

## **EFFECT OF COVID-19 ON FISH PRODUCTION AND MARKETING VALUE IN KABBA/BUNU L.G.A. OF KOGI STATE**

**By**

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### **Abstract**

*The study examined the challenges of fish production and marketing value and the additional effect of COVID 19 on this source of livelihood in kabba/bunu L.G.A. of Kogi State. Marketing of fish was faced with more problems, after the covid-19 pandemic, among which are; increased cost of fish production, transportation cost from where these fish are brought to the market, the perishable nature of fish, the market price of fish fluctuation, the number of Persons involved in the production of fish, preservation and packaging. The study examined the social economic status of fish farmers in Kabba/Bunu, the level of fish production in Kabba/Bunu and the marketing value of fish in Kabba/Bunu. A questionnaire was designed mainly to find out personal information about the respondent and to enable the researcher obtain the opinion of farmers / marketers as regard to the effect of COVID-19 pandemic on fish production and marketing value in the area of the study. It was thus established after the COVID-19 pandemic that, fish production dropped drastically. It is only the males that practice culture fisheries actively in Kabba – Bunu L.G.A and female in most cases are the sellers of fish in Kabba – Bunu Local Government Area, though male involved in selling fish are Hausas. It was recommended therefore that Government should improve on the electrification of rural areas, provide water supply for the fish farmers as these will enable them to raise the fish efficiently and as expected, and should provide credit facility to enable marketers to expand their businesses. Women fish marketers should be encouraged to improve their educational status and to participate actively in cooperations as this will enable them to improve their business capacity. The covid 19 pandemic has caused so many fish farms fold up as prices of maintaining a fish farm has increased .*

**Key words:** Covic-19 Pandemic, fish Production, Marketing Value

### **Introduction**

Fish farming is the principal form of aquaculture which involve raising fish in tanks, enclosures or ponds either for consumption or commercial purpose.

There is a high level of poverty in some places in Nigeria especially in the rural areas, therefore there is need to find means of improving their living standard through the exploration of such great potential as fish production. One of the ways of doing this is to find out the problems facing fish farming and fish production.

The COVID-19 pandemic has turned out to be the most significant disruptive event witnessed by this generation ranging from mainstreaming remote working, cutting global travel to a comprehensive digital shift, the outbreak has changed the way businesses are executed. This transformational effect is not momentary; is significant and is here to stay. Under these settings, most enterprises have difficulty in operating. Especially, for small and medium-sized enterprises, these problems are more serious than for other enterprises as a result of the considerable decline in the demand for goods and service.

Fish culturing in agriculture supplement the natural methods of fish growth and harvest and it provides a method of producing desirable breeds of fish through the use of scientific methods and feeding of stock. Fish and fishery product has been a vital and affordable source of high-quality protein, especially in the world poorest nations in 2018, fish supplied more than 3.5 million people with at least 15 percent of their average animal protein intake.

Therefore, maintaining the long term prosperity and sustainability of fish production and marketing is not only political and socially significant but also of economic and ecologically important (Ye, and Cochrane, 2011).

Finally, fish production and marketing provides employment and income earning opportunities for considerable families and employment scarce coastal countries (Sanchirico and Willen, 2007). Fishery production and marketing make substantial contribution to employment and GNP; therefore, it has the significant importance in Nigeria economy due to its roles in domestic and foreign markets because

Nigeria has extremely inappropriate conditions especially in culture fisheries. Over many decades, series of research questions or topics has been done regarding fish production but the major importance of fishery as not being promoted to limelight. This motivated the researcher to write on the topic; the important of fish production and marketing value a case study in kabba L. G.A. Kogi state.

### **Statement of the Problem**

Nigeria is a developing country and animal protein is essential in our diets. The cost of animal protein is high and so children under 6 years are often malnourished due to lack of consumption of fish as the pandemic has yet increased this problem. Animal protein from other sources such as beef, mutton, bacon and pork are quite expensive, prohibited by some religion and not as sufficient as the fish protein. Fish is so far the cheapest source of animal protein and very important for growth and development of an economy. Despite the numerous uses of fish, the after effect of COVID-19 issues, resulted to very high price of producing and marketing fish, as the average man cannot afford to get fish cheaply, ranging from problems of transportation, preservation and marketing, all of these add up to the cost of production which eventually results to the final consumer paying above the normal price. Fish production in recent years has been driven by the rapid expansion of aquaculture in Asia, it is developing more slowly in Africa.

Marketing of fish is faced with a lot of problem, after the covid-19 pandemic, among which are; the cost of production, the distance of where these fish are caught to the market, the

perishable nature of fish, the market for fish, the number of Persons involved in the production of fish, preservation and packaging.

### **Objective of the Study**

The major objective of the research is to analyze the effect of COVID-19 pandemic on fish production and its marketing value in Kabba/Bunu L.G.A. of Kogi State, the specific objective is to:

- (i) Examine the social economic characteristic of fish farmer in Kabba/Bunu
- (ii) Determine the level of fish production in Kabba/Bunu
- (iii) Determine the marketing value of fish in Kabba/Bunu.

### **Research Question**

- (i) What is the socio- economic effect of the pandemic amongst fish farmers?
- (ii) What are the levels of fish production in Kabba/Bunu L.G.A.?
- (iii) What are the marketing values of fish farming in Kabba/Bunu L. G. A. of Kogi State?

### **Socio-Economic Characteristic of Fish Farmers**

In most parts of Nigeria, especially south western part, fish marketing whether in the life or processed form is mostly done by women (kingdom and Alfred-Ockiya, 2009). Over the years, Fish marketing have become such an important occupation among the women folk that some women inherit the enterprise from their mother's.

Adewumi I. ( 2010), opined that in rural communities where women are predominating engaged in fish handling, processing and marketing, most families depend mainly on the free fish supplied by the women of the household for food and the income derived from the enterprise is used for household upkeep, thus the contribution of fish marketing to livelihoods, especially in rural and semi urban Nigeria is apparent, even after the COVID-19 pandemic.

The socio economic characteristics of production, investment, income and expenditure patterns of people living in a particular location strongly influence their response to the technological changes and participation in the developmental schemes. However, lack of authentic information on the socio economic condition on the target group and regular updating of information is one of the serious impediments in the successful implementation of the developmental programs, conducted by various research workers in fisheries sectors in different regions of the country to study one or the other perimeter of the fish farming (Pandey and Upadhayay, 2012;Pandey, De and Hijam, 2014). Several attempt had been carried out on similar study in Kabba, where Odoma, Omada and Emeje (2018) before the COVID-19 pandemic studied "the problem and prospect of fish production in Kabba/Bunu L.G.A".

Is quite obvious that the main problem among the fish farmers in the Area is lack of water availability, source of good fingerlings, cost of feed and market outlets in improving fishing in Kabba/Bunu and the likely area in Nigeria, there must be collective efforts by forming Co-operative Union in order to mediate between interested farmers and the Government in acquiring good source of water especially the use of borehole, fish feed and market structure. The problems identified in the study definitely lead to the farmers very low or no profit during production. This has at a long run led to discouragement in the business and some farmers stopped production while others reduced their stocking density. (Odoma, Omada and Emeje, 2018).

### **Research Design**

The research work adopted survey research design in order to obtain valuable and reliable data in writing this work, the research design a set of questionnaire mainly to find out personal information about the respondent and to enable him obtain the option of farmers and / or marketers as regard to the effect of COVID-19 pandemic on fish production and it marketing value in the area of study.

### **Population of this Study**

The researcher selected 25 respondents for the study, 20 fish marketers and 5 fish farmers in Kabba/Bunu Local Government Area which were selected randomly by the researcher as the population of the study. The villages selected are Okebukun, Odo-Ape, Ayede, Kabba town, Egbeda and Kakun respectively.

### **Sampling and Sampling Procedure**

The sampling procedure was based on the fish farmers and/ or marketers' location and was randomly selected in each village of the study covered.

Simple random sampling was used to select 20 fish marketers and 5 fish farmer which amounts to 25 respondents. 4 fish marketers from Okebukun, 4 fish marketers from Kabba town, 4 fish marketers from Aiyede and 4 fish marketers from Egbeda and 4 from Kakun (Ikopa). One fish producer was selected from each of the aforementioned villages.

### **Instrument for Data Collection**

The instrument for this study was organized items of questionnaire, distributed to farmers and marketers. The questionnaire was developed considering the importance of fish production and it marketing value among other component to be suitable for the research topic.

The questionnaire was collected in the area and the researchers paramount aim was to see that the entire questionnaire gets to him for the analysis of the data collected in order to suit and evaluate his research work.

Method of data analysis was; 
$$\frac{\text{Total Number of respondent} \times 100}{\text{Total Frequency.}}$$

## **RESULTS ANALYSIS**

**Research Question 1:** what is the socio economic characteristics of fish farmers/marketers in Kabba/Bunu?

**Table 1:** Socio Economic characteristics of fish farmer/marketer.

| S/N              | Characteristics    | Frequency | Percentage |
|------------------|--------------------|-----------|------------|
| <b>Marketers</b> |                    |           |            |
| 1.               | Ages               |           |            |
|                  | 21-30              | 9         | 45%        |
|                  | 31-40              | 3         | 15%        |
|                  | 41-50              | 6         | 30%        |
|                  | 51-60              | 2         | 10%        |
|                  | 61 and above       | -         | -          |
| 2.               | Sex                |           |            |
|                  | M                  | 1         | 5%         |
|                  | F                  | 19        | 95%        |
| 3.               | Marital status     |           |            |
|                  | Single             | 8         | 40%        |
|                  | Married            | 12        | 60%        |
| 4.               | Level of Education |           |            |
|                  | Informal           | 3         | 15%        |
|                  | Primary            | 10        | 50%        |
|                  | Secondary          | 6         | 30%        |
|                  | Tertiary           | 1         | 5%         |

**Research Question 2:** What is the level of fish production in Kabba/Bunu?

**Table 2:** Determination of the level of fish production in Kabba/Bunu

| S/N | Fish production        | Frequency | Percentage % |
|-----|------------------------|-----------|--------------|
| 1.  | Types of fish          |           |              |
|     | Cat fish               | 4         | 80           |
|     | Tilapia                | 1         | 20           |
|     | Others                 | -         | -            |
| 2.  | Types of fish pond     |           |              |
|     | Concrete               | 3         | 60           |
|     | Earthen                | -         | -            |
|     | Both                   | 2         | 40           |
| 3.  | Sources of supply      |           |              |
|     | Kabba                  | 1         | 20           |
|     | Lokoja                 | 1         | 20           |
|     | Ibadan                 | 3         | 60           |
|     | Others                 | -         | -            |
| 4.  | Capacity of fish farm  |           |              |
|     | 50-200                 | -         | -            |
|     | 201-350                | 1         | 20           |
|     | 351-500                | 1         | 20           |
|     | 501 and above          | 3         | 60           |
| 5.  | How long in production |           |              |
|     | 1-5years               | 2         | 40           |

|     |                                              |   |     |
|-----|----------------------------------------------|---|-----|
|     | 6-10years                                    | 2 | 40  |
|     | 11-15years                                   | 1 | 20  |
|     | 16years and above                            | - | -   |
| 6.  | How can you raise sell of fish in your farm: |   |     |
|     | Very high                                    | 2 | 40  |
|     | High                                         | 2 | 40  |
|     | Moderate                                     | 2 | 20  |
|     | Low                                          | - | -   |
|     | Very low                                     | - | -   |
| 7.  | Source of finance                            |   |     |
|     | Friends and relatives -                      | - | -   |
|     | Cooperative society                          | 3 | 60  |
|     | Commercial Bank                              | - | -   |
|     | Government                                   | 2 | 40  |
| 8.  | Rating of marketing values of fish           |   |     |
|     | Very high                                    | 2 | 40  |
|     | High                                         | 1 | 20  |
|     | Moderate                                     | 2 | 40  |
|     | Low                                          | - | -   |
| 9.  | What do you use for feeding                  |   |     |
|     | Imported feed                                | 4 | 80  |
|     | Self formulated                              | 1 | 20  |
| 10. | How do you add value to your fish production |   |     |
|     | Smoking / dry                                | 4 | 80  |
|     | Freezing                                     | - | -   |
|     | Canning                                      | - | -   |
|     | None                                         | 1 | 20  |
| 11. | Source of employment in your fish farm       |   |     |
|     | Yes                                          | 3 | 60  |
|     | No                                           | 2 | 40  |
| 12. | Accommodation of apprenticeship              |   |     |
|     | Yes                                          | 4 | 80  |
|     | No                                           | 1 | 20  |
| 13. | Do you rely on own fish farm for survival    |   |     |
|     | Yes                                          | - | -   |
|     | No                                           | 5 | 100 |
| 14. | Any asset from fish production               |   |     |
|     | Yes                                          | 4 | 80  |
|     | No                                           | 1 | 20  |
| 15. | Any form of credit facilities                |   |     |
|     | Yes                                          | 3 | 60  |
|     | No                                           | 2 | 40  |
| 16. | Any challenges with feed                     |   |     |
|     | Yes                                          | 2 | 40  |
|     | No                                           | 3 | 60  |

|     |                           |   |     |
|-----|---------------------------|---|-----|
| 17. | Water problem             |   |     |
|     | Yes                       | 3 | 60  |
|     | No                        | 2 | 40  |
| 18. | Do you sell to middle men |   |     |
|     | Yes                       | 5 | 100 |
|     | No                        | - | -   |

**Research Question 3:** What is the marketing value of fish in Kabba/Bunu?

**Table 3:** Determine the marketing value of fish.

| S/N | Marketing value                         | Frequency | Percentage |
|-----|-----------------------------------------|-----------|------------|
| 1.  | How long in business                    |           |            |
|     | 1-5                                     | 13        | 65%        |
|     | 6-10                                    | 3         | 15%        |
|     | 11-15                                   | 3         | 15%        |
|     | 16 years and above                      | 1         | 5%         |
| 2.  | Types of fish sold                      |           |            |
|     | Life                                    | 2         | 10%        |
|     | Frozen                                  | -         | -          |
|     | Dry                                     | 18        | 90%        |
| 3.  | Types of marketer                       |           |            |
|     | Retailer                                | 12        | 60%        |
|     | Wholesaler                              | 8         | 40%        |
| 4.  | Rating fish value                       |           |            |
|     | Very high                               | 3         | 15%        |
|     | High                                    | 3         | 15%        |
|     | Moderate                                | 9         | 45%        |
|     | Low                                     | 5         | 25%        |
| 5.  | Source of finance                       |           |            |
|     | Friends                                 | 4         | 20%        |
|     | Family                                  | 3         | 15%        |
|     | Cooperatives                            | 9         | 45%        |
|     | Bank                                    | 2         | 10%        |
|     | Others                                  | 2         | 10%        |
| 6.  | Is fish marketing your major occupation |           |            |
|     | Yes                                     | 9         | 45%        |
|     | No                                      | 11        | 55%        |
| 7.  | What determine pricing                  |           |            |
|     | Season                                  | 5         | 25%        |
|     | Distance from source                    | 6         | 30%        |
|     | Fish size                               | 9         | 45%        |
| 8.  | Source of fish supply                   |           |            |
|     | Stream                                  | 3         | 15%        |

|     |                                                 |    |       |
|-----|-------------------------------------------------|----|-------|
|     | Cold room                                       | -  | -     |
|     | Fish farm                                       | 14 | 70%   |
|     | Others                                          | 3  | 15%   |
| 9.  | Does marketing of fish brings forth high return |    |       |
|     | Yes                                             | 14 | 70%   |
|     | No                                              | 6  | 30%   |
| 10. | If No, why?                                     |    |       |
|     | Price fluctuation                               | 4  | 66.7% |
|     | High cost of transportation                     | -  | -     |
|     | Spoilage                                        | 2  | 33.3% |
|     | Middle men                                      |    |       |
| 11. | Any form of credit facility                     |    |       |
|     | Yes                                             | 15 | 75%   |
|     | No                                              | 5  | 25%   |
| 12. | Do you have employee?                           |    |       |
|     | Yes                                             | 8  | 40%   |
|     | No                                              | 12 | 60%   |
| 13. | Do they add to your value?                      |    |       |
|     | Yes                                             | 6  | 30%   |
|     | No                                              | 14 | 70%   |
| 14. | Any asset from your marketing?                  |    |       |
|     | Yes                                             | 9  | 45%   |
|     | No                                              | 11 | 55%   |
| 15. | Do you rely on own fish marketing for survival  |    |       |
|     | Yes                                             | 12 | 60%   |
|     | No                                              | 8  | 40%   |

## Discussion

It was discovered that due to high number of respondents (50%) with primary education involve in the marketing of fish that is half of the population. This shows that if new innovations are introduced, it will be difficult for them to adapt to the new technology compared to those with secondary and tertiary. It was discovered in the findings that marketing of fish was dominated by females. This is in line with the work of kingdom and Alfred – Ockiya (2009) who noted that in most part of Nigeria, especially south western, fish marketing whether in the live or processed form is mostly done by women. It also shows that the number of females involved in marketing of fish is greater than males. It was discovered that the types of sellers involved in fish marketing are mostly retailers, these account for more than half of the respondents (60%). It was also discovered that most of the fish marketers sources their finances from cooperatives. That most of the retailers does not rely on fish marketing only for survival, these means they have other sources of generating income. That the marketers lack local preservation which extend duration of fish. This is in agreement with Cheke (2014) who noted that fish begin a highly perishable commodity, high post-harvest losses are common due to lack of proper handling on board. From the findings, the number of respondent who don't make any asset form their fish marketing is high due to lack of government support compared to those

that make asset. The research findings showed that though the government supports the sector of agriculture, more needs to be done as it seems not enough.

It was observed that people involve in the production of fish are more male to female, all the respondents are male and also discovered that people involved in production of fish are single, it was also discovered that people involved in the production of fish are mostly educated. It was discovered that people involved in the production of fish are mostly raising catfish and people raising tilapia are also raising catfish preferring concrete pond rather than earthen pond. It was also discovered that most of the respondents sources their supply from Ibadan compared to people who source their own from Kabba, Lokoja and Lagos.

### **Conclusion**

The study focused on the problems of marketing of fish after the COVID-19 pandemic as associated with it in Kabba – Bunu Local Government Area of Kogi State. The results obtained showed that fish marketing greatly reduced. It is thus established after the COVID-19 pandemic that fish farmers and marketers be motivated as cost of transportation, feeding of the fish, buying drugs for fish, and marketing is now more expensive for low income earners as such affecting the economy of our country.

The major importance of fish production and its marketing value is that, it provides employment opportunities for the youth and people who see fish business as one of the most lucrative business in Nigeria today.

The government as well does not pay much attention to the fishing sector in the area. This has brought about low production, malnutrition among children and inability of adult to eat a balanced diet/meal because of the availability of the product. There are no rivers where fish can be captured in the study areas and the numbers of persons involved in aquaculture are very few.

### **Recommendation**

The importance of fish and its marketing value can be improved on if the following recommendations are put in place:

1. Government should improve on the Electrification of rural areas.
2. Government should provide water supply for the fish farmers as these will enable them to raise the fish efficiently and as expected.
3. The government should provide credit facility to enable marketers to expand their businesses
4. Women fish marketers should be encouraged to improve their educational status and to participate actively in cooperations as this will enable them to improve their business.
5. sources of water should be made available for the fish farmers to improve on their yield.
6. The extension officers should endeavor to educate farmers and the general public especially the youth to go into fish farming (aquaculture); This should be a continuous process.
7. The price fixed for fish sales should be regulated by the government, there should not be price fluctuation amongst the fish farmers.
8. People should engage themselves in eating of fish, this add more value to our diet and health as such we build immunity against diseases like covid.

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