



## **DEMOGRAPHIC CHARACTERISTICS OF FRESH FISH MARKETERS IN SELECTED LOCAL GOVERNMENT AREAS OF NIGER STATE, NIGERIA**

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### **ABSTRACT**

The study was carried out to analyze the demographic characteristics of fresh fish marketers in selected Local Government Areas of Niger State, Nigeria. A multi-stage sampling procedure was used to select 120 marketers in the study area. The data collected were analyzed using descriptive statistics. The results revealed that the mean age of the marketers 33 years, 95% of them were male while 73.3% of them were married and 45% of them has attain a secondary level of education; with mean year of marketing experience was 17.14 and 84.2% of the respondents belong to cooperative group. The study also found that the marketers were confronted with problems of price instability, inadequate capital, and high cost of transportation, seasonality of fish supply, storage problems, and inconsistency of government policy, inadequate power supply and low patronage. The study concluded that marketers had a high level of resilience, hence, having high capacity to withstand the market stress by ensuring full commitment to the business. The study recommended Government to create a conducive environment that will attract people in to aquaculture farming to bridge the gap created during the offseason thereby stabilizing the prices. Also, Government to make credit facilities available and affordable to the fresh fish marketers in the study area to encourage the marketers in the business. It was also recommended that, more research work should be carried out on fish marketing strategies that will enable the marketer to become efficient in the fish marketing business.

**Keywords:** Agricultural Zones, Aquaculture, Demographic, Fresh fish, Multistage, Socio-economics.

### **INTRODUCTION**

According to the United States Agency for International Development (USAID, 2014), fish consumption account for about 35% of animal protein in Nigeria. The Agency observed that fish farming is a vibrant and dynamic commercial sector in Nigeria, ripe with investment and employment opportunities. Recent data shows that Nigeria produced just over 600,000 metric tons of fish in 2007. Consumption-demand on the other hand, was reported at 2.66 million metric tons and was met only in part by import of 740,000 metric tons that same year (USAID, 2014). In a similar vein, Lawal and Idega (2004), earlier observed that the fishery sub-sector also provides employment opportunity to many Nigerians including those involved in direct fishing, processing and marketing. The price of fish changes as it passes through



marketing channels such that by the time it reaches the final consumers, it has become expensive.

Adeleke and Afolabi (2012) submitted that fresh fish and fish products are known worldwide for their paramount importance in diets because of their high nutritional quality and importance in improving human health even though dried smoked fish are also widely consumed in Nigeria. The per capita consumption of animal protein in Nigeria is only 9.3g/day as against 34g/day recommended by the Food and Agriculture Organization (FAO) to be the minimum requirement for the growth and development of the body (Adeleke and Afolabi, 2012). This short fall is believed to have occurred not because of the non-availability of the financial resources, but due to non-maximization and sustainable utilization of these resources. According to Amao *et al.* (2006), Nigeria has over 12.5 million hectares of inland waters which are capable of producing over 600,000MT of fish annually. Although animal protein is rich in amino acids, it is virtually out of reach of the average Nigerian due to its high cost.

Fish nutritionally has high quality proteins, fats and vitamins. It is relatively cheaper and more available than other animal proteins. It contains the essential amino acids such as lysine and tryptophan as well as methionine which are lacking in proteins of plant origin (Lawal, 2002). In addition, it also contains some fat-soluble vitamins, especially vitamins A and D, considerable amounts of phosphorus and other minerals such as copper, calcium, iron, iodine and magnesium which are necessary for the healthy growth of the human body. Animal protein sources such as beef, chicken, turkey presently are beyond the reach of an average man, hence the need for fresh fish being a cheap and important source of protein to man (Omolanwa, 2011). The demand for such protein is rising exponentially with the rapidly accelerating increase in human population (Food and Agriculture Organization [FAO], 2004).

## **MATERIALS AND METHODS**

### **The Study Area**

Niger State is located between Latitudes 8°22'N and 11°30'N and Longitudes 3°30'N and 7°20'E. The area is characterized by season that varies from wet to dry, the wet season last for a period of seven months (April – October) while the dry season cover the five (5) months of (November – March). With an average temperature of 27°C and annual rainfall of about 1,000 mm to 1500 mm (Niger State Geographic Information System [NIGIS], 2013). The State comprised of the old Nupe and Kontagora Kingdoms, Abuja (Suleja) with link to the famous kingdom of Zazzau and a host of other political entities. Niger State was excised from the defunct North-Western State and made a full-fledged State in the Federation in April 1976 (NIGIS, 2013). The State is bordered to the North by Zamfara State, to the North-West by Kebbi State, to the south by Kogi State, to South-West by Kwara State; while Kaduna State and Federal Capital Territory border the State to North-East and South-East, respectively. Furthermore, the State shares a common international boundary with the Republic of Benin at Babanna in Borgu Local Government area of the State.

The State covers a total land area of 74,244 sq.km, or about 8% of Nigeria's total land area. This makes the State the largest in the Country. Several ethnic groups are found in the



State. However, there are three most prominent ethnic groups: the Nupes, the Gbagis and Hausas. Other ethnic groups include the Kadara, Koro, Baruba, Fulani, Ganagana, Dibo, Kambari, Kamuku, Pangu, Dukkawa, Gade and Ingwai. The State had a total population of 2,482,367 people in 1991. The 2006 population census put the population figure of the State at 3,954,772 persons consisting of 2,004,350 males and 1,950,422 females, (National Population Commission [NPC], 2006). The population has been projected to be about 4,702,376 in 2014 at an annual growth rate of 2.8%. This gives the State a population density of about 33 persons per sq km; the lowest in the country. Agriculture is the back bone of the economy of the State. More than 80% of the population depends either directly or indirectly on it for their livelihood. By reason of its location, climate and soil, it is one of the States which has the most fertile agriculture lands in the country and has the capacity to produce most of Nigeria's stable crops. It also has ample opportunities for grazing, fishing and forestry (NIGIS, 2013).

### Sampling Procedure

Multi-stage sampling procedure was used for the study. Niger State is divided into three (3) agricultural Zones, with each zone having a defined agricultural system. Zone II was purposively selected based on the prevalence of fresh fish marketing activities in the zone. The second stage involved the selection of three (3) Local Government Areas (LGAs) with the largest fresh fish markets in the zone. The third stage involved the selection of four (4) fresh fish markets from the three LGAs. Two (2) markets were purposively selected in Shiroro, Local Government Area (LGA), namely, Zumba and Gwada fresh fish markets. One (1) fresh fish market was also purposively selected in Chanchaga Local Government Area (LGA) located at Keteren Gwari Mobil. Similarly, one (1) fresh fish market was selected from Suleja Local Government Area (LGA). The final stage was the selection of 10% of fish marketers in each location (from the sampling frame). The lists of all the fish marketers in each market were obtained from the market associations. A total sample of 120 (Table 1) fish marketers were issued questionnaire from whom relevant information were elicited. The formula used in selecting the sample size in proportion to the population of the fresh fish marketers in the study area is given as follows:

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

where;

n = sample size,

N = the finite population

e = the limit of tolerable error

1 = unity

**Table 1:** Number of Fresh Fish Marketers in Selected Markets of the Study Area

Markets	Sampling frame	10% of frame	Sampled marketers
Zumbea	220	22	20
Gwada	220	22	20
Mobil	450	45	40
Suleja	445	44	40
<b>Total</b>	<b>1,335</b>	<b>133</b>	<b>120</b>

Source: Field Survey (2014)



## **Analytical Techniques**

Descriptive statistics was employed to analyze the data collected from the field survey in order to achieve the objectives of this study. The descriptive analytical tools used include the means, frequency distributions, cross tabulations, and percentages. These statistics were employed to describe the socio-economic characteristics of the respondents involved in fresh fish marketing, describe consumer preference and identify the constraints associated with fresh fish marketing in the study area.

## **RESULTS AND DISCUSSION**

### **Socio-economic Characteristics of Fish Marketers**

The socio-economic characteristics of fresh fish marketers such as age, gender, marital status, educational level, household size and years of experience are as presented in Table 2. The age of the marketers is a critical factor to the success of that business since it determines whether the marketer is a beneficiary of the experience of an older generation, or an innovative marketer that base his/her decisions on the risk taking attitude of younger marketers. The results also show that fish marketers were within the mean age of 33 years. In addition, the marketers were in their economically active, productive and energetic age which could translate their abundant stamina and ability to accept new innovation. This study is in line with the findings of Gaya *et al.* (2005) who found out that the marketers were within the active age of 30 years in the study area. Also Adeleye and Afolabi (2012) on appraisal of fish marketing in Ondo State Nigeria, it was revealed that majority (95%) of the respondents were male while only (5%) of them were females. This is an indication that fish marketing in the study area was gender specifics business and it is an indication of serious gender inequality in the business which might be due to socio-cultural values of inhabitants in the study area. This result is in disagreement with the findings of Lawal and Idega (2004) on the analysis of fish marketing in Benue State Nigeria where the study showed that majority (90%) of the marketers were women but the study was in line with Ali *et al.* (2008) on the economic analysis of fresh fish marketing in Maiduguri, GaniBoru market and KachallariAlau Dam landing site of North-Eastern Nigeria which revealed that majority (81.67%) of the respondents in the study area were male. This gender peculiarity is an important dimension at the policy front.

The percentage distribution of the respondents according to their marital status is presented in Table 2. Marital status of fish marketers is very paramount to the business especially when it concerns issues of decency, married people are considered to be highly responsible given the consumer more confidence and trust as against the marketers that are not married. The results indicated that majority (73.33%) of the respondents were married as against the (26.67%) of those that were single. This is an indication that there will be a high sense of responsibility on the part of the sellers. This is in line with the findings of Kainga and Adeyemo (2012) on the socio-economic characteristics of fish marketers in Yenagoa Local Government Area Bayelsa State Nigeria, where the results showed that majority (68.9%) of the respondents were married. Salihu (2011) carried out a study on the economics of fresh fish



marketing in Kontagora Local Government Area, Niger State Nigeria, and found that majority (85%) of the marketers in the study area were married.

The results in Table 2 Further revealed that 45 % of the respondents had obtained their secondary certificate while only (8.4%) had acquired up to tertiary level of Education. This is an indication that most of the marketers can read and write. According to Lawal and Idega (2004), the level of education attained by the marketer determined to a larger extent, the strategies, he/she may use in resolving marketing problems and to adopt new innovation without difficulties and consequently he/she is better positioned to maximize their profit. This is in line with the findings of Omolanwa (2011) on the marketing structure of fresh fish at Olomore fresh water fish market in Abeokuta Ogun State, Nigeria which revealed that 38% of the respondents attained up to secondary level of education. The level of education also has the propensity to enhance interpersonal relationships which has a bearing on marketing strategies. An educated person is more likely to exhibit high hygienic standards at the market place thereby attracting more buyers and sellers. More sales could translate to higher profits. The distribution of respondents according to household size is presented in Table 1 Household size of the fish marketers is also important especially when there is inadequacy of man power or when hired labour is in short supply. Marketers with a large household size will more likely make up for the short fall by using family labour as it is cheaper and readily available to the marketer.



**Table 2:** Socio-economic Characteristics of Fish Marketers

Variable	Frequency (n = 120)	Percentage	Mean
<b>Age (Years)</b>			
≤20	13	10.8	
21-30	45	37.5	
31-40	35	29.2	
41-50	18	15.0	
51-60	09	7.5	
<b>Total</b>	<b>120</b>	<b>100.0</b>	<b>33.25</b>
<b>Sex</b>			
Male	114	95.0	
Female	6	5.0	
<b>Total</b>	<b>120</b>	<b>100.0</b>	<b>0.95</b>
<b>Marital status</b>			
Single	32	26.7	
Married	88	73.3	
<b>Total</b>	<b>120</b>	<b>100.0</b>	<b>1.73</b>
<b>Educational status</b>			
No formal education	34	28.3	
Primary education	22	18.3	
Secondary education	54	45.0	
Tertiary education	10	8.4	
<b>Total</b>	<b>120</b>	<b>100.0</b>	<b>3.91</b>
<b>Household size (Numbers)</b>			
Non household size	37	30.8	
1-10	57	47.5	
11-20	21	17.5	
21-30	4	3.3	
>30	1	0.8	
<b>Total</b>	<b>120</b>	<b>100.0</b>	<b>5.95</b>
<b>Marketing experience (Years)</b>			
1-10	46	38.3	
11-20	35	29.7	
21-30	27	22.5	
31-40	07	5.8	
41-50	05	4.2	
<b>Total</b>	<b>120</b>	<b>100.0</b>	<b>17.14</b>
<b>Cooperative membership</b>			
Non member	19	15.8	
Members	101	84.2	
<b>Total</b>	<b>120</b>	<b>100.0</b>	<b>0.84</b>

Source: Field survey (2014)





**Table 3:** Summary of Socio-economic Characteristics of Fresh Fish Marketers

Variable	N	Minimum	Maximum	Mean	S.D
Age	120	17.00	60.00	33.25	10.79
Gender	120	0.00	1.00	0.95	0.22
Marital Status	120	1.00	2.00	1.73	0.44
Education	120	0.00	12.00	3.91	2.15
Household Size	120	0.00	34.00	5.95	6.72
Marketing Experience	120	1.00	46.00	17.14	11.01
Membership of cooperative	120	0.00	1.00	0.84	0.37

Source: Field survey (2014)

### Constraints Faced by Fresh Fish Marketers

The study found that the marketers faced various problems in their fresh fish marketing activities in the study area. A summary of the results is presented in Table 4. Results in Table 4 indicated that the problem of price instability ranked 1st in decreasing magnitude of importance whereby an overwhelming majority of (89.16%) encountered this problem in their fish marketing activities. The implication is that the instability in prices could depress their profit margin, because lower price could constrain the realization of their profit maximizing motive. This finding is in line with the study of Nwabueze and Nwabueze (2010) which revealed that price instability is one of the problems militating against the fresh fish marketing in Oshimili South LGA of Delta State, Nigeria. In a similar vein, the problem of inadequate capital is ranked 2nd on the severity of the problems confronted by the fresh fish marketers in the study area where by a large majority (78.33%) were confronted with this problem. The implication is that capital being the bedrock of any meaningful business, marketers with large capital has the propensity to expand their business consequently make a larger returns while the marketer with lower capital make low returns and constrain with little or no chance for expansion. This finding is in consonant with the finding of Adeosun and Adebukola (2012) on the determinants of income from fish marketing in Ibarapa area of Oyo State, Nigeria; where they found out that inadequate capital is a major problem in the study area.

Furthermore, the problem of high cost of transportation is ranked 3rd in a decreasing magnitude of importance whereby an appreciable majority (65.00%) encountered this problem in their fresh fish marketing activities. The implication is that the high cost of transportation could add to the cost of fresh fish and high cost of product affect the demand for the product thereby affect the quantity of fresh fish marketer can buy and sell consequently depresses their profit margin. This finding is in agreement with the finding of Kainga and Adeyamo (2012). More so the results in Table 4 revealed that seasonality of fish supply was ranked 4<sup>th</sup> in decreasing magnitude of importance, whereby majority (63.33%) of the marketers encountered this problem in their fresh fish marketing activities. The implication is that the seasonality of fish supply could depress the profit maximizing motive of fish marketer because there will be glut during the fishing season couple with lack of storage facilities, thereby forcing the price to come down. The problem became aggravated during the off-season when there is no fish



supply, the marketers could be unemployed and the only way of survival before the fishing season was to depend on personal savings or look for another job. This finding is in line with the finding of Ali *et al.* (2008).

Similarly, the results in Table 4 further show that storage problem is ranked 5th in decreasing magnitude of importance whereby appreciable number (55.83%) of the marketers indicated this problem in their fish marketing activities. The implication is that the problem of storage owing to inadequacy of storage facilities, fish loses their state of freshness and as a result the prices change as the product passes through the marketing channels as a result leads to low profitability. This finding agrees with that of Aworh (2012). The results in Table 4 show that the problem of inconsistency of government policies ranked 6th in decreasing magnitude of importance whereby many (46.67) of the respondent were reported to have encountered this problem in their marketing activities. The implication of this problem of inconsistency of government policy cannot be overemphasized; for example, government policy serves as a guide for any business manager in planning good and productive business plan. Change in the policy will render the business plan useless thereby depressing the profit maximizing motive of the marketer. This study is in line with the finding of Omolanwa (2011) who identify inconsistency of government policy as one of its pressing problems in the study area.

Furthermore, inadequate power supply is one of the problems confronting the fish marketers in the study area. The problem is ranked 7th in decreasing magnitude of importance. Average number (41.67%) of the respondents of the marketers encountered this problem in their marketing activities. Fish is highly perishable therefore some marketers have to apply a system known as “rigor mortis” Due to the erratic nature of our power in Nigeria, many marketers sometimes resolve to using generator as an alternative source of energy thereby added to the cost of the product as a result of the costs emanating from the purchase of fuel or diesel to power the generator as well as the cost of services. This is in agreement with the finding of Eyo (1999) who found that inadequate power supply is one of the problems militating against success of fish marketing activities in the study area.

**Table 4:** Constraints to Fresh Fish Marketing (n = 120)

Constraints	*Frequency	Percentage	Rank
Price instability	107	89.16	1st
Inadequate capital	94	78.33	2nd
High cost of transportation	78	65.00	3rd
Seasonality of fish supply	76	63.33	4th
Storage problems	67	55.83	5th
Inconsistence of govt. policy	56	46.67	6th
Inadequate power supply	50	41.67	7th
Low patronage	46	38.33	8th
Total	574		

\*Multiple responses exists

Source: Field survey (2014)





Finally, the results in Table 4 indicated that the problem of low patronage is ranked 8th in decreasing magnitude of importance and is the least of all the problems confronting the fish marketers in the study area whereby few (38.33%) of the marketers encountered this problem in their fish marketing activities. The implication is that marketer can only talk of profit when the product is being sold; low patronage however translate to low sale and invariably low returns because selling is central to marketing as the success of any business, depends on the number of sale hence low patronage could depress their profit margin as it constrain their profit maximizing motive. This finding is in consonant with the finding of Salihu (2011) where he identified low patronage as one of the problems affecting the economics of fish marketing in Kontagora LGA of Niger State, Nigeria.

## CONCLUSION AND RECOMMENDATIONS

In conclusion, the socio-economic characteristics of the marketers indicated a high level of resilience hence, having high capacity to withstand the market stress by ensuring full commitment to the business; but the marketers were confronted with numerous problems in their marketing activities. It was recommended that Government to create a conducive environment that will encourage people in to aquaculture farming to bridge the gap created during the offseason thereby stabilizing the prices. The Government should make credit facilities available and at affordable rate to the fresh fish marketers in the study area.

## REFERENCES

- Adeleke, M. L. and Afolabi, J. A. (2012). *Appraisal of Fresh Fish Marketing in Ondo State, Nigeria*. In: M. L. Adeleke and J. A. Afolabi, J. A (Eds.). IIFET 2012 Tanzanian Proceedings in Akure, Federal University of Technology, Akure.
- Adeosun, O. and Adebukola, F. B. (2012). Determinants of Income from Fish Marketing in Ibarapa Area of Oyo State, Nigeria. Department of Fisheries Technology, Oyo State College of Agriculture, Igbo-Ora. *Science Journal of Agricultural Research and Management*, 135: 1-6.
- Ali, E. A., Gaya, H. I. M. and Jampada, T. N. (2008). Economic Analysis of Fresh Fish Marketing in Maiduguri Gaboru market and Kachallari Alau Dam Landing Site of North-Eastern Nigeria. *Journal of Agriculture and Social Science*, 4: 23-26.
- Amao, J. O., Oluwatayo, I. B. and Osuntope, F. K. (2006). Economics of Fish Demand in Lagos State, Nigeria. *Journal of Human Ecology*, 19(1): 25-30.
- Aworh, O. C. (2012). Reducing Post Harvest losses of Horticultural Commodities in Nigeria than improved packaging. *Word Journal of Agricultural Sciences*, 6(4): 127-135.
- Eyo, A. A. (1999). *Fish processing and Marketing in the Arid Zone of Nigeria with particular reference to Lake Chad*. In: Lake Chad and arid zone fisheries. A. A. Olatunde and J. S. O. Ayeni (eds). National Institute for Fresh Water Fisheries New Busa, Nigeria. Pp.172-195.



- Food and Agriculture Organization [FAO] (2004). *Future Prospect for fish and fishery products: medium term projection to the year 2010 and 2015*. FAO Fisheries Circular FIDI /972 – 1. Rome.
- Gaya, H. I. M. Mohammed, S. T. and Bawa, D. B. (2005). *Economic Analysis of Fish Marketing in Yola – North Local Government Area*. Adamawa State Department of Agricultural Economics and Extension, University of Maiduguri, Nigeria. Pp.1-7.
- Kainga, B. E. and Adeyemo, A. O. (2012). Socio-Economic Characteristic of Fish Marketers in Yenagoa Local Government Area of Bayelsa State, Nigeria. *World Journal of Young Researchers*, 2(1): 3-6.
- Lawal, W. L. and Idega, E. O. (2004). *Analysis of Fish Marketing in Benue State*. Proceedings of the 2004 Annual Conference of the National Association of Agricultural Economists (NAAE) held at ABU Zaria, Nov. 3rd – 5th 2004.
- Lawal, W. L. (2002). *Economic Analysis of fish Culture in Benue State*. A PhD Thesis, Submitted to the Department of Agricultural Economics, University of Agriculture, Makurdi, Nigeria.
- National Population Commission [NPC] (2006). *Year Book on Nigeria Population Data*. National Population Commission, Nigeria. Report Retrieved on March 15, 2014. <http://www.jstor.org>.
- Niger State Geographic Information System [NIGIS] (2013). *Background Information*. Retrieved on March 15, 2014 from [www.nigergis.com/about-niger-state](http://www.nigergis.com/about-niger-state).
- Nwabueze, A. A. and Nwabueze, E. O. (2010), An Investigation into the problems of Fresh Fish Marketing in Oshimili South Local Government Area of Delta State, Nigeria. *Agriculture and Biology Journal of North America*, 1: 1-4.
- Omolanwa, T. D. (2011). *Marketing Structure of Fresh Fish at Olomore Fresh Water Fish Market in Abeokuta Ogun State*. Unpublished B.Sc. (Agric) project report submitted to the Department of Aquaculture and Fisheries Management, College of Environmental Resources Management, University of Agriculture, Abeokuta, Nigeria.
- Salihu, I. (2011). *Economics of Fresh Fish Marketing in Kontagora Local Government Area, of Niger State*. Unpublished B.Tech (Agric.) project report submitted to the Department of Agricultural Economics and Extension Technology, Federal University of Technology, Minna, Nigeria.
- United States Agency for International Development [USAID] (2014). FEWSNET Program (2014): [www.fews.net](http://www.fews.net).