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Analysis of factors affecting fish marketers in gombe central area of gombe state Nigeria

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Abstract
Fish is considered the best source of animal protein for man's growth and development. However, it takes marketing to ensure delivery of fish and fish products to the consumers at the right time, convenient place and the best possible quality. This study assessed the challenges fish marketing in Gombe central area of Gombe state Nigeria as well as proffer solutions for the expansion of fish marketing. Relevant data was collected with the aid of structured questionnaire and enhanced by oral interview, from 120 fish marketers randomly selected without replacement with 40 each from three (3) different markets. Data was analyze using descriptive statistics of frequency, percentages and mean score analysis on 5-point Likert scale with 3 as the decision value. The result showed that Consumer choice (3.93) was the major factor affecting the quality and quantity of fish sold by fish marketers; financial problem (3.87) was the greatest challenge of fish marketing faced by the marketers. positive response was recorded on the suggested ways to improve the system with access to loans/grants having the highest response of 3.87 followed by creation of cooperative and provision of basic facilities as the third way of improving the marketing system. Fish marketing in Gombe central has the potential to grow if active steps are taking in enhancing the need of the marketers.

Keywords: poverty, Dadin Kowa, channels, assessment

1. Introduction

Fish is an aquatic resource exploited for food, employment and other economic purposes which production comes from fish farmers and fishers. Fish and its products are highly regarded by most Nigerians base on it relatively price as cheaper protein source when compare to other sources of animal protein [1]. Bene and Heck [2] stated that fish is described as the easily accessible and affordable source of animal protein for both poor and rich households. Although, the prices of fish vary from one locality to another, which to some extend center on the demand and level of urbanization [3]. The world's fisheries are challenged by a combination of overexploitation, habitat damage and poor economic returns which generally indicates the world's total harvest of fish from wild stocks is in decline because of over fishing. Other factors that greatly affect fish availability are the challenges face by the artisanal fishers. Fish marketing and distribution is view as integral aspect of fish production because it is only when the fish gets to the final consumers that production can be completed [4]. Fish follow a channel to make it available for the consumer at the right time, right place and the best quality possible through an effective marketing system. Fish marketing system ensure the flow of fish and fish products from the producers to the consumers in a good quality and place that will be convenient and accessible [5]. Efficient market system tends to offer acceptable and cost effective services to consumers that maximize the input and output of marketing [6]. An efficient marketing system trigger production and likely increase in production by the producers if they are able to sell at reasonable prices [7]. In Nigeria, fish marketing system varies from one area to another depending on type of fish product, market location, and the distance between source of supply of fish product and retailer and ultimately to consumer [8].

With the fluctuation in price, marketing costs and the marketing functions which the marketing system depends, affect the distribution of fish and the efficiency of the system. Rahaman *et al.,* [9] stated that fish marketing system is complex owing to huge differences in species, size, taste and the need to sustain quality of fish. Generally, when price of a commodity rises, the demand of such item usually falls while a drop of price tends to increase the purchase of the item and poor consumers often tend to look for cheaper commodities or its substitutes.

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Market mechanisms have to be proficient to be able to play the critical role of propelling profit of a fish product and an efficient market system that gives an acceptable and cost effective services to consumers [10]. Agricultural marketing is generally faced with constraints which include limited knowledge and use of market information, lack of access to high-value reliable markets, socio-economic factors, high transactional costs, inadequate property rights, lack of bargaining power, excesses of intermediaries and distance from the source of supply among others (11). An efficient marketing process will go a long way in providing sufficient food to the populace through the process of market mechanism which influence mechanism on price and availability of the products. The need to identify these challenges and possible solution within Gombe central of Gombe state prompted this study.

2.0 Materials and Methods
2.1 Study area.
The study was conducted in three (3) fish markets located in Dadin Kowa Fish market of Yamaltu Deba LGA, Gombe Fishing market in Gombe LGA and Nassarawo fish market located in Akko LGA; all in Gombe State. Gombe State is one of the states in the North-Eastern part of the country. The study area is characterized with a warm climate, having a mean diurnal temperatures of 35 °C to 40 °C during the hottest months of (March to May) and to about less than 30 °C during harmattan [12]. The area has two distinct seasons based on the amount of rainfall received. The dry season (November to April) and the wet/rainy season (May to October) with an average (850 mm) amount of rainfall received per annum in 110 to 125 days [13].

2.2. Data collection
The study used descriptive - survey method through a structured questionnaire as main instrument of gathering data. The questionnaire is classified into 4 section which comprises of; section A- Socio-Economic Characteristics, section B- Factors affecting Quality and Quantity of fish sold, Section C- Challenges of fish marketers and Section D- Channels to improve fish marketing. The questionnaires were administered with oral interview due to low educational level of the respondents. Forty (40) fish marketers were randomly selected and administered the questionnaires from each of the 3 selected fish markets with a total of one hundred and twenty (120) respondents.

2.3. Data analysis
The collected data was analyzed using descriptive statistics (such as frequency and percentages tables) for section A while section B, C and D respectively were analyzed using mean score model of Likert scale.

2.3.1 Mean Score Model
Mean score in form of a 5 point Likert scale was use to analyzed data collected and 3.0 was adopted as the decision rule (John, 2008)

X< 3.0 Reject
X >3.0 Accept
Decision rule. X =Σ x/n = 5+4+3+2+1 = 15/5 = 3.0
Where.
Value likert X =Σ x/n
x = mean

n=number of items
Σ = summation
n = number of items.

3.0 Results
Table 1 shows the socio-economic characteristics of fish marketers in the study area presented as percentage of the total number of respondents. Male were having the highest number with 61.67%. The result indicated that the fish marketers have the highest age group between 19-35 years with 48.33% while marketers below the age group of 18years were having the lowest number. The educational level of the respondents shows the highest level 40% attended primary, 36.67% attended primary while the lowest number was recorded in those that did not attend school with 23.33%. The result indicated that majority (60%) of the respondents sourced their fund from personal savings while 16.67%, 10.00% and 13.33 sourced their funds from family and relatives, banks and cooperative groups respectively.

The result of the analysis of Factors affecting the Quality and Quantity of fish sold in Gombe fish markets on 5-point Likert scale is presented in table 2. Consumer choice having a scale of 3.93 while Inadequate fish supply recorded 2.82 which gives a negative response as a factor. Cost of Fish recorded a positive response with 3.65, Poverty of consumers 3.70 and Access to cold room recorded a positive response with 3.07. Other result from the study shows cost of transportation as a positive response that is affecting quality and quantity of fish sold in the study areas with 3.73, inadequate power supply gives a positive response with 3.45 and the fear of fish marketers indicated a negative response of 2.90 as not a factor that affect fish quality and quantity sold in the study areas. Cost of transportation (3.73) and Inadequate power supply (3.45) and Access to cold room (3.07) was observed to be the lowest in the factors affecting the quality and quantity of fish sold in the markets.

Table 1: Socio-economic characteristics of Respondents

	Frequency	Percentage (%)
Gender		
Male	74	61.67
Female	46	38.33
Age group		
0-18	10	8.33
19-35	58	48.33
36-60	36	30.00
61-Above	16	13.33
Educational level		
No formal school attended	28	23.33
Primary	48	40.00
Secondary	44	36.67
Source of funds		
Personal savings	72	60.00
Friends and relatives	20	16.67
Bank	12	10.00
Cooperatives	16	13.33

Sources: Field work 2021

Table 3 records the challenges of fish marketers' based on 5-point Likert scale. Problem of processing and preservation recorded a positive response of 3.38 while Financial problem records a positive response of 3.87 on the scale which is

observed to be highest challenge faced by fish marketers. Activities of the middle men and price fluctuation records positive response of 3.35 and 3.63. Union activities and activities of government tax agent both shows a negative response toward constraint of fish marketers with a value of 2.65 and 2.6. Inadequate space for selling fish gives a positive response with 3.55 marks on the scale while security as a challenges was also accepted by the fish marketers on 3.15 scale marks.

Table 2: Socio-economic characteristics of Respondents

Factors	Response	Scale	Decision
Consumer's choice	Yes	3.93	Accepted
Inadequate fish supply	No	2.82	Rejected
Cost of fish	Yes	3.65	Accepted
Poverty of consumers	Yes	3.70	Accepted
Access to cold room	Yes	3.07	Accepted
Cost of transportation	Yes	3.73	Accepted
Inadequate power supply	Yes	3.45	Accepted
Fear of fish marketer	No	2.90	Rejected

Sources: Field work 2021

Table 3: Challenges of fish marketers

Challenge	Response	Scale	Decision
Problem of processing and preservation	Yes	3.38	Accepted
Financial problem	Yes	3.87	Accepted
Activities of middlemen	Yes	3.35	Accepted
Price fluctuation	Yes	3.63	Accepted
Union activities	No	2.65	Rejected
Activities of government tax agent	No	2.62	Rejected
Inadequate space for selling fish	Yes	3.55	Accepted
Security	Yes	3.15	Accepted

Source: Field work 2021

The analysis presented on table 4 based on 5-point likert scale in which the decision rule was 3.0 and any value below it was rejected while above is accepted as a channel to improve fish marketing system in the study area. All the 3 question recorded a positive response with access to loans/grants by marketers having the highest response of 3.87 then creation of cooperative with 3.71 and the lest value was on provision of basic facilities by the government.

Table 4: Channels to improve fish marketing

Channel	Response	Scale	Decision
Provision of basic facilities by the Government	Yes	3.68	Accepted
Marketers should be able to access grant/loan	Yes	3.87	Accepted
Creating of cooperative society	Yes	3.71	Accepted

Source: Field work 2021

4.0 Discussion

The result shows of both female and male involve in the fish marketing which indicates that fish marketing in the study area is not gender specific. This agree with the view of Nwabeze *et al.* [15] who stated that men and women are engage in complimentary activities in fisheries. The higher percentage of males might be connected to the dominance of fish marketing by males which is similar to the findings of Nwabueze and Nwabueze [4] which recorded much of male in wholesalers while females being more of retailers. The result is similar to the findings by Ali *et al.,* [16] which recorded highest number of males in fish marketing at Maiduguri,

Borno state. However, Ike-Obasi [6] stated a different finding who revealed that females are more than their male counterparts in fish marketing business in the southern part of the country. Conversely, Agbebi and Fagbote [6] in their study of the role of middlemen in fish marketing in Igbokoda fish market, Ondo-state, south western Nigeria, revealed that majority of the marketers are female. Fish marketing in Gombe involved people of different age group. The data reveals that fish marketing provide employment not only to adults but across age groups in the study area from as low as below the age of 18 years to as old as above 61 years. The result compares favorably with the findings of Oparinde and Ojo [17] which stated that the youth are mostly dominant in fish marketing. The result shows that the trade is dominated by youth within vibrant and active age group with strength and reasonable level of maturity who according to Orewa and Iteke [18] and Onwumere (19) should be able to manage resources. The highest percentage of the marketers shows they are literate which is similar to the result obtain by Amao., *et al.,* [20] among fish marketers in Lagos State. Education levels will enhance the adoption of new ideas in marketing system which contribute to the improvement of the sector. Lawal and Idega [21] observe that the level of education attended will determine the strategies of solving marketing challenges which will increase the sales and profit level of the marketers. This result is similar to the findings of Agbebi and Fagbote [5] that institutional credit for fish marketing is low or none existing, mainly because it is dominated by the low/medium scale private sector. Market intermediaries (middlemen) occasionally provide credit on high interest rate marketers who are obliged to sell their produce to the supplier of credit, who often pay slightly lesser than the prevailing market prices. The inaccessibility of bank loans by the fish marketers can be attributed to the general reluctance on the part of the banks to issue credit facilities to small scale entrepreneurs especially those in agriculture and allied sectors. According to Akinbote [22] the demand for collaterals and endless documentations discourages the simple minded small scale operators who were often compelled to look inward for solutions to their operational financial needs which is similar to the findings during the study. This has greatly limited the development and operational efficiencies of various forms of fisheries activities. Most of the respondents were self-sponsored as many of them complained of not having any form of assistance and did not know how to go about obtaining loans from credit facilities. The great reliance on personal savings and relatives greatly limits the scope of the business and the profit margin from it [18].

Fish consumption variation depend on the quality and quantity of fish available for consumption [23]. Different factors affect the quality and quantity of fish sold by fish marketers and Consumer choice was the major factor in the study area. The result is in line with the study conducted by Ike-Obasi [6] who indicated that quality and quantity of fish available for consumption is affected by consumer's choice. According to Alapan *et al.,* [24] most consumers preferred to purchase high quality fish for health safety and satisfaction. Other factors with strong influence on the quality and quantity of fish in the markets are cost of fish. The price of fish is determined by the customer's choice and its quality [26]. The price efficiency is concerned with improving the operation of buying, selling and other connected aspects of marketing process so that it will remain responsive to consumer direction [16].

Consumer's level of poverty affects fish consumption similar to the study by Gordon *et al.,* [26] who stated that higher income groups may be a considerable source of the increase in fish demand despite population increase, particularly in a big city and affect the availability of fish for consumers. Inadequate power supply is also a factor which is in line with the findings of Gaya *et al.,* [27] that reaffirm among fish sellers in Yola, Adamawa State, Nigeria who attributed to the perishable nature of the fish as a severe barrier to fish marketers due to epileptic and irregular power supply in the area which is highly needed for preserving fresh fish. Considering the increasing cost of transportation and poor storage facilities, it might not be economically feasible under current conditions to increase the volume of quality and quantity of fish in the fish markets. Without proper transport or storage facilities in rural areas, the opportunity to compete for the urban fresh fish market is restricted to the wealthiest of retailers [28]. Inadequacy of supply and fear of fish marketers were of little or no appreciable impact on the quality and quantity of fish sold in the study area. This is similar to the result conducted by Nwabunike [7] on constraints of Fish Marketing in Abakaliki Metropolis. Problems of processing constitute a constraint to fish markers in the study area which corroborates with the study by Asogwa and Asogwa [29] of inadequate and poor processing facilities needed to process the products to a form that will enable the marketing agents to store it safely within a short time being either not readily available and not adequate where available. Many of the fish marketers in the study areas complained of not having any form of financial assistance. This is in line with findings of Madugu and Edward [30] who ranked poor access to capital as a major constraint in fish marketing which is linked to inability of marketers to meet the collateral demand of the banks. Alapana *et el.*, [24] acknowledged the significant effects of finance on the market prices of fish and the difficulty of marketers to expand their businesses because of inability to secure loans from banks [31]. The shortage of credit facilities is a major constraint to expansion of marketing commodities. The non-availability of a credit facilities is seen as a challenge derailing the expansion of fisheries activities. Middlemen perform several roles and function and their utility is best judged from commodities, besides making the product available to the customers. They mostly take the responsibility for the payment from the buyers to the seller (5) Price fluctuation posed a challenge to fish marketing as according to Cengiz [32], increase in fish price decreases the amount of fish bought by households, whereas an increase in the price of substitutes such as red meat and chicken tend to increase the amount of fish demand in the markets. That price fluctuation could also be attributed to some government policies that are not favorable [6]. Based on the analysis union activities and activities of government tax agent does not pose serious threat to fish marketers which is similar to the study by Nwabunike [7]. Other factors that poses challenges to fish marketers in the study area includes inadequate space for selling fish and security.

An attempt at providing solutions to the prevailing challenges of the fish marketing in Gombe the result shows a positive response. Fish is a highly perishable commodity which require a good storage facility to maintain it quality. The result is similar to Oparinde and Ojo, [17] who stated that sophisticated storage facilities/cold rooms should be provided by the government as well as cooperative societies in order to have easy storage of unsold fish till the following day. This result also tallies with the findings of Nwabunike, [7].

The notion that marketers should be able to access grant/loan easily is seen as the main aspect of improving the fish marketing in the study area. Marketers mostly dependence on personal savings and contributions from relatives which have hinder expansion of fish marketing operation [18]. The response was similar to study by Nwabunike [7] who stated that co-operative society enables loan to be easily obtain from financial institutions which will help to expand fish marketing activities. The establishment of co-operative societies plays a paramount role to the marketers since it is much faster and convenient for assistance to reach them when they are in groups or associations [5]. Government intervention was seen as a factor which can also improve the area [23]. Provision of facilities by the government will help in improving fish marketing which include power supply, storage facilities and access road.

5.0 Conclusion
Fish marketing in Gombe will expand greatly if effort could be geared towards addressing the challenges of the marketing system faced by the marketers. Access to finance by the marketers play a major role in solving Nigeria's unemployment and poverty alleviation challenges, the lending rates particularly for agriculture and allied sub-sectors, would have to be reduced to at least one-digit lending rates or subsidized. Accessing loans from financial bodies with low interest rate will help in improving the fish marketing in the study area. Formation of a strong and functional co-operative society by marketers in the study area should be encouraged so as to ease the problem of capital and loan acquisition from finance institutions as well as government intervention/assistance.

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