

Assessment of Fish Marketers Livelihoods Status in Kebbi State, Nigeria

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Abstract

The study examined the livelihood of fish marketers in Kebbi State. The study focused on the socioeconomic features of fish marketers, how fish advertising influences their level of livelihood, the difficulties they experience, and the ways they employ to overcome these challenges. A purposive sampling technique was utilized to choose a sample size of 110 fish marketers for the study. The researchers employed a well-structured questionnaire to perform their investigation. The collected data was analyzed using frequency distribution. The findings revealed that more fish marketers (74%) derived social benefits from fish marketing, while youth respondents (62%) used fish marketing as a source of income. Respondents (68%) indicated that fish marketing reduced hunger and enhanced the availability of fish year-round, resulting in increased revenue and savings. The different contributions of chosen livelihood components revealed that aquaculture has a significant impact on the livelihood pattern. Fish marketing faced several obstacles, including the high cost of fingerlings (mean = 3.46), inadequate government support (mean = 3.21) and the absence of extension workers' visits (mean = 3.09). The inclusion of cooperative societies in the feed supply (mean = 3.92) and better fingerling varieties (mean = 3.25) were evaluated as the respondent's most significant strategies for overcoming obstacles. To enhance the standard of living for fish marketers, it is recommended that the government get more involved in fish marketing initiatives.

Keywords: Fish Marketers, Fish Marketing, Livelihoods, Strategies

Introduction

In general, a person's livelihood can be defined as a way for them to obtain the things they need to survive. Livelihoods are extremely dynamic, shaped by a multitude of forces and causes that are always changing. The mission of many public and governmental institutions in developing countries is to improve people's livelihoods, which is successful when communities experience increased well-being and reduced vulnerability as a result of higher incomes, improved food security, and more sustainable use of natural resources [1]. Fishing has been a significant source of food for humans, as well as a source of employment and economic rewards for those who participate in it. Fish is a vital source of nutritional protein, minerals, and critical fatty acids for millions of the world's poor, and it helps to meet their caloric needs. In farming operations, livelihood components play critical roles in agricultural progress, rural expansion, welfare status changes, employment opportunities, income creation, environmental stability, and government support [2,3].

Fish farming, often known as aquaculture, is a rapidly expanding sector in the tropics. Africans and Nigerians benefit from this livelihood and economic sector. The Nigerian government has made fiscal and human resource contributions to the agricultural sector. The northwest region of Nigeria is a leading beneficiary of this livelihood [4,5].

After conducting a survey of rural aquaculture, Rouhani and Britz (2014) discovered that the management of land, water, infrastructure, finances, fingerlings, feeds, human resources, and other inputs or capital investment are significant indicators of food security and livelihood improvement.

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However, little exact knowledge concerning the true contribution of fishing activities to livelihoods and economies in developing countries (including Nigeria) aimed at poverty eradication is available [3]. In Kebbi State, for example, many fishing households are poor and vulnerable, and they are likely to engage in small-scale fishing. It is widely acknowledged that small-scale fishing can generate significant profits, be resilient to shocks and crises, and contribute meaningfully to income and food security. These issues have highlighted the relevance of fish farmers' livelihoods and poor status. To address these problems, a study was proposed and led by several objectives.

Objectives of the Study

The broad objective of this study was to assess the fish marketer's livelihoods in Kebbi State. Specifically, the study seeks to address the following objectives to:

1. Describe the socioeconomic characteristics of respondents,
2. Determine the contributions of fish marketing to the livelihood of fish marketers,
3. Identify the challenges in fish marketing
4. Examine the perceived strategies employed to reduce the effects of challenges on fish marketing.

Conceptual Framework of the Study

Framework for Conceptualization The livelihood components of fish marketing (*Figure 1*) are divided into six categories: social advantages, vulnerability status, employment benefits, cultural benefits, food security, and revenue production. The link between these objects establishes a conceptual framework for this inquiry. The social benefits include a willingness to engage in fish marketing and group formation activities, as well as the cultural benefits of adhering to farming community norms and rules in order to avoid conflicts and crises that could harm livelihood status.

Women's engagement, youth participation, and indigents all contribute to the vulnerability status. Incorporating these strata of community profile into fish marketing increases men's productivity rates, linking to the next livelihood component of economic empowerment. The employment advantages in livelihood patterns take into account the availability of part-time or full-time fish farming enterprises. The home food security benefits component is a crucial link in this framework, since it looks into reducing hunger and fish availability all year round while also ensuring revenue generation savings and reinvestment turnarounds.

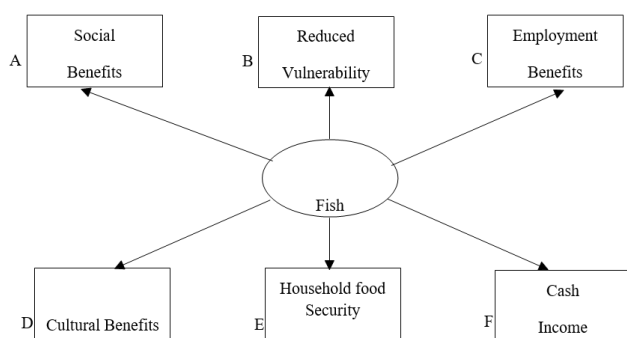


Figure 1. Livelihood framework components: contributions of fish Marketing.

Methodology

Study Area

The study was conducted in Kebbi State, Nigeria. The state is located in the northwest Sudan Savanah region, between latitudes 10° 051 and 13° 271 N of the equator and longitudes 3° 351 and 6° 031 E of Greenwich. According to the 2006 census, the state's population was 3,351,831. Projecting this population to 2022 at a 3% growth rate yields a population of 4,351,067. More over two-thirds of the population is involved in agricultural production, primarily arable crops, but also cash crops and livestock production.

Sampling Technique And Sample Size: The study's sample was selected from the population of fish marketers in four (4) local governments in Kebbi State. Based on this, a purposive sampling strategy was utilized to generate a sample size of 110 fish marketers for the study. A purposive sampling strategy was chosen since only the sample fish marketers had an effective aquaculture marketing system.

Data Collection Method: Respondents provided primary data via a well-structured questionnaire containing objectively connected questions to the study, while secondary information was obtained from books, journals, conference proceedings, and the Internet.

Contributions Of Fish Marketers To Livelihood Status:

This was determined by categorizing livelihood components as social advantages, vulnerability status, cultural benefits, food security, and income creation. The weights assigned to the various categories were High = 3, Medium = 2, and Low = 1. $(3+2+1=6/3=2)$ The cut-off mean is 2 (>2 indicates significant contribution, <2 indicates poor contribution). Based on this profile, respondents were asked to rate the contribution of fish marketers to their livelihoods as high, medium, and low [1].

Challenges To Fish Marketers In Livelihood Patterns:

A ten-parameter standard was utilized to establish optional assertions, from which respondents chose if their challenges to fish marketers were very serious =4, serious =3, not very serious =2 or not serious = 1 based on a 4 point Likert-type scale with 2.5 as the decision rule.

Perceived Ways To Minimize Fish Marketing Difficulties Among Livelihood Patterns:

A number of statements were given out for respondents to tick as appropriate using a four (4) point Likert scale with a matching weight "strongly Agree =4", "Agree = 3", "Disagree = 2" and "Strongly Disagree = 1" with a cut-off point of 2.5 $(4 + 3 + 2 + 1 = 10/4 = 2.5)$. All data obtained were statistically analyzed using frequency counts and percentages.

Results

Socio-Economic Characteristics of Respondents

Table 1 reveals that males (73.6%) weigh more than females (26.4%). This implies that men fish marketers dominated the sampled area. The average age of respondents is approximately 47 years. This suggests that youngsters are more involved in the fish marketing industry.

The marital status of respondents revealed that (45.5%) of the sampled populations were married. This also strengthened the fact that more youth are involved in the business of fish marketing as a source of livelihood.

The respondents' educational qualifications revealed that the majority of them (34.6%) had a secondary certificate as their greatest degree of educational achievement. Respondents had a mean marketing experience of five years. Only (41.8%) of respondents had 4–6 years of experience in fish marketing. This indicates that the majority (88%) of fish farmers were young, as reported by Ovharhe and Gbigbi in a similar study with the Kebbi State Fadama III project [6].

Fish are classified as fresh, dried, or smoked according to how they are sold or marketed. Overall, fresh fish (67.3%) dominates the market, although dried and smoked fish have significant niches, with smoked fish seeing major increase due to rising demand for processed and easy food products. Similarly, 54.6 percent of fish marketers in the research area are retailers who sell directly to the end consumer.

Table 1. Socio-economic characteristic of fish marketers

Parameters	Frequency	Percentage (%)	Mean/Mode
Sex			
Male	81	73.6	Male
Female	29	26.4	
Age of Respondents (years)			
21-30	20	18.2	
31 -40	48	43.6	47
41-50	30	27.3	
51 -60	12	10.9	
Marital Status			
Single	42	38.2	
Married	50	45.5	Married
Divorced	6	5.4	
Widowed	12	10.9	
Education Qualification			
Primary	29	26.4	
Secondary	38	34.6	
OND/NCE	26	23.6	Secondary
HND/B.Sc.	17	15.4	
Farming Experience(years)			
1 -3yrs	42	38.2	
4-6yrs	46	41.8	5years
7-11yrs	22	20	
Categories of Fish Products			
Fresh fish	74	67.3	
Dried	24	21.8	Fresh
Smoked	12	10.9	
Types of Marketing			
Wholesale	29	26.4	
Retailers	60	54.6	
Consumer	21	19.0	

(n = 110)

Contributions fish marketers to livelihood status

Table 2 provides a detailed analysis of fish marketers in the study area, highlighting the benefits of fish marketing in terms of various aspects of the marketer's livelihood pattern, such as social benefits, the ability to target vulnerable groups, employment benefits, cultural benefits, food security, and cash income generation. Ofuoku et al., stated that cooperative farmers contributed more to household food security than non-cooperative farmers due to their greater income level [7].

The study found that 67.3% of respondents are interested in fish marketing and 63.6% participate in group activities related to fish farming. According to Ofuoku et al., the more cohesive the group structure, the easier it is to acquire agricultural inputs, assets, and farming prospects [7].

Vulnerable groups of targeted women (45.5%) are proud of the fish marketing activity. Youth respondents (60.9%) are engaged in fish marketing as a source of livelihood. Respondents (68.2%) are into aquaculture as a full-time business venture.

Fish marketing has little or no conflict with the norms and values of the community in which they operate, with only 13.6% of conflicts with customs falling into the high category. The respondents' belief in Kebbi state as a tourism attraction location was relatively low (13.6%). This necessitates an enhancement of the potential in that area. Respondents (61.9%) answered that fish marketing improved food security by reducing hunger and increasing fish availability all year. Respondents (70.9%) generated surplus income to save. Okoedo-Okojie and Ovharhe, stressed information sourcing and farmer record keeping training as ways to control cash flow in the agricultural company [8]. The livelihood aggregated from the numerous contributions of selected livelihood components indicates a very high-impact contribution.

The aggregated livelihood from the various contributions of selected livelihood components implies that aquaculture has a very high impact on overall livelihood. This is a better report than Ovharhe's findings [5]. He stated that aquaculture's contribution to livelihood was on a wider scale.

Challenges to fish marketer's livelihood status

Table 3 reveals that the most important constraints were the high cost of fingerlings (mean = 3.46) and fish feeds (mean = 3.36), inadequate government support (mean = 3.21), non-visitation of extension workers (mean = 3.09), and a lack of storage facilities (mean = 2.91). Meanwhile, another challenge was observed, even though it provided no obstacles. For example, small pond size concerns (mean = 2.22), scarcity of better fingerling breeds (mean = 2.00), weak cooperative management issues (mean = 2.06), poor water quality management (mean = 1.99), and ineffective market tactics (mean = 1.87). According to Dibb and Sally, they discovered that most marketers believe that a significant emphasis of their efforts is the differentiation of their product offer vis a vis competitors products and services [9]. The aquaculture business is competitive.

Perceived Ways to Minimize Fish Marketing Difficulties Among Livelihood Patterns

Table 4 reveals that the top strategies used by respondents to overcome fish farming challenges were improved fingerling varieties (mean = 3.25), inclusion of government agricultural activities (mean = 3.29), regular fish farming training (mean =

Table 2. Fish Marketer Contribution to Livelihood Status (N = 110)

Item	High	Medium	Low	Total	Mean
Social Benefits:					
Willingness to practice fish Marketer	74(67.3)	22(20)	14(12.7)	280	2.54
Group formation activities	26(23.6)	70(63.6)	14(12.7)	232	2.10
Vulnerability Status:					
Women participation	50(45.5)	45(40.9)	15(13.6)	255	2.31
Youth participation	67(60.9)	25(22.7)	18(16.3)	269	2.44
Employment Benefits:					
Provision of Full-time Business	75(68.2)	22(20)	13(11.8)	282	2.56
Part-time business	55(50)	44(40)	11(10)	264	2.40
Cultural Benefits:					
Non-conflict with community Norms and values	71(64.6)	24(21.8)	15(13.6)	276	2.50
Opportunity for tourist attraction sites	15(13.6)	33(30)	62(56.4)	140	1.27
Food Security:					
Reduction of hunger	68(61.9)	26(23.6)	16(14.5)	272	2.47
Fish availability all year Round	59(53.6)	37(33.7)	14(12.7)	265	2.40
Cash Income Generation:					
Cash Surplus for Banking	78(70.9)	22(20)	10(9.0)	288	2.61
Harvest Period	23(20.9)	72(65.5)	15(13.6)	228	2.07
Note: Figures in parentheses are percentages.					
Cut-off mean =2 (>2= high contribution; <2 = low contribution;)					

Table 3. Respondent challenges to fish farming (n=110)

Parameters	Very Serious	Serious	Not Very Serious	Not Serious	Total	Mean
High cost of fingerlings	73(66.4)	22(20)	8(7.2)	7(6.4)	381	3.46
High Feed cost of feeds	75(68.3)	10(9.0)	15(13.7)	10(9.0)	370	3.36
Weak government support	59(53.6)	20(18.2)	27(24.6)	4(3.6)	354	3.21
Non-visitation of extension workers	50(45.5)	30(27.3)	20(18.2)	10(9.0)	340	3.09
Absence of storage facilities	33(30)	40(36.4)	32(29.1)	5(4.6)	321	2.91
Small pond size	15(13.6)	25(22.7)	40(36.4)	30(27.3)	245	2.22
Scarcity of improved breed of fingerlings	20(18.2)	10(9.0)	30(27.3)	50(45.5)	220	2.00
Weak corporative management	17(15.5)	15(13.6)	36(32.7)	42(38.2)	227	2.06
Poor water quality management	11(10)	13(11.8)	50(45.5)	36(32.7)	219	1.99
Low market strategies	10(9.0)	14(12.7)	38(34.6)	48(43.7)	206	1.87
Note: Figures in parentheses are percentages.						
Cut off mean =2.5 (>2.5 = important challenges; <2.5= unimportant challenges;)						

3.07), inclusion of cooperative societies in feed supply (mean = 2.92), and linkage to extension agencies (mean = 3.00). The employment of middlemen to market goods (mean = 1.85). This modest reaction indicates that it is a minor tactic, like others. As a result, middlemen are unnecessary for the fish business in the research area. The results support Mwangi's conclusions that small enterprise fish farming success does not require middle agents, but rather strong markets, cooperatives, access to seed, feed, loans, and transportation, as well as a profit-driven emphasis

Summary and Conclusion

The average age of fish marketers was discovered to impact their livelihood venture, as more youngsters were interested in aquaculture (fish marketing) in Kebbi State. Another survey stated that more married fish marketers were interested in aquaculture in Kebbi State.

In terms of educational attainment, it was reported that aquaculture, among other farming industries, accounted for a

Table 4. Respondents' perceived strategies employed to overcome challenges (n = 110)

Parameter	Strongly Agree	Agree	Disagree	Strongly Disagree	Total	Mean
Exposure to varieties of fingerlings	52(47.2)	42(38.2)	11(10)	5(4.6)	358	3.25
Inclusion of government agricultural activities	60 (54.6)	30(27.2)	12(10.9)	8(7.3)	362	3.29
Conduct regular fish farming training	34(30.9)	55(50)	16(14.6)	5(4.5)	338	3.07
Inclusion of corporative society in feed supply	44(40)	24(21.9)	32(29.1)	10(9.0)	322	2.92
Linkage to external agencies	50(45.5)	20(18.2)	30(27.3)	10(9.0)	330	3.00
Use of middlemen to market products	10(9.0)	14(12.7)	36(32.8)	50(45.5)	204	1.85
Note: Figures in parentheses are percentages.						
Cut-off mean =2.5 (>2.5 = important strategies; <2.5 = unimportant strategies)						

significant number of secondary levels in Kebbi State. Ovharhe and Gbigbi made a similar discovery about the average age of fish marketers in aquaculture [6]. They stated that young people were more interested in the fish farming industry as a source of income.

Ofuoku et al. and Ofuoku et al., concurred that social benefits and empowerment of vulnerable populations help fish traders' livelihoods [7,11]. Currently, the research area is busy with fish marketing activities. According to Rouhani and Britz, women and young people contributed significantly to rural lives in the aquaculture sector (fish marketing) [12].

The fish marketers experience a variety of obstacles in the study area; the challenges faced by fish marketers were believed to be slightly high but easily manageable in order to assure profitability in their marketing strategy. Mwangi underlined that fish traders might overcome hurdles if the government or other donors pay attention to their perceived requirements [10].

The study concluded that males were more involved than females in fish marketing in terms of livelihood contributions. The majority were married. A larger proportion of the respondents held secondary school certificates. Fish marketing has contributed to livelihood through social and cultural advantages, youth and women's participation, and part-time and full-time enterprise for food security and revenue production. The study discovered that fish marketers have significant problems in their livelihood patterns, and the offered ways to address these challenges are critical. As a result, it was determined that fish marketing helped to improve the livelihoods of the study participants.

The study recommends the following:

1. Improve the supply and availability of better fingerling varieties.
2. Increase government involvement in agricultural activity.
3. Regular fish marketing training courses should continue.
4. Connecting fish traders with extension agencies is crucial for improving productivity and marketability of output.

Study Limitations

The assessment of fish marketers' livelihood status presents several limitations and weaknesses, one primary limitation is the seasonal variability of fish availability and market prices, which can lead to fluctuating income and livelihood conditions that are difficult to capture accurately in a single assessment period. Economic diversity within the fish marketing sector, where large-scale commercial operations coexist with small-scale subsistence marketers, can also complicate the assessment by obscuring the specific challenges and needs of different groups. Furthermore, the assessment may be constrained by resource limitations, including insufficient funding, technical expertise, and time, which can hinder comprehensive data collection and analysis. Lastly, the rapidly changing environmental conditions and regulatory landscapes affecting fisheries can render assessments quickly outdated.

Future Research

Future research on the livelihood status of fish marketers should adopt a multidisciplinary approach which incorporating economic, social, and environmental dimensions. These research areas can provide a comprehensive understanding of the factors influencing the livelihood status of fish marketers and inform strategies to enhance their economic and social well-being.

1. Investigate the income levels, financial stability, and economic challenges faced by fish marketers.
2. Examine the social structures and networks within fish marketing communities.
3. Assess the availability and impact of infrastructure, such as storage facilities, transportation, and technological advancements, on the efficiency and profitability of fish marketing.
4. Explore sustainable fish marketing practices and their adoption, focusing on environmental impacts, resource management, and resilience to climate change.

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