

## **The Economic Effect of Insurgency on Smoked Fish Sellers in Maiduguri Metropolis of Borno State Nigeria**

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### **Abstract**

*The research examined the economic effect of insurgency on smoked fish sellers in Baga fish marketing Maiduguri metropolis of Borno-State, Nigeria. Primary data were collected using questionnaires. A total of 60 respondents were randomly selected for the study. Descriptive statistics and gross margin was used to analyse data generated. The result reveals that 91.7% of the respondents were male, 83.3% married, 53.3% were between 41- 60 years, 41.7% constitute family size of between 1-5, 33.3% of the respondent had moderate educational level while 90% had trading as their main occupation. The previous and present gross margin values for small, medium and large carton of smoked fish were (N1, 402.00, N1, 962.20, and N4, 455.30) and (N1, 733.80, N13, 893.00 and N66, 488.70) respectively. The problems mostly encountered were poor storage facilities, pests and disease, lower market price by the buyers due to its perishable nature and lack of access to capital with 21.9%, 31.4% 22.5% and 24.3% respectively. The insurgency attack has negative effect on the economic activities of smoke fish sellers. Local dried fish marketers should be organized into cooperative groups by extension agents and government should provide adequate infrastructural facilities such as modern storage facilities, good road network etc.*

**Keywords:** Fish seller, Insurgency, Baga market

## **Introduction**

Fish constitutes a very important component of diet for many people and often provide much needed nutrient for a healthy living (Adeleke and Afolabi, 2012; Olaoye, 2010). Fish serve as a principal source of dietary protein which is very inexpensive in relation to other protein food (Folorunso *et al.*, 2006; Olaoye, Adekoya, Ezeri, Omonyimi and Ayansanwo, 2007). The fish muscle contain four basic nutrient in varying proportions; water 70-80%, protein 16-25%, lipid 1-5% and vitamins (Ojo and Fagbenro, 2004; Amusan and Okorie, 2002) which makes it less tough and more digestible compared to beef, chicken and mutton (Oloruntoba and Adegbite, 2006; Kainga and Adeyemo, 2012). However, fish is an extremely perishable food commodity than cattle, sheep and poultry, it gets spoil very quickly after capture (Adeosun and Adebukola, 2012; Omoregie *et al.*, 2001), hence it is subject to post-harvest losses ranging from bacterial and autolytic spoilage to other factors (Fasakin and Aberejo, 2002). These causes fish to lose its organoleptic qualities and generally unacceptable for human consumption as the quality diminishes (Ashamo and Ajayi, 2003; Folorunso *et al.*, 2006). Fish has been preserved into different forms due to its perishability, such as smoked, canned fish, fish cake, fish meal, fish burger etc. (Afolabi, 2008; Aderolu and Akpabio, 2009). Fish is a major source of food in West Africa and beyond (Akinwumi, 2011; Okorie, 2003). In view of its importance as a source of food, the demand for fish has been on the increase (Sabry, 1990; Ogadep, 2005). In the quest for meeting the needs of fish consumers across the west African sub-region, fish farmers and or sellers began to develop various means of storing the fish in order to preserve it for a longer period and moreover, to package it and get it across to other places where there is scarcity (Ofuya, 2003; Azam, Ali, Asaduzzaman, Basher and Hossain, 2004). The major challenge faced by fish marketers is that fish are perishable and easily infested by pests (Johnson and Esser, 2005; Tunaz and Uygun, 2004). It is in the light of this that most fish farmers developed the smoking method of fish preservation. However, the raging boko haram insurgency in the north east hit the regions fishing industry, causing shortages and driving up prices (National Emergency Management Agency (NEMA), 2015). Maiduguri has been particularly affected as the authorities in neighbouring Niger have detained huge consignments of smoked fish on security ground (National Commission for Refuge Management (NCRM), 2015). More than 200 vehicles loaded with fish had been detained in Diffa, Niger republic, for several months, which lead to scarcity of fish in Maiduguri (Faith and Aminu, 2015). The fish supply to Maiduguri has been disrupted and price have soared (Faith and Aminu, 2015).

Marketing channel is simply the path of a commodity from its raw form to the finished product or the path of a product as it moves from the producers to the final consumers (Olukosi *et al.*, 2005). In other words, it is the sequence of intermediaries or middle, and the marketers through which goods passes from producers to consumers (Olukosi *et al.*, 2005). Marketing channels are important in evaluating marketing system because they indicate how the various market participants are organized to accomplish the movement of a product from the producer to the final consumers. According to Gona *et al.* (2004) the number of middle men in the indigenous marketing system for the agricultural product has been a subject of considerable debate in government and academic circle. The concern has to do with

the existence of so many middlemen in the distribution chain of food products (Imoudu and Afolabi, 2002). The shorter the marketing channel, the more efficient the market, and the higher the net profit on sales of products (Madugu and Edward, 2011). Fish marketing does not usually involve the fishermen and consumers only but there are other players in the fish distribution channels especially middlemen (Lawal and Idega, 2004). Consequently, prices of fish change as it passes through these middlemen such that by the time it reaches consumers, it becomes expensive. Fish sellers have suffered so much financial setback as a result of the Boko haram insurgency (Abubakar, 2015; Nossifer, 2015).

### **Purpose of the study**

The overall purpose of the study was to examine the impact of insurgency on economic activities of smoked fish in Baga Park Fish Market Maiduguri, Borno State, Nigeria. Specifically, the study sought to:

- i. determine the socio economics characteristics of smoked fish marketers;
- ii. examine cost and return of smoked fish marketing before and after insurgency ;
- iii. determine marketing chain and margin of smoked fish marketing;
- iv. identify marketing constraint to smoked fish.

### **Methodology**

The study was carried out in Borno State, North eastern zone of Nigeria. Its capital is Maiduguri (also known as 'Yerwa'), which lies within latitude 10°N and 14°N and longitude 11° 3'E and 14° 4'E. Borno State which has an area of 61, 435sqkm is the largest state in the Federation in terms of land mass. The State occupies the greatest part of the Chad Basin and shares borders with the Republics of Niger to the North, Chad to the North-East and Cameroon to the East (Ministry of Land and Survey Maiduguri, 2008). Maiduguri, shares boundaries with Konduga Local Government Area to the North and Northwest and Jere Local Government Area to the South. The climate of the study area is characterized by dry and hot season, with mean annual temperature of 25°C. The hottest months are March and April with maximum temperature of 37-40°C, while the coldest months are December and January and with rainfall of about 500 – 700mm per annum (Nigeria Meteorological Agency, 2014). The majority of the inhabitants are farmers, fishermen, traders or civil servants (BOSADP, 2007).

The data collection was from both primary and secondary sources. The primary source was mainly interview, with the aid of questionnaire. Sixty questionnaires were distributed randomly to the respondents. Secondary sources, are Journals, textbooks, book of abstracts, conference proceedings, Internet etc. Stratified random sampling was used to divide the marketers into two that is wholesaler and retailer. Thirty questionnaires out of the sixty were distributed to the wholesalers and the remaining 30 questionnaire were also distributed to the retailers. Descriptive statistics and gross margin was used as analytical tools in the research.

## Results and Discussion

Table 1 reveals the socio-economic characteristics of the respondent, 91.7% of the respondents were male, while 8.3% were female. This indicates that fish marketing was dominated by male. This result is in line with study carried out by Orobiyi (2007) who observed that all fish marketers in Maiduguri are male. This could be attributed to high energy required in performing the marketing operations and cultural background. The marital indicates that, 83.3% of the respondents were married, 6.7% of respondent were single while 6.7% represent widow while 3.3% of the

respondents were divorced. This reveals that the majority of respondents were married, the involvement of married people as reported by Kwaghe, Gaya, and Patrick (2008) means that the trade is remunerative to cater for family responsibilities.

The respondents with 53.3% are within the age of 41-60 years, 25% fall within the age bracket of 21-40 years while 21.7% were within the ages of 60 years and above. The mean age of the fish trader is 40.5 and are actively involved in fish marketing. Akinwusi (1995), reported that marketing activities involve making the product available to the consumer in the form, place, time and at price the consumers are willing to buy, as such marketers below the age of 30 are few.

**Table 1: Socio-economic characteristics**

Characteristics	Percentage (%) (n=60)
<b>Sex</b>	
Male	91.7
Female	8.3
<b>Marital Status</b>	
Single	6.7
Married	83.3
Divorcee	3.3
Widow	6.7
<b>Age (years)</b>	
21 – 40	25.0
41 – 60	53.3
Above 60	21.7
<b>Educational level</b>	
Tertiary	33.3
Secondary	28.3
Primary	3.3
Quranic	30.0
Informal	5.0
<b>Household Size</b>	
0 -1	26.7
1 - 5	41.7
6 -10	15.0
11-15	16.7
<b>Main occupation</b>	
Smoked Fish Trading	90.0
Civil servant	5.0
Crop Farming	1.7
Artisan	3.3

Source: Field Survey, 2016

The educational level, shows that 33.3% of the respondents had tertiary level of education, 30% had informal education, and 28.3% had secondary education. However, 5% had Quranic education while 3.3% had primary education. As

observed by Ahmed (2008), education provides marketers with knowledge and skills that enhance marketing activities thereby ensuring efficiency in market performance as well as improving the standard of living of the marketer.

The household sizes of the respondents, 41.7% of the respondent had 1-5 as family size, 26.7% were single and 16.7% of the respondent had greater than 11 in their house hold while 15% had 6-10 family size (household). The family size, indicates that the fish marketers would not have remained in the business, if it is not profitable to meet their family need. This is in agreement with findings of Kwaghe, Gaya, and Patrick (2008) who opined that profitability of business is one driving motivational factors that attract people to any particular venture.

The occupational status of the respondents showed that 90% of the respondents were traders, 5% were civil servant. However, 3.3% were artisans and 1.7% of the respondents engaged in farming activities.

Table 2, reveals the problems faced by the respondents which includes, poor storage facilities, pests and diseases, low bargaining price and poor access to capital.

**Table 2: Problems encountered by the respondents**

<b>Problem encountered</b>	<b>Percentage (n=60)</b>
Poor storage facilities	21.8
Pest and Disease	31.4
Low bargaining price	22.5
Lack of access to capital	24.3
<b>Total</b>	<b>100.0</b>

Source: Field Survey, 2016

The study reveals that 31.4% of the respondents indicates that pests and diseases ultimately affect their fish invariably profit. Also, 24.3% complain of lack of access to capital to expand their small scale business. Furthermore, low bargaining price and poor storage facilities also constitute 22.5% and 21.9% of the problems, respectively. This work agreed with the findings of Abah, Zaknayiba and Simon (2013) that, due to lack of good storage facilities, there is limit to which a seller or consumer will keep unsold products. This is especially the case when fish in its fresh form. In this regards, retailers are likely to obtain higher profits because of the risk they bear as sales are gradual and can take longer periods. Secondly, wholesalers usually travel long distances to procure products and therefore bear the cost of transport and loading. These constitute part of their variable cost thereby reducing profit margin. Thirdly, volume of sales, by wholesalers it higher and thus buyers, mostly retailers enjoy the benefit of scale economics as a result.

The gross margin of small, medium and large carton of smoked fish before insurgency was represented in Table 3.

**Table 3: Gross margin of small, medium and large cartons of smoked fish before insurgency**

	<b>Cost before insurgency(N)</b>		
	<b>Small</b>	<b>Medium</b>	<b>Large</b>
Gross revenue	12,667	34,333	68,733
Purchasing price	11,265	32,371	64,333
Rent	121	250	900
Transport	23.75	47.5	61.25
Loading /offloading	95.23	100.31	123.4
Tax	25.02	40.01	60.01
Total variable	1,126	33,771	65,478
Gross margin	1,402	1962.2	4,455

Source: Field Survey, 2016

Table 3, reveals the gross margin for previous period as 1,402 for small, 1962.2 for medium and 4455.3 for large. This shows that, the profit improved even after insurgency though the total variable cost was higher after the insurgency. The gross margin of small, medium and large cartons of smoked fish after insurgency was represented in Table 4.

**Table 4: Gross margin of small, medium and large cartons of smoked fish after insurgency**

	<b>Present cost (N)</b>		
	<b>Small</b>	<b>Medium</b>	<b>Large</b>
Gross revenue	13,500	34,733	69,333
Purchasing price	12000	33,335	65,333
Rent	121	250	900
Transport	25	50	72
Loading/ offloading	95.23	100.31	123.4
Tax	25.02	40.01	60.01
Total variable	12,266	20,440	66,488
Gross margin	1,733	1,389	2,844

Source: Field Survey, 2016

The gross margin for smoked fish marketing was still positive even after the insurgency. This implies that the insurgency has impact on the profitability of the smoked fish marketing though total variable cost has increased after the insurgency. The marketing margin of the wholesalers and retailers indicates the risk incurred by the fish marketers (Jones, 1996). Although, this reveals that retailers had higher gross margin compared to wholesalers. This could be explained by the ability of wholesaler to handle bulk purchases for a long period of time. Transportation cost was found to constitute large portion of marketing margin in Africa (Abah, *et al.*, 2013).

## Conclusion and Recommendations

In spite of the problems associated with fish marketing in Baga Park Fish Market Maiduguri, it is evident that fish marketing is profitable. The marketer stand to earn more profit if the problems associated with the business were taken care of, especially the recent case of insurgency. The study also indicates that dried smoked fish product was highly marketed and there was negative effect on the gross margin of the fish sellers.

Effort should be made to train the marketers, with the help of extension agents, on efficient fish processing and storage techniques. Attainment of such knowledge could help to reduce the level of losses and improve profit.

The local fish marketers should be organized into cooperatives. This could help members to improve their business through assistance such as loans and other benefits from the cooperative society.

The private sector in collaboration with the Nigerian government should adequately provide infrastructural facilities such as good roads; good market facilities and so on to reduce marketing cost of dried fish.

Government should make effort to standardize the unit of measurement for dried fish throughout the nation, so as to check the fraudulent activities in dried fish marketing

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