

# **Socioeconomic Consequences of Small-Scale Fish Farming and Commercialization in Taraba State, Nigeria's Ibi Lga**

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**Abstract:** In Ibi, Taraba State, Nigeria, this study examined the impact of the marketers' socioeconomic profile and assessed the profitability of fish smoking and marketing. For the study, a multistage random sampling procedure was used to elicit responses from eighty respondents. Data were gathered using a standardized questionnaire. The values of the profitability indicators that deduce the important influencing elements economic feasibility of fish smoking and marketing endeavor were ascertained using a variety of methods, including descriptive statistics, regression analysis, marketing margin and net marketing margin estimation processes. Section 4 presents the specific results of the frequency distribution of respondents based on the following factors: age, gender, marital status, household size, principal occupation, educational attainment, marketing experience, and preservation method used. The obtained marketing margin was 23.43%.

with a net marketing margin of 13.77%, resulting from a total gross and net revenue of smoked had a net marketing margin of 13.77% as a result of sales of smoked fish bringing in a total of N1, 378,889 in gross revenue and N8,10,580 in net revenue, respectively. The prices for the smoked fish, the unsmoked fish, and the overall cost of the smoked fish were N5,886,079, N4,507,190, and N5,075,449, in that order. With a fish smoking efficiency of 3.06 and a smoked fish marketing efficiency of 2.43, dealers can profitably invest N1.00 in fish smoking, which speeds up sales by 2.43 times compared to unsmoked fish. Thus, it is evident that the area under study may profitably smoke and market fish. It is advised that national market development coordination be established to guarantee the implementation of fish industry standard weight and measure.

Smoking and marketing in the area; the government should step up capacity building for agricultural extension officers and enumerators on market information service (MIS); affordable transportation and smoking service facilities should be maintained by private individuals and corporate groups alike to improve the efficiency of venture by dealers.

## **CHAPTER ONE INTRODUCTION**

### **THE STUDY'S BACKGROUND**

Nigeria is endowed with a wealth of fish resources in both fresh and marine waters. There are an estimated 12,478,818 hectares of inland waterways and about 741,509 hectares of brackish waters, the majority of which are suitable for aquaculture, according to information gathered from (<https://www.meat-machinery.com>). It went on to say that currently, 5,476 hectares of these waters are used for fishing. Furthermore, it described Nigeria's 200 nautical mile Exclusive Economic Zone (EEZ), which stretches across 853 kilometers of coastline and encompasses 192,000 square kilometers. And made it clear that Nigeria gets its fish from four main sources: aquaculture, artisanal fisheries, industrial trawlers, and significant frozen seafood. The Niger Delta provides more than half of Nigeria's total domestic fish supply.

A significant portion of the protein consumed by many individuals, particularly those living in poor nations, comes from fish. Fish products provide around 41% of the total animal protein consumed in

Nigeria. Furthermore, because it is more affordable than meat, fish is said to be a key source of animal protein and a staple diet in Nigeria. Nigeria has a greater overall demand for fish and fish products than many other West African nations (<https://www.meat-machinery.com>).

According to Subba et al. (2004), marketing refers to all methods and techniques used to move agricultural products from their point of production to their final customers. By use of marketing procedures, the commercial exchange of products and services (fish) among producers, marketers, Customers are guaranteed to have their values determined in terms of money pricing. If the best possible quality and nutritional value are to be maintained, fish marketing is a very sensitive procedure. Processing, storing, preserving, shipping, wholesaling, and retailing are all included. Given the high rate of produce deterioration, effective marketing would be a means to manage the existing resources going forward. Furthermore, the aquaculture industry's biggest job prospects are found in the processing and marketing sectors (Okoronkwo, 2016).

Market for fish is therefore perceived as a place where titles of goods and or services are exchanged at a given time and price from producers to retailer and to the final consumers, given the prevailing marketing channel. Exchange of titles in fish marketing requires at least two individuals here referred to as buyers and sellers that have to bargain and agree for transaction on the good and or service to occur, leading to a higher level of satisfaction by each individual. For these key marketing functions to be actualized, the performance of some other major marketing functions such as assembling, grading, transportation, processing, storing, sales etc. for and by middlemen of interest, retailers have to be fulfilled. Fish marketing like marketing of other goods and services has economic value because it gives form, time, place, utility to products and services (Benjamin and Victoria, 2012).

Urbanization has brought about a steady change in the way fish is marketed. As a result, a growing portion of Nigeria's fish consumption occurs outside of fish production areas as the country's urbanization process advances (Umoniyang, 2014). Prior to greater urbanization and population growth, fish was produced and consumed domestically and locally. The gap between fish producers and customers has grown due to rising urbanization and population migration to metropolitan regions, making fish marketing crucial. Middlemen occasionally enter production areas to buy goods and bring them to cities for retail sales.

## **RESEARCH PROBLEM STATEMENT**

The Nigerian economy, being in its developmental phase, presents numerous obstacles to the selling of agricultural products and services, particularly fish. Agricultural marketing has been criticized for being ineffective because of the perishable, delicate, and poorly stored produce, which leads to a high rate of spoilage, exorbitant prices, and a vicious cycle of poverty for small-scale farmers and marketers. Smoking or fire-drying is the less expensive preservative that the marketers used to guarantee a longer shelf life for the goods. By removing all of the water and some of the fat from the fish, fire-drying lowers its weight. Naturally, the majority of smoked-fish buyers who buy and preserve them are happy about this.

usage in the future. The main research question is: Given that marketers are aware that production in agriculture and other industries is matched with marketing in order to actualize the profit-making purpose in terms of price values, how can the efforts of smoking or fire-drying (value addition) that causes weight loss in fish translate into an increased price value and margin for the marketer? Since fish is highly perishable, post-harvest loss makes up more than 25% of the nation's total catch or harvest (Eyo, 2008). In light of the nation's overall fish needs, post-harvest losses should be taken into consideration in order to meet the demands of the nation's burgeoning population for food security and protein. This can be accomplished with an effective marketing strategy designed to guarantee high-quality transportation. fish from the point of production all the way to the final consumer. There is a slump in the post-harvest activities, which are mostly concerned with processing, storing, and preserving (Ikenwa, 2016). Furthermore, because fishery goods are so delicate, the kinds of physico-chemical methods that are employed in their processing and preservation greatly influence the markets and prices at which they are

sold. When fish preservation methods like smoking, fire-drying, salting, and/or sun-drying are not done with dedication in Nigeria, the quality of the products is compromised and may not even reach local or international market standards.

Since fish is a perishable good, getting it to market at the appropriate time from the place of production can significantly increase net returns and reduce waste. The challenge of preparing and storing fish so that customers are as satisfied as possible falls on Nigerian marketers. Following drying, they encounter further issues with improper handling, shipping, molding, and crushing (Nwankwo and Ogalue 2000). The following research questions are intended to be addressed by this study:

### RESEARCH ISSUE

- What socioeconomic traits characterize the Ibi Local Government Area's small-scale fish farming and marketing operations?
- What obstacles or issues do fish sellers in the Ibi Local Government Area encounter?
- To what extent is the small-scale fish farming and marketing enterprise valued added?
- Do the fish marketers make money from the anticipated value addition?

### GOALS AND ASPIRATIONS

The study's objective is to ascertain the socioeconomic effects of small-scale fish farming and selling in Taraba State, Nigeria's Ibi Local Government Area.

The following goals will help achieve the stated goal:

- Analyze the socioeconomic makeup of small-scale fish farming in the study area.
- Analyze the small-scale fish farming industry in the research region.
- Ascertain how socioeconomic profiles affect marketers' earnings
- Calculate the value enhancements and smoking efficiency that marketers' attempts to extend shelf life have made possible.

### IMPORTANCE OF THE RESEARCH

It is imperative that the value addition and profitability of small-scale fish farming and marketing operations in Taraba state's Ibi Local Government Area be looked at. Given how many people enjoy fishing as a hobby, there are also a lot of school dropouts who may pursue value addition through small-scale fish farming and marketing, but they are afraid of the business's capacity to make a profit. The gross margin cum net return on small-scale fish farming and marketing was calculated in this study. In this approach, young people without jobs can benefit from the constant supply of fish and the market to add value and successfully sell preserved fish. This research provides essential information for those who in addition to closing these knowledge gaps, could like to conduct more study in this area.

#### 1.6 The study's limitations and scope

Ibi Town, which is situated in latitudes 2, 8, 19' north of the equator and 9, 51 east of the Greenwich meridian, was the exclusive focus of this study.

## CHAPTER TWO

### INTRODUCTION

Fish farming provides income for all categories of participants and therefore adds to the national income. It also creates jobs both directly and indirectly for those working in the production of fishing output and other related businesses. It has a greater feed conservation rate and needs less area, time, money, and resources than cattle (Nwakuche et al., 2019). Around the world, fish farming is recognized as a significant agricultural and food-producing industry. Promoters contend that aquaculture can provide relatively cheap protein to millions of people in underdeveloped nations, thereby meeting their food security demands even while depleted fish stocks can be replenished (Hagar, 2014; Wally, 2016). The fish farming sector, which produces more than 50% of the world's fish production is the area of food production

that is expanding the quickest (FAO, 2017). Worldwide, 424 aquatic species are farmed, providing millions with sustenance, food security, a sustainable lifestyle, and a reduction in poverty (Galappaththi et al., 2020). Social and economic goals including boosting rural nutrition, generating supplemental income, diversifying sources of revenue, and creating jobs have propelled the growth of farming in Nigeria (Anthony and Richard, 2016). The rise in fish production activities as a result of the worldwide drop in ocean fisheries supply linked to fishing pressure, habitat destruction, and environmental pollution is indicated by the contribution of aquaculture to Nigeria's fish supply (Adedeji et al., 2011). According to Omitogun and Orisasona (2018), an approximate yearly per caput fish intake of 13.3 kg in 2013 demonstrated that fish is one of the few sources of animal protein accessible to 180 million Nigerians and a significant dietary component.

### **THEORY BASED STRUCTURE**

On what constitutes fish farming and the various techniques employed for fish farming in Nigeria, there is, still, disagreement. Thus far, writers have examined fish farming in their own unique ways in relation to the farming customs and traditions that are prevalent in their communities.

The definition of fish farming, also known as aquaculture, is the cultivation of aquatic creatures, such as mollusks, crustaceans, fin fish, and aquatic plants. In this context, human involvement in the rearing process is implied in order to boost production, such as frequent and sufficient stockings.

sustenance, defense against predators, and feeding (UNO/FAO, 1990). Aquaculture, as defined by Ibrahim and Yahaya (2011), is the commercial culture of plants and animals raised in fresh, brackish, or saltwater. Fish and shellfish farming is the definition of aquaculture given by the World Bank (2013).

Marketing marks the conclusion of the agricultural production process.

The act of coming together in public to purchase and sell goods or agricultural products, such fish and fish products, is known as marketing. One of the biggest obstacles facing fish farmers nowadays is often the marketing of fish products. This is due to the fact that although farmers are able to see that low pricing, inadequate transportation, an unprepared market, and significant post-harvest losses are obstacles, they are frequently ill-prepared to determine possible remedies. To be successful in marketing, one must pick up new abilities, strategies, and methods for gathering and applying data. The farmer receives a return on his products, like fish, at the point of marketing, which is known as revenue. Fish marketing encompasses all of the operations involved in getting fish or fish products from the farmer to the customer. It covers a range of tasks necessary to transfer fish or fish products from the producer to the end user.

### **CONCEPTUAL STRUCTURE**

This study's theoretical framework has been provided by a number of ideas, including the critical minimal effort theory, the industrial characteristics theory, the cultural theory of poverty, and the classical economic theory. In 1976, a group of classical economists led by Ragner Nurkse and Rodenstein Rodan established a connection between poverty and a process known as circular cumulative causation. This process holds that low income causes low savings and capital formation, which in turn maintains low productivity, which in turn feeds back into low income and the associated effects of absolute poverty. Because of this, it is thought of as a self-reinforcing condition where certain forces and causes work to keep people in a cycle of poverty. Because of their illiteracy, backwardness, and lack of technical skills, knowledge, and entrepreneurial endeavors, natural resources are misused, underutilized, and unutilized (Jhingan, 2006). According to the industrial characteristics hypothesis, which was advanced by Mc Clelland in 1961 and Angon in 1962, poverty is a result of a lack of money. Income and wealth hierarchies are thought to be primarily the product of an individual's drive, mindset, and aptitude. It makes sense that driven people with more aptitude for both mental and physical tasks will probably be superior to others with lesser aptitude for these tasks. According to Lewis's 1977 cultural explanation of poverty, "people held an attitude of fatality," or that it was futile to try to alter their circumstances, and "present

time orientation," which is why poverty is caused. They consequently have a lower likelihood of seeing education as a means of escaping their company. Lewis claims that those who live in poverty have a deep sense of isolation, dependence, powerlessness, and disconnection. Persuaded that the current institutions do not cater to their needs and interests, they feel alienated within their own nation. A pervasive sense of personal unworthiness and inferiority goes hand in hand with this feeling of helplessness. All of this applies to the impoverished people living in Taraba State's Ibi city. Harvey Leibenstein (1989) is credited with developing the critical minimum effort theory. According to Jingan (2006), the idea was based on the observation that developing nations such as Nigeria are trapped in a vicious cycle of poverty that maintains them in an equilibrium condition of low per capita income. He mentioned A poor man may not have enough to eat because he is underfed, his health may be weak, his working capacity is low due to physical weakness, and so on. Ragner Nurkse's work supports this assertion that "there is a circular constellation of forces tending to act and react upon one another in such a way as to keep a country in a state of poverty." The vicious cycle of poverty is caused by poor overall productivity in less developed nations as a result of underdevelopment, market imperfections, economic regression, and a lack of capital formation.

#### **THE PURPOSE OF THE IBI LOCAL GOVERNMENT AREA'S FISH FARMING**

Adzer (2016) asserts that the fishing industry plays a major role in the country's economic development by creating jobs, generating money, reducing poverty, earning foreign exchange, and supplying raw materials for the animal feed sector. Approximately 35 million individuals worked full- or part-time as fish farmers as of 2000, up from 28 million in 1990. By 2020, 42 million were expected to be among them (Central Bank of Nigeria (CBN), 2016). Data indicates that as people's understanding of the value of fish farming to both individuals and the nation's economy has grown over time, so has interest in the activity in Nigeria.

In order to achieve this, the Nigerian government has also demonstrated interest in fish farming through the introduction of a number of projects, including the Presidential Initiative of Aquaculture (PIA), Food and Agriculture Organization (FAO), National Accelerated Fish Production Project (NAFPP), and Fisheries Infrastructure Provision (FIP) (Adzer, 2016). According to Nyarondia (2017), Nigeria is endowed with an abundance of fish resources that, if properly utilized, will raise the current level of fish production and supply in the nation and enhance the consumption of animal protein and low-cost capital. Specifically, the subject region for this research is the Ibi Local Government region (LGA) in Taraba State, which is rich in resources, especially the fish market, river, and accompanying fadama land that provide an environment that is conducive to commercial fish farming.

This, if properly employed, will boost the fish producers' socioeconomic activities and disrupt the market. Issues Fish Marketers in Nigeria Face. Nigerian fish selling has numerous challenges. Numerous writers have investigated this topic and shared their results. According to a study conducted in Ogun State, Akinola (2015) reported that the primary issue with marketing is the high cost of fish preservation. He observed that 62% of the marketers he surveyed faced the challenge of preservation. Issues include exorbitant upfront costs, unstable buying prices, uneven and expensive transportation. Seasonality, scarcity, preservation methods, inadequate transportation, and the usage of ill-fitting containers were listed by Nwabueze (2010) as the primary issues with fresh fish marketing in the region. Insufficient processing ability, produce deterioration, and a lack of storage facilities were the issues reported among women marketers of agricultural produce in another study conducted in the Enugu South Area of Enugu State (Eze, et. al., 2010). According to their analysis, three specific issues—poor packaging information (0.55), lengthy distance to processing centers (0.45), and inadequate processing equipment (0.44)—loaded highly and increased inadequate processing skill. Poor technical expertise (0.42) and subpar technical extension services (0.37) were the other two. They also emphasized how difficult it is to market agricultural produce when there are insufficient storage facilities, which they claimed are weighed down

by a number of particular problems, including high store costs (0.41), insufficient storage facilities (0.47), subpar performance measures (0.34), and low equity capital (0.40).

Abah et al. (2013) identified barriers to fish commercialization in a study conducted in the Lafia Local Government Area of the state of Nasarawa. These are a result of insufficient funding as well as poor quality, storage, and transportation. A significant issue for wholesalers and retailers alike is a lack of funding, with smoked fish marketers ranking the highest, which will have an impact on the amount of fish they need. Retailers are particularly concerned about inadequate storage facilities, while marketers of smoked fish place a higher priority on transportation. This makes sense given that shops typically sell in tiny quantities at a time; as a result, they are probably concerned about having adequate storage facilities. On the other hand, marketers of smoked fish typically travel great distances to obtain the product and so have to contend with the rising transport fares.

### **NIGERIAN FISH SUPPLY AND DEMAND**

The Nigerian fishing industry is a significant contributor to the country's yearly GDP, accounting for 3–4% of GDP, and it provides around 50% of the population's animal protein intake, meeting their nutritional needs. Furthermore, the sub-sector provides employment and revenue for a considerable number of small dealers and artisanal fishermen. Nigeria has significant potential in both marine and freshwater fisheries, including aquaculture, notwithstanding the current decline in caught fisheries. Notwithstanding its great potential, domestic fish production is still significantly less than the world market's demand, which was projected to reach 2.2 million metric tons annually in 2008. As a result, about 60% of the fish consumed in the nation is imported. To lower the quantity of fish imports, one of the priority value chains that will be developed during the next four years is aquaculture. With FAO's assistance, the National Aquaculture Strategy Plan was completed to direct value chain support (FAO, 2013).

The State of World Fisheries and Aquaculture 2016, a biannual study from the UN FAO, states that since the 1970s, overfishing on the world has increased by over three times, with 40 percent of popular species, such as tuna, now being harvested in an unsustainable manner. It's crucial to remember that, despite the sustainable limit and growth in output reached globally, nations like Nigeria experience limited supply due to the effects of illicit, unreported, and fishing without a permit. Nigeria boasts an abundance of aquatic natural resources, yet its 11kg per capita fish consumption is typically regarded as poor. The article went on to say that the nation mostly depends on fish imports to make up for its production shortfall. In 2004, Nigeria's entire fish production was estimated to be 1,160,000 tons. The primary sources include aquaculture (3.8%), industrial trawl fishery (2.6%), brackish-water and inland fishery (37.6%), and imports (56%) from coastal areas. An estimated 600,000 tons of fish were produced domestically in 2007 compared to almost 700,000 tons imported. Nigeria must import 700,000 tons of fish a year, which is estimated to be worth \$500 million USD.

The Ministry of Agriculture's (2013) report on Nigeria's fisheries states that the country's fish consumption was expected to reach 1.89 million tons in 2010. The actual production, though, was 800,000 tons. The shortfall in the seafood supply exceeded one million tons. With Nigeria's population growing at a pace of 3% annually, it is anticipated that the deficit in fish supplies would only get worse. Despite being 13.5 kg annually, the average yearly intake worldwide is currently about 16.0 kg. If Nigeria meets its aim, the total demand will be 20% higher than the demand projection, or about 2 million tons.

Nigeria, where the average person consumes 13.5 kg of fish per year, has a predicted 1,430,000 tons of fish demand and 467,098 tons of domestic output.

tons in 2000, resulting in a 962,902 ton supply shortfall. In 2010, there was a 1,890,000 tons shortfall due to supply being short by 634,560 tons compared to demand. 2015 saw a sharp increase in demand to 2,175,000 tons, but domestic supply was only 730,248 tons, resulting in a 1,444,752 ton supply shortfall (Naoki, 2013). According to the available data, the nation's need for fish is greater than its supply, necessitating an immediate effort to boost domestic aquaculture production in order to fulfill the demand.

### **CHANNELS FOR FISH MARKETING**

A series of procedures or actions are engaged in the smoking and marketing of fish in order to shift ownership of the product from the place of production or processing to the point of consumption. In this way smoked-fish get to the end-user (the consumer). These practices and or activities carried out by the fish smoking and marketing pass along or through a specified route or medium which has been customized here as a distribution channel. The marketing channel(s) describes the existence of a trade medium for communication or the passage of smoked-fish that bridge the access gap between fish producers, marketers and consumers in the area under survey. In these regards, marketing of smoked-fish in the study area provides a social process by which individuals and groups acquire what people require and desire by producing and trading goods and value with others. It is simple to comprehend how the word "middleman" came to be used to describe product flows when comparing marketing channels or routes that resources or things could take to get from producers to users (Lou et al., 2014). A marketing channel moves goods and resources from their place of origin to their site of final consumption by working together as a team and sharing risks and resources. Agricultural commodities are transported from farmers to consumers over time and space, according to Subba et al. (2004). This transportation is made possible by a number of market intermediaries that are part of the marketing system.

They went on to say that different commodities have different marketing channels, which suggests that smoked fish and eggs have different marketing channels. Additionally, they believed that the marketing channel plays a number of responsibilities, including strategically connecting producers and buyers, influencing the firm's pricing strategy, and influencing product strategy through branding. There are four different sorts of marketing channels, depending on the degree of relationship that exists between the product's creator and the final consumer:

**The channel from Producer to Customer:** In this scenario, the producer deals directly with the customer, selling items or rendering services, bypassing intermediaries like wholesalers, retailers, agents, or resellers.

**Producer → Retailer → Customer:** In this scenario, the retailer purchases the goods straight from the producer and offers them to the customer. Producer → Distributor/Wholesaler → Client. In this channel, the producer transfers ownership to the end consumer via the wholesaler. The wholesaler purchases the product from the producer and resells it to the consumer at a reduced cost since the consumer purchases the product in bulk from the wholesaler. Producer → Broker/Agent → Retailer or Wholesaler → Client. Prior to the goods reaching the customer, this distribution chain involves multiple middlemen. The agent, who acts as a mediator between the producer and the seller, offers assistance in their negotiations. When producers seek to get their goods into the market, agents come into play as soon as feasible. This typically occurs when a perishable product needs to be sold quickly to avoid going bad. Occasionally, the agent would connect the retailers to the merchandise directly, or they would follow a different path that involved going via the wholesaler, who would then connect the retailer to the customer.

### **MARGIN OF MARKETING**

According to Tomek and Robinson (1990), marketing margin is the discrepancy between the price that manufacturers receive and the price that consumers pay. Stated differently, the marketing margin is the discrepancy between the product's purchase price and the company's profit margin. Furthermore, marketing margin, according to Cramer and Jensen (1982), is the portion of the final weighted average selling price that each marketing chain stage takes.

### **SECTION THREE: THE RESEARCH FIELD**

Nigeria's northeastern region is home to Taraba State's Ibi Local Government Area. With a total size of about 2,672 km<sup>2</sup>, it is one of the State's 16 local government districts. It is located between latitude 8°19'

N and 8.317°N and longitude 9051' E and 9.850° E. The Benue River's south bank is where the town of Ibi is situated. Within the local government territory, the Benue is fed by the Taraba and Donga rivers. This region's economy is centered on agriculture, with people using the Benue River for fish harvesting and the ample land there to produce a variety of crops.

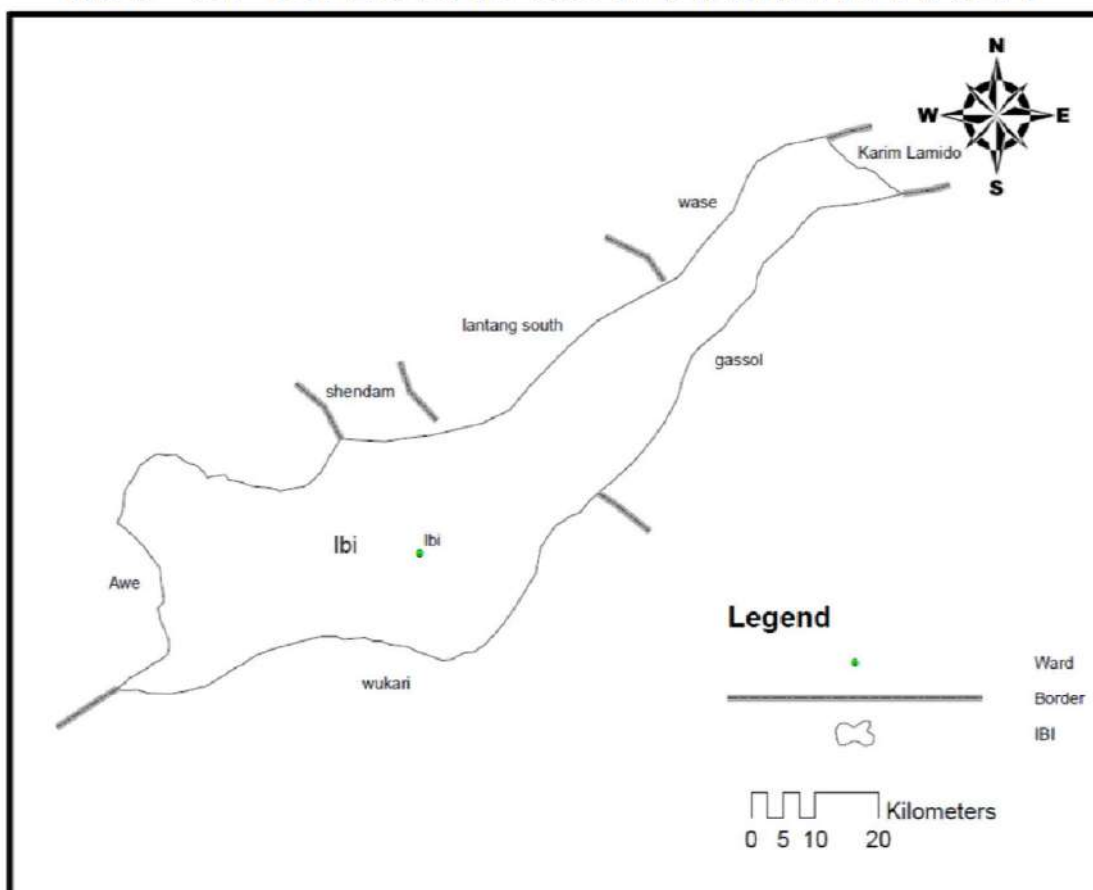
### DATA COLLECTION AND SAMPLING PROTOCOL

To choose respondents who buy capture and smoke fish before selling it, purposive sampling approaches were applied. Every week, eighty (80) of the small-scale vendors that were chosen conduct business at the Ibi markets. Respondent data was gathered through interviews and questionnaires. This research project uses primary data.

### DATA ANALYSIS METHODOLOGIES

Descriptive statistics, value added, and profitability analytical models were used to examine the data. Objective (i) was accomplished by descriptive statistics, such as frequency counts and percentages, whereas objectives (ii), (iv), and (v), among others, were accomplished through value added and gross margin analytical methods; (iii) was accomplished through the use of Ordinary Least Squares (OLS) analytical procedure.

## MAP OF IBI LOCAL GOVERNMENT AREA



SOURCE: GEOGRAPHY DEPT, KWARARAFI UNI, WUKARI

### FINDINGS AND CONVERSATIONS

Utilizing regression analysis, descriptive statistics, net marketing margin, marketing margin, and net return to marketing estimation procedures, the values of the profitability measures and the socioeconomic

characteristics influencing the smoker-marketers who infer the financial viability of the fish smoking and marketing venture were ascertained.

### FEATURES OF THE MARKETERS' SOCIOECONOMICS

These are variables that have to do with how social and economic variables interact. Finding the elements that make up the path or means of success to a specific firm is the greatest way to comprehend the diverse dynamism of marketing operations among any group.

Age, gender, marital status, household size, educational background, and years of experience in the marketing of smoked fish are among the socioeconomic traits of marketers that were investigated.

### THE RESPONDENTS' AGE

The age range, frequency, and percentage of the fish smoker-marketers under study are displayed in Table 1 below. The data indicates that most of the responders are of the active and viable age range needed for economics-related activities. People in the 18–60 age range are commonly referred to as the working or active population (Ande, 2008). This demographic is thought of as the working-age population that engages in productive endeavors. This circumstance is anticipated to facilitate the translation of a strong desire to raise family income, in line with the submission of Babalola et al. (2015).

**Table 1: Distribution of the Respondents by Age**

Age Range	Frequency	Percentage (%)
18-26	18	22.75
27-35	26	32.75
36-44	11	11.50
45-53	14	17.75
54-62	7	8.50
63 Above	4	4.75
<b>Total</b>	<b>80</b>	<b>100</b>

Source: Field survey 2024

## SECTION FIVE

### CONCLUDING REMARKS AND SUGGESTIONS

Given the predicted marketing margin, net marketing margin, fish smoking efficiency, and smoked fish marketing efficiency, is it a reasonable agribusiness endeavor to undertake, even though age and education are the socioeconomic variables that influence fish smoking and marketing? It is advised that:

- Marketers should try to raise their educational level by attending night schools, as education has a beneficial impact on their revenue.
- To guarantee the adoption and application of standard weight and measure for fish smoking and marketing in the region, national market development and coordination should be implemented.
- To increase the effectiveness of dealers' ventures, both private persons and corporate groups should support affordable transportation and smoking services.
- The government should step up capacity building for enumerators and agricultural extension officers on the market information service (MIS).
- It is advisable to motivate marketers to broaden their range of business ventures in order to generate additional revenue and raise their standard of living.

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