performance.

In Nigeria, particularly in Delta State, the fish business is of greater advantage to production sector, with little or no knowledge in fish marketing (18). Thus, this study is focused on the behaviour of fish marketers towards profitability.

The specific objectives of this study were to:

- Examine the social economic characteristics of fish sellers;
- Examine the fish sellers business status;

- Determine the fish seller marketing experience;
- Determine a fish seller revenue;
- Determine the fish seller total cost of marketing;
- Analyze the profitability of fish selling.

CONCEPTUAL FRAMEWORK

The conceptual framework for profitability analysis of fish selling is crucial to factors linking revenue generation in agricultural productivity. (20) poised that productivity in agricultural business is attained by the conceptual design of framework analysis. In the analysis of the profitability of fish selling, various factors taken into consideration include: social economic characteristics fish sellers, business status of the fish farmer, marketing potentials and cost variation leading to revenue generation on the accounts of positive fish business. This is a pro-profitability business cycle as shown in Figure 1.

Figure 1 – Conceptual framework for the profitability analysis of fish selling

METHODS OF RESEARCH

The area is made up of 10 dans and 59 communities with its headquarters at Oleh. It has an average population of about 227,712 and lies at latitude 5.2N and longitude 6.1E respectively. The area experiences two climatic season namely wet and dry seasons with perennial flooding mostly from many tributaries in the area that derived the source from the river Niger. The main occupation is agriculture especially fishing and crop farming.

Multistage sampling procedure where used in purposive selection of four dans that have a large fish market from the 10 dans in the area. Secondly one market each were purposive selected giving a total of 4 markets and lastly, 10 fish sellers were randomly selected giving a total of respondent to be 40.

Data were collected with the aid of structured questionnaire administered to fishseller's. Data obtained were analyzed using benefit cost ratio model and descriptive statistics such as mean, mode, frequency and percentages.

$$TC_{fs} = TV_{fs} + TFC_{fs} \dots \dots \dots (i)$$

$$GM_{fs} = R_{fs} - TVC_{fs} \dots \dots \dots (ii)$$

$$BCR_{fs} = TR_{fs} / TVC_{fs} \dots \dots \dots (iii)$$

$$NR_{fs} = GM_{fs} - TFC_{fs} \dots \dots \dots (iv)$$

Where: GM_{fs} = Gross margin of fish seller; R_{fs} = Revenue of fish sellers; TVC_{fs} = Total variable cost of fish sellers; BCR_{fs} = Benefit cost ratio of fish sellers; TC_{fs} = Total cost of fish seller; TFC_{fs} = Total fixed cost of fish sellers.

RESULTS AND DISCUSSION

Fish sellers socio-economic characteristics respondents with age bracket of 40 - 51 years and 64 - 75 years were 10.0% respectively with a mean age of 48 years. This

clearly shown fish marketing were mostly carried out by young and energetic persons since it involves traveling and energy in carrying out marketing operations (19). Female gender participated most with a percentage of 72.5% compared to their male counterparts of 27.5% most respondents were married which educational level of secondary school and household size of 10 persons as shown in Table 1. This is in line with the report of (17) that the most household were married with family size of 8-10 persons.

Table 1 – Fish Sellers Socio-Economic Characteristics

Parameters	Frequency	Percentage	Mean/Mode
Age (years)			
28-39	7	17.5	48 years
40-51	21	52.5	
52-63	8	20.0	
64-75	4	10.0	
Gender			
Male	11	27.5	Female
Female	29	72.5	
Marital level			
Married	28	70.0	Married
Single	4	10.0	
Widowed	6	15.0	
Divorced	2	5.0	
Educational Level			
No formal School	8	20.0	Secondary
Primary school	11	27.5	
Secondary School	17	42.5	
Tertiary School	6	15.0	
Household size (persons)			
1-5	6	15.0	10 persons
6-9	11	27.5	
10-13	19	47.5	
	4	10	

Source: Field Data.

The study clearly indicates that's 65.0% and 35.0% respondents engaged in full-time and part-time fish selling business respectively fish sellers took fish business as their major occupation in the area as shown in Table 2. In a similar report, (9) stressed that consumers rely on availability of fish in appropriate, place, time and affordable cost. This is mostly achieved by full time fish sellers and not part time fish sellers.

Table 2 – Fish Sellers Business Status

Status	Oleh	Aviara	Uzere	Irri	Entire
Full time Business	9 (202%)	6(15.0%)	5(12.5%)	7(17.5%)	26(65.%)
Part Time Business	2 (5.0%)	4(10.0%)	5(12.5%)	3(7.5%)	14(35.0%)
Mode					Full time business

Source: Field Data.

Marketing experience of fish sellers were on the range of 7-12years (52.5%) with an average of experience of 9years 6months. Respondents with arrange of 1-6years were 22.5% as shown in the Table 3. This shows that those with higher experience engaged more in fish marketing for more marketing advantages. These findings agreed with Nworu (14) that experience as direct effects on efficiency and profit.

Table 3 – Marketing Experience of Fish Sellers

Experience (years)	Oleh	Aviara	Uzere	Irri	Entire
1-6	2(50.0%)	3 (7.5%)	2(5.0%)	2(5.0%)	9(22.5%)
7-12	5(12.5%)	4 (10.0%)	6(15.0%)	6(15.0%)	21(52.5%)
13- 18	3(7.5%)	3(7.5%)	2(5.0%)	2(5.0%)	
Mean					9 years 6 months

Source: Field Data.

The results in Table 4 showed that selling price varies between ₦700 and ₦740 with an average selling price of ₦720. The revenue average gotten from the sales of fish was ₦ 273 600 in the area. The selling price varies from one market to another depending on the market price ability. Higher selling prices attract greater profitability. (22) observed that the more the business opportunities in sales, the better the business profits.

Table 4 – Fish Sellers Revenue

Items	Oleh	Aviara	Uzere	Irri	Entire Area
Quantity Sold (kg)	380	380	380	380	1520
Selling Price (n)	740	710	700	730	2880
Total revenue	281,200	269,800	266,000	277,400	1,094,400
Mean					N273,600

Source: Field Data.

Cost of purchase, transportation and handling, preservation and miscellaneous were classified as total variable cost amounting to ₦189,320 while the fixed cost such as store rent, tools (basin, Cutlass, tables and others) and preservation materials such as charcoal, ice blocks oval/dryer and drying stands amounting to ₦22,025 as shown in Table 5 this clearly revealed that total variable cost of fish sellers were more than the fixed cost. The increase cost of transportation and labour in fish marketing resulted from poor transportation network in the rural areas of Nigeria (3).

Table 5 – Fish Sellers Expedition (Total Cost)

Cost	Oleh	Aviara	Uzere	Irri	Entire Area
a. TVC					
Quantity Purchased (kg)	380	380	380	380	1520
Buying Price (₦)	470	435	440	465	1,810
Total Cost of Purchase	178,600	165,300	167,200	176,700	687,800
Transportation Cost (₦)	15,000	11,000	9,500	13,500	49,000
Preservation/Handling Cost	4,500	2,000	2,500	4,000	13,000
Miscellaneous Cost (₦)	2,300	1,200	1,900	2,100	7,500
Total Variable Cost (TVC)	200,400		181,100	196,300	757,300
Mean TVC					189,320
b. TVC					
Selling tools					
Store Rent	6,200	6,100	6,300	6,000	24,600
Preservation materials	11,000	7,000	8,500	10,000	36,500
Total fixed cost (TFC)	7,500	6,000	6,500	7,000	27,000
Mean TFC N	24,700	19,100	21,300	23,000	88,100
TC = TVC + TFC	189320 + 22,025				211,345

Source: Field Data.

Table 6 – Profitability of fish marketing

Item	Entire Area
Total Revenue (₦)	273,600
Total Variable Cost (₦)	189,230
Total Fixed Cost (₦)	22,025
Total Cost	211,345
$Gm_{fs} = R_{fs} - TVC_{fs}$	
Gross Margin (Gm_{fs})	= 273,600-189,320
Gross Margin	= ₦ 84,280
NR_{fs}	=
	= $GM_{fs} - TFC_{fs}$
Net Returns	= ₦(84,280-22,025)
	= ₦ 62,255
BCR_{fs}	=
	= TR_{fs}
	= TC_{fs}
	= 273,600
	= 211,345
Benefit Cost Ratio	= 1.30

Source: Field Data.

Gross margin of fish marketing was ~~N~~84,280 and the net returns was ~~N~~62,255 showing that there is profit in fish selling in the area. This is in line with the findings of federal department of fisheries (2007) that "Fish farming play a pivotal role in boosting human protein and major sources of income to the farmer" Benefit cost ratio of 1.30 reveals that each naira ploughed into the marketing business 30k was realized also indicating profit from the business as shown in Table 6. This is in collaboration with the findings of (7) that when the margin difference between the total revenue and total cost is high it will result to maximum or greater profit. (22) further reported that efficiency of marketing of fresh fish could be high in adoption of fish marketing technology which is one of the biggest determinant of fish business as cost greatly affect income.

CONCLUSION

The results indicated that young people that were mostly married engage in fish selling business, women participated more than men in Fish marketing and were not educated most fish sellers where on full-time basis as their major occupation with average marketing experience of 9 years 6 months the selling price of the fish varies between ~~N~~700 and ~~N~~740 revealing that there is no standard price system. The revenue derived from Fish marketing and cost incurred was ~~N~~ 73,600 and to ~~N~~211,345 respectively. The gross margin and net return of fish marketing was ~~N~~84,280 and ~~N~~62,255 respectively, this indicated that there was profit in business. Benefit cost ratio of 1.30 revealed that everyone naira ploughed into the fish marketing business thirty thousand naira was realized indicating profit in the business. The study recommends that marketing training programs should be carried out by NGO and government for acquisition of marketing skills further recommends a uniform price should be fixed by government especially the marketing boards.

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