

AN ANALYSIS OF THE STRUCTURE OF FISH
MARKETING AND DISTRIBUTION IN
KWARA STATE OF NIGERIA

by

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INTRODUCTION

It is generally recognized from the food balance sheets prepared by experts (NACD, 1972; FAO, 1966; Oyenuga, 1967) that Nigeria is a protein deficient country. Not only is the daily intake of protein low but the contribution from animal sources is extremely low. FAO (1966), calculated animal protein consumption of about 7 gm/caput/day for Nigeria. This is confirmed by the Second National Development Plan which states that "only 7 gm out of the 62 gm of protein available in the Nigerian diet come from animal sources".

Olayide *et. al* (1979) calculated that in 1975 protein from animal sources was 19.38 gm/caput. Protein from animal sources is often very expensive and beyond the means of an average Nigerian. Since many consumers spend as much as four-fifths of their incomes on food, they could not afford to consume adequate amounts of meat, especially beef and poultry.

It is envisaged that fish holds the promise of reducing protein deficiency in the country. A casual observation in the local markets shows that frozen fish is as much as 300% cheaper than any other meat. Fish (especially frozen fish) apart from being cheap, also has very high protein content and quality surpassing those of other animal proteins.

The bulk of the fish consumed in the country is frozen and are imported. Efficient and effective marketing and distribution of frozen fish is important to ensure that it gets to the hands of the consumers quickly in good quality and at prices they can afford. This undergirds the need for an efficient market structure

Market structure measures the number and size distribution of the existing competitors; it affects the conduct and ultimate performance of the market agents. The key element of market structure is the number of sellers and the total share of a few large firms in the market. As the number of rivals decrease, industry profits increase (due to high prices being charged) and draw nearer those found in monopolistic industries.

Objectives of the Study

The objectives of this study are to:-

- 1) examine the structure of fish marketing in Kwara State,
- 2) examine the conduct of the participants within the market structure,
- 3) evaluate the performance of the marketing system with the aim of identifying bottlenecks, and
- 4) suggest ways of overcoming the bottlenecks.

Method of Data Collection

The data for the study were collected through the use of questionnaire schedule to interview fish traders in Offa, Ilorin, Erin and Ajase-Ipo. The markets covered are Oja-Oba market, Erin; Owode market, Offa; Pata and Oja-Oba markets in Ilorin.

The study focused entirely on frozen fish marketing. Fresh and dried fish could not be included because of problems of logistics.

All available cold stores in the study area were covered. The factors or dealers in each cold store were interviewed, and the attached agents and some of their retailers were also interviewed. The study was conducted between October, 1981 and March, 1982.

The relationships between the firms and their agents, the distribution of cold stores and markets around and within the towns studied were also investigated.

ANALYSIS OF THE SURVEY DATA

Structure of Frozen Fish Marketing System

In Figure 1, the structure of frozen fish marketing in the state as it is observed from the study is presented tracing the pattern of distribution from the firm to the consumer.

The Firm

The fishing firm is the sole source and major distributor of frozen fish in Nigeria. Most of these firms engage in chartering arrangements with foreign firms which travel to distant waters to fish. The Nigerian firms pay the foreign firms in foreign exchange for a specified amount and type of fish.

Some of the marketing firms, the Nigerian firm, have at one time or the other, operated their own vessels, but packed it up due to lack of qualified personnel to man and maintain the vessels.

The only Nigerian company that is operating its own vessels is the Nigeria National Fishing Company (N.N.F.C). The company operates in close collaboration with the Nigeria National Shipping Line, which is being financed by the Federal Government.

All other marketing firms engage in vessel chartering. Some of the active ones are Globe Fishing Industry, Trans Continental Fishing Company, Sadia Fishing Company, Ibru Sea Food, Universal Fishing Company, Messu Fish Company, and Intra Fish Company

All these firms have their headquarters in Lagos, with distributors or factors all over the country. In the case of Nigeria National Fishing Company distributors are appointed in each of the 19 states of Nigeria.

Ibru Sea Food and Globe are the oldest marketing firms in the frozen fish marketing. Consequently, they have their factors in many towns in the country.

There is a distributor of N.N.F.C. at Ilorin. And only two of the marketing firms (Ibru and Universal) are actively engaged in the state. The rest of the dealers operate independently.

Intermediaries

From the study, four types of intermediaries were identified in the frozen fish marketing. They include Firm Factors or Distributors, Independent Dealers, Agents, and Retailers.

(i) Firm Factors or Distributors

These are the wholesalers who sell on behalf of the marketing firms on an average commission of 40K per carton of fish sold. They consist of mostly men who have direct contact with the firms. From the discussions with these factors, there exist a sort of relationship between them and their corresponding firms. Some of them are:-

- (1) Former employees of the firm
- (2) Shareholders in the company
- (3) Relatives of the executives of the company who will recommend them.

The first two categories are common within the Ibru and Universal factors.

The N.N.F.C. distributors sell on a wholesale basis to the independent dealers and directly to few agents it has. The other two firm factors sell directly to their agents.

No processing is done on their products. But the agents differentiate the fish on the basis of size and type.

Not many types of frozen fish were available on the market in the state during the period of study. Skumbia were the most common, while staverda followed, with small amounts of suban, moro, and stock.

The reasons attributed to this observation were that:

- 1) both skumbia and staverda are easy to come by, that is, from the firms.
- 2) they are relatively cheaper.

The latter reason justifies the high demand for both types in the state.

Entry to the wholesale sector of the marketing system is neither free nor restricted. It is both to some extent. The most important barrier is the deposit of N1,000 to N1,500 requested by the firms before supplying fish to the factors.

The cold stores for this group of people are at the expense of their corresponding firms. Therefore, any evidence of good market and competence in the handling of the fish are additional qualities the firms request for. This is to justify the existence of such cold stores in the area.

(ii) Independent Dealers

These are also a wholesale group, who buy directly from the firms and sometimes from their factors.

They own their cold stores, and are not in anyway required to buy from any particular firm or factors. Those who do not have licence or permit as factors, buy from licensed factors. Their patronage depends on the type and quality of fish the factor has to offer, as well as the price.

If when going round the factors in Lagos or Ibadan, they are able to negotiate for a lower price they will leave their former factor to buy at the cheaper place. They buy anywhere their choice of fish is available. They have the responsibility of transporting the fish to their station in their cold vans.

They also sell to their agents with a certain mark up. They earn a 20K commission from the factors and give it in return to their agents. They are very predominant in fish marketing in the state.

(iii) The Agents

The agents are the sub-wholesaler. They buy in quantities of about 2 - 10 cartons from their customers (factors or independent dealers), and sell to the retailers. Entry to the market is free as long as one has the money to buy in quantity. Those agents who are close to the factors can buy on credit for a day or two. These are mostly women who stay in front of the cold stores in which they buy. The regular agents do not leave their customers for another, but other agents buy anywhere they can get the fish. All sales in the cold store goes through the agents. They also sell to those household consumers who come to the store.

Some agents come from their various towns and villages to buy at Ilorin.

(iv) Retailers

The retailers are those who sell in small units to the household consumers. They hawk the fish from house to house. Some of them stay in the market place. They are mostly women of various ages.

A retailer can sell up to a carton in a day, but most of them do not sell more than half of a carton per day. They normally buy on credit from their specified agents. Entry is free as long as the agent is willing to take the retailer.

The above structure is rather general for frozen fish marketing in Nigeria.

In some cases these intermediaries are eliminated in the marketing system. The factors, and independent dealers sell directly to some institutional consumers. Such institutions include universities, hospitals, hotels and other schools.

However, the factors sell the fish to the institutions at a price higher than their agents pay. The difference ranges from N1.00 to N1.50 per carton.

MARKET CONDUCT

Interaction

The fish marketing firms and their intermediaries interact often when performing the marketing functions. The factors are directly in contact with the headquarters of the firms in Lagos. Each factor travels down to purchase his order of fish. He then transports the fish in his own cold van to his town. Those factors who have no cold van can order for an available firm's van to do the job for them. Such factors are charged N260.00 as the delivery fare from Lagos to any part of Kwara State by the firm.

The pricing of a carton of each type of fish is done by the firm alone, no negotiations on the part of the factor. The prices at which the factor can sell to the agents are also fixed by the firm. Thus making the factor a price taker. The Inspectors of the firm are sent from Lagos to pay the agents their commission of 20k on each carton purchased. This is deducted from the factor's 40k commission.

With this arrangement, the factor can not cheat the agents. The cordial relationship that used to exist between the firm and the factor is no longer there.

A few years back, if a factor incurs some losses due to power failure he must report to the firm. The factor is requested to contact a Public Health Inspector in his area. The Health Inspector is to determine if the fish is good for consumption or not. He will then give the factor a certified copy of his report. If the fish is certified unfit for consumption the factor has to bury or dispose of the fish somewhere. He has to show his certificate to the headquarters of the firm in Lagos. The firm will then reimburse him for the losses. However, the situation has changed. Factors are no longer reimbursed for their losses because of abuse by some factors.

The independent dealers in their own case, have the right to buy anywhere comfortable and cheaper for them. The firm factors who have independent dealers as customers will be struggling to keep them. As a result any problem or complaint laid before him will be dealt with promptly. The independent dealers get their 20k commission immediately after purchase of the fish. In some cases, however, the commission is allowed to accumulate.

Trade Association

The only active trade association existing in the frozen fish marketing system is the Agent Association.

The Association is a very powerful one, which puts both the factors and the retailers at their mercy.

Normally, the firm expects the factors to fix the retail price for the agent. They are expected to add just about 50k mark-up to a carton, but this is not always the situation. A carton of 30 kg skumbia which the agents buy at N17.00 is, at least, sold to the retailers at N20.00 or N21.00.

Any factor who kicks against such a pricing policy or proves to be too noisy, stand the risk of losing his customers hip to another factor who is ready to ignore such antics. Through the association, market information is freely communicated. For example, within 24 hours all members must have known where good fish is available, and where prices are low. With such information, the factors are compelled to reduce their prices. Refusal to do so may mean losing his agents to other factors.

It is against the rules of the Association for any factor to sell directly to any retailer. And it is the responsibility of every agent to refuse sales to another member's retailer.

Though the marketing firm is against such association, the factors can not effect the firm's wish. This they do, so as not to lose their agents to the independent dealers who are less concerned about the Association.

Pricing Policy

At the wholesale level, the price is fixed by the firm. The price is determined by considering the cost of production, freight and other charges, making allowances for profit. The prices vary depending on the type of fish and market conditions. Table 1 shows the prevailing market prices at the various levels of marketing in the state, at the time of study.

The prices from the firm vary from time to time. Pricing depends on the general cost of production by the firm. For example, a factor at Offa bought a carton 20 kg skumbia at N12.50, and a week after, the factor bought the same type and size of fish for N12.00.

Table 1 - Frozen fish prices at various levels of marketing

Fish	PRICE IN (N/kg)			
	Firm-factor	Factor-Agent	Agent-Retailer	Retailer-Consumer
Skumbia	0.54	0.57	0.67	0.74
Starverda	0.54	0.57	0.67	0.74
Suban	0.60	0.74	0.80	0.87
Stock	0.60	0.74	0.80	0.87
Mero	0.64	0.74	0.80	0.87
Macrobert	1.20	1.30	1.40	1.50

Source: - Field Survey, 1981

There is not much difference between the firms' prices, even though they set their prices independently. The firms pay an average of 40k commission per carton to their factors, out of which the agent is paid 20k as commission.

The factors usually add from N1.00 to N3.00 mark-up per carton. The independent dealers have to sell at the same price too because of keen competition in the market.

Table 2 shows the mark-up at each level of marketing. Since we do not know how much it costs the firms per carton, one can not compute their mark-up. The firm's representatives declined to give the necessary information.

The agents add a mark-up of N2.00 to N3.00, thus leaving the retailers who actually do the marketing with a meagre profit of N1.00 to N2.00 per carton. The agent also receives an additional 20k per carton as commission from the factors or dealers.

Table 2 - The profit level of the marketing agents

Agents	Average Mark-up (N/Cartron)
Firm	-
Factor	2.50
Agent	2.34
Retailer	2.00

Source: - Field survey, 1981

Selling is by negotiations and haggling by the consumers from the retailers. The profit which a retailer makes depends on her ability to sell and the type of fish she retails. The retailer gains more from a good, big fish.

Special Distribution of Cold Stores

Table 3 shows the distribution of the cold stores in the area of study. Majority of the cold stores are independent of any firm. The exceptions are Intra, Ibru, Universal and Rota cold stores which are owned by Intra, Ibru, Universal, and N.N.F.C., respectively. This partly explains the reason for the relatively high prices of the fish in the state.

Table 3 - Cold store distribution in the study area

Town	Total No of Stores	Rota	Ibru	Intra	Universal	Independent
Erin	1	-	-	-	-	1
Offa	4	-	-	-	1	2
Ajase	-	-	-	-	-	-
Ilorin	5	1*	1	1	1	2

* Supplied about 5 other small independent cold stores.

Source: - Field survey, 1981

Table 4 shows the distribution of factors, agents, and retailers in the study area. It is evident from the table that the independent dealers handle the majority of the marketing intermediaries.

Table 5 shows that over 46% of the retailers in the study area belong to the independent dealers. This explains why they are successful in terms of sales because the retailers are the active marketing intermediaries.

Table 4 - Distribution of factors, agents and retailers in the study area

Town	Company:- ROTA																	
	F	A	R	F	A	R	F	A	R	F	A	R	F	A	R	F	A	R
Erin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	16	50
Offa	-	-	-	-	-	-	1	15	300	1	6	30	2	22	360			
Ajase	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ilorin	1	20	310	1	10	200	-	-	-	1	8	120	2	21	420			

F = Factor; A = Agent; R = Retailer

Source: - From the Survey Data

Table 5 - Distribution of retailers by firm

Firm	Number of Retailers	Percentage
Rota	310	17.32
Ibru	200	11.17
Universal	150	8.38
Intra	300	16.76
Independent	830	46.37

Source: - Field Survey, 1981

Table 6 shows the consumption level of frozen fish in the study area, as evident from the sales of the individual cold stores.

An independent cold store in Ilorin has the highest quantity of fish sold per month, 180 metric tonnes, from the data collected. This is followed closely by 167.25 tonnes from Rota Fish Company also in Ilorin.

Table 6 Consumption level of frozen fish in the study area per month

Fish	Quantity Consumed/Month (metric tonnes)
Skumbia/Staverda	853.25
Macrobert	4.80
Stock	20.70
Suban	2.50
Mero	2.10

Source: - Field Survey, 1981

From the study, it was also observed that about 853.25 metric tonnes of skumbia and starverda is being consumed per month in the area, 4.80 tonnes of macrobert, 20.70 tonnes of stock, and 2.00 to 2.50 tonnes of suban and mero are also consumed.

The high consumption of skumbia and starverda is due largely to their ready availability in the market, and relatively low prices. They are also, always in small sizes thus giving room for about 4 to 5 fish pieces per kilogram while only 2 to 3 pieces of mero or macrobert will weigh 1 kg. The local people who believe in number rather than weight then rush at starverda and skumbia.

PERFORMANCE EVALUATION

Distribution System

The distribution of frozen fish is to some extent efficient when compared with the handling and distribution of some other agricultural products in the country.

Fish transportation are relatively on a large scale to the southern parts of the country. This is due to few available sources of animal protein. Moreso, frozen fish is relatively cheap and an average family can afford it, as opposed to beef or mutton.

In the past it was the duty of the firm to take care of the delivery of frozen fish to their factors in various towns of the country; but now each factor takes care of the transportation of his purchase to his destination. Consequently, each factor tries to own at least a refrigerated truck. For the firm to help those who have no trucks, the factor will be charged. The charge is N260.00 for a load of 360 carton of 30 kg each from Lagos to Kwara State.

The agents in frozen fish marketing do exploit both the factor or independent dealers and the retailers. This they do by selling to the retailers at prices above the firm's recommended agent-retailers price. And also they share the factor or dealer's commission for fish sold at the factor's cold store, without paying rent for the place used.

The numerous retailers in the frozen fish marketing are the real sellers. They provide place utility to the consumers. Some frozen fish retailers go from door to door to canvass for customers who do come to the market to make their purchase.

Storage System

Fish freezing has been the major source of storage in the marketing system of frozen fish in the country. This system is efficient for fish storage as long as there is constant power supply. As a result, the factors usually install electric plants to supply power to the cold stores in cases of power failure from NEPA. But then when the fish stays for a very long time it gets soft, becoming stale and stinks. Such fish have to be disposed at any price. However, arrangements are made through the agents to enable the retailers return the left-over fish to the cold store for preservation. If the remaining fish is not much the retailers may prefer to smoke-dry it for sale in the evening market.

Marketing Margin.

The marketing margin in the frozen fish marketing ranges between 37% and 45%.

Table 7 shows the marketing margin at each level of marketing.

Table 7 - Marketing margin at each level of marketing of frozen fish in the study area

Intermediary	Marketing Margin (%)
Factor	14
Agent	12
Retailer	9
Market	37 - 45

Source: - Field Survey, 1981

The marketing margin for the firm cannot be computed from the data collected because the cost price of each carton to the firm is not known.

The factor receives an average of about 14% of the consumers money while the agent and retailers receive about 12% and 9% respectively.

The marketing margin of 37 - 45% is considered high because no processing is done on the fish. The high marketing margin is basically due to the many intermediaries in the marketing system.

The 12% margin by the agents is very high, and in our opinion, exploitative. The agents do not perform active marketing functions. If the agents can be removed, or their excesses minimised, the burden on the consumers will be lightened.

The retailer's 9% could be considered fair. But when an individual retailer is considered with her sales, the marketing margin of 9% is low. A retailer

cannot sell more than a carton per day at most. It then means that a retailer, if lucky to sell a carton per day, cannot make more than N2.00. Majority of the retailers sell about half a carton per day, and make N1.00 profit per day.

On the other hand, an agent can sell an average of ten cartons per day, with a mark-up of N2.34 on each carton, or a total of N23.40 daily. Comparing the agent's income of N25.40 per day with the retailer's N1.00 (or N2.00) and their respective marketing functions, it is easily observed that the retailer's earning is very low.

The factor makes an average profit of N2.50 on a carton. This is not much considering his cost of transportation, power supply, salaries and other costs which he has to bear.

POLICY IMPLICATION

To meet the proposed estimate of 1.5 million metric tonnes demand of fish in 1985⁽¹⁾, meaningful policies as well as its implementation should be intensified in fish production.

Some of the problems causing the bottleneck are the inadequacy of capital for local fishermen to transform their largely subsistent fishing into commercial fishing; lack of infrastructure, especially fishing terminals; and the shortage of trained manpower. In fact, until very recently, none of Nigeria's institutions of higher learning offered either short-term or full-time courses in fisheries sciences.

The local fishermen have had over the years to cope with crude and make-shift equipment, such as outboard engines, synthetic nets, indicator buoys and boats, were beyond their means.

Re-organization of the Marketing System

The investigation carried out in the study area indicated that profit of all the middlemen in the frozen fish marketing varies between 37% and 45%. There is need to re-organize the marketing system so as to eliminate some of the operatives.

The presence of the agents in the marketing system is a bottleneck to the factors and retailers. Much more embarrassing is their powerful trade association in which they decide their relationship with the factors and retailers.

The firms do not in anyway recognise or have anything to do with the retailers. They recognise, instead, the agents and even pay them 20k commission on each carton their retailers can sell. A lot of risks are being taken up by the factors too because the firms do not seem interested in their operations other than the sales of fish.

To correct the short-comings enumerated above the following policy changes are recommended:-

The Federal Government should endeavour to enforce good management and implementation of its fisheries planning as well as its formulation. More of cold storage and ice-making machines should be purchased. These are expected to reduce losses of fish and fish products due to spoilage. Also, an intensive storage system should be formulated through research and extended to the local fishermen and itinerant traders.

The Federal Government should take more interest in the activities of the firms, not merely establishing a National Fishing Firm. A network of pricing system should be formulated for each type of fish at which the firms should sell. The price must give fair consideration to the cost of production by the firms. This will go a long way in reducing the price per kilogram of the frozen fish, as well as reducing the heavy burden on the consumers.

The agents should be eliminated from the frozen fish marketing system. In the alternative the factors could be given the power to fix the prices at which the agents should sell to the retailers. This will reduce the high margin presently enjoyed by the agents. In the agents place, the retailers should be recognised by the firms, and the 20k commission being paid to the agents on each carton sold should go to the retailers. This will compensate the retailers for their hard work and improve their standard of living.

REFERENCES

Federal Ministry of Agriculture and Natural Resources; Joint Planning Committee: Agricultural Developments in Nigeria, 1973 - 1985

Food and Agricultural Organization of the United Nations (FAO, 1966)
Agricultural Development in Nigeria, 1965 - 1980. FAO, Rome.

Lacipo, O.L. General System Analysis and Simulation Approach: "A Preliminary Application to Nigerian Fisheries, Chap. 1"

Oluyide et. al (1979) A Quantitative Analysis of Food Requirements, Supplies and Demand in Nigeria, 1968 - 1985. Technical Report for Nigerian Agriculture Development Council, 1971 - 1979

Oyemuga, V.A. (1967) Agriculture in Nigeria: An Introduction. FAO, Rome.

N.A.D.C. (1971) National Agricultural Development Committee. Fisheries Report: Federal Ministry of Agriculture and Rural Development, Lagos.

The Federal Department of Fisheries (1980) Fisheries Statistics of Nigeria.

Third National Development Plan. 1975 - 1980.