

PRICE BEHAVIOUR AND MARKETING EFFICIENCY OF MARINE FISH IN TUTICORIN, TAMIL NADU

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ABSTRACT

Marketing is an important activity in the marine fisheries sector of the country. Fish being a highly perishable commodity needs immediate disposal after harvest. Around 50 percent of the fish caught are marketed in and around the landing centres and the rest goes for interstate trade or export. Analysis of price behaviour at landing centres and retail markets helps to assess the efficiency of the marketing system. The paper analyses the efficiency of marine fish marketing system in Tuticorin through different indicators like marketing margins, percentage share of fishermen in consumers' rupee, monthly price fluctuations and marketing efficiency index. The results indicated that fishermen's share in consumers' rupee varied from 35 per cent for silverbellies to 80 per cent for barracudas. The highest marketing efficiency index was shown by barracudas and pigface breams.

Key words: Price behaviour, marketing efficiency, marine fish.

I. INTRODUCTION

An efficient marketing system is one capable of moving goods from producer to consumer at the lowest cost consistent with the provision of the services that consumers demand. Marine fish marketing in India is characterized by uncertainties in supply, assembling of fish from too many landing centres, different types of varieties and demand patterns, large number of marketing channels and intermediaries and price fluctuations. Unlike other agricultural commodities, where demand decides the price, marine fisheries supply plays a major role in price determination (Sathiadhas, 1997). Price is determined by the interaction of demand and supply at both producing centre (primary markets) and consumer markets. Analysis of price behaviour at landing centres and retail markets helps to assess the efficiency of marketing system.

Tamil Nadu is one of the important coastal states in the East coast, which has a coastline of 1076 km covering 13 coastal districts and 591 fishing villages. The marine fish production in Tamil Nadu stood at 5.09 lakh tonnes worth Rs.4,732 crores in 2010. All the fishing villages along Tamil Nadu coast constitute the primary marketing centres of marine fish. However, the major primary fish markets of Tamil Nadu coast are Pudumanikuppam, Cuddalore, Nagapattinam, Mandapam, Rameswaram and Tuticorin, where the fish arrivals are comparatively higher due to mechanised landings. Prior to independence, substantial quantity of dry fish was exported from Tamil Nadu especially from Tuticorin (Sathiadhas,

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1997). About 68,397 tonnes of marine products worth Rs.1,772 crores was exported from Tamil Nadu in 2008-09. Tuticorin in Tirunelveli District is one of the major fishing harbours in Tamil Nadu which contributes nearly 12% of the marine fish production in the State. Out of the 2.06 lakh active fishermen population in Tamil Nadu, 21, 613 are from Tuticorin. About 1,127 coastal fisher folk are involved in fish marketing in the region (CMFRI, 2005). An analysis of marine fish marketing system in Tuticorin was done for the period 2004-2008, using different indicators like marketing margins, percentage share of fishermen in consumers' rupee, monthly price fluctuations, landing centre and retail price correlations and marketing efficiency index.

Review of related studies

Panikkar and Sathiadhas (1989) estimated the functional relationship between the landing centre price and retail price at two markets in Cochin for selected fish varieties using linear regression analysis. The landing centre prices and retail prices were highly correlated for most of the fishes. Sathiadhas (1997) reported that marketing cost including handling and transportation of big sized fishes like seerfish, giant sea-perch, shark and barracudas was comparatively higher than that of small sized fishes such as sardines, lizard fish and thread-fin breams.

A macro level analysis of marine fish marketing revealed that at all India level, fishermen received an average of 30% (silverbellies) to 60% (seerfish) of consumers' rupee for different varieties of fish. The general trend of fishermen's share in consumers' rupee for different varieties of fish in various states indicates that the fish marketing system is comparatively efficient in Gujarat and Maharashtra while less efficient in Karnataka and Andhra Pradesh (Sathaidhas and Kanagam, 2000). A study conducted in the East Godavari District of Andhra Pradesh showed that the percentage share of fishermen in the consumer rupee (PSFCR) was maximum for varieties like penaeid prawns annually at 76.87% followed by sharks (69.57%), pomfrets (68.89%), rock cods (68.57%), thread fin breams (67.21 %) and seer fish (68.53%). These varieties earned the fishermen a consistent share of the consumer rupee (Narayankumar and Sathiadhas, 2006).

II. METHODOLOGY

There are about 22 fish landing centres in Tuticorin. The data on marine fish prices at first sales were collected from Tharuvaikulam, Alangarathattu, Tuticorin North and Tuticorin South fish landing centres. The major retail markets in Tuticorin are Corporation market, VOC market and SS Pillai market. The retail price data was collected from VOC market which is one of the important retail markets in Tuticorin. Analysis of marine fish prices at landing centre and retail levels were done for Tuticorin District for the period 2004-08. Monthly price fluctuations were analysed using coefficient of variation. Data on marketing costs and margins were collected from different landing centres and VOC market. The price spread or gross marketing margin is the difference between the producer price and the consumer price. The marketing margin is an indicator of efficiency of the marketing system. In the absence of any value added process, higher the value of marketing margin, the lower is the efficiency of the marketing system (Huger and Hirenath,

1984). Marketing efficiency is worked out using Shepherd's Index (Chole *et al.*, 2003):

Index of marketing efficiency (MEI) = V/I

V= value of goods sold (retail price)

I= Total marketing costs and margins

III. RESULTS AND DISCUSSION

Marine fish passes through different channels and intermediaries until it reaches the ultimate consumer. There is no wholesale market existing in Tuticorin and VOC market was one of the important retail markets where fishes arrive from Tharuvaikulam, Fishing Harbour, Alangarathattu, North and South landing centers. Groupers, prawns and cephalopods are mainly taken by the export sector. Sailfish, tunnies, seer fish, mackerel and pigface bream are mainly going to neighbouring States especially Kerala. In Alangarathattu landing centre, there is a large scale trade of dried rays especially to cater the dried fish markets in Central Kerala. Varieties like barracudas, pigface breams, half and full beaks, anchovies, crabs, etc move through the local marketing channels. The different marketing channels in Tuticorin are:

- A. Fishermen-Auctioneers-commission agents-Retailers (Tuticorin)-Consumers (Tuticorin)
- B. Fishermen-Auctioneers-commission agents (Kerala)-Retailers- Consumers (Kerala)
- C. Fishermen-Auctioneers-Agents of exporters-Processors-Exporters

Among the different channels, the local marketing channel is analysed to assess the price behaviour and marketing efficiency.

1. Monthly Price Fluctuations of Landing Centre and Retail Prices

Analysis of annual average price, monthly price fluctuations at landing centre and retail levels were done for commercially important species of fishes in Tuticorin. Analysis of monthly price fluctuations showed that at landing centre level fluctuations were more when compared to retail level. This showed a stable demand for fishes at retail level when compared to landing centre level where local buyers, exporters, and outside state buyers decide the price of auctioned fish. At landing centre, the highest fluctuation was shown by rock cods (87.87%) and the lowest by lizard fishes (10.96%). At retail level, the highest fluctuation was seen in the price of silver bellies (32.24%). Crabs (6.97%), anchovies (7.33%), seer fishes (10.93%) and pigface breams (11.79%) showed lower fluctuations (Table 1). The highly elastic supply, perishability of fish and absence of storage and processing facilities force the fishermen to dispose the catch immediately after harvest. This make the fishermen mere price takers and causes high fluctuations at landing points when compared to retail markets.

Table 3. Marketing Costs and Margins of Selected Species of Fish
(Marketing channel: Fishermen-Auctioneer-Retailer-Consumer)

Items of cost	Name of fish					
	Rays	Anchovies	Pigface- breams	Goatfish	Seer fish	Burracudas
At landing centre level						
Landing centre price	21	36	58	38	170	57
Auctioning charges	1.26	2.16	3.48	2.28	10.2	3.42
Fishermen's price	20	34	55	36	160	54
Costs of packing	0.1	0.1	0.2	0.1	0.2	0.2
Loading/unloading charges	0.25	0.25	0.25	0.25	0.25	0.25
Ice cost	1.5	1.5	2	1.5	2	2
Costs of transport	1	1	1	1	1	1
At retail level						
Ice cost	0.5	0.5	1	0.5	1	1
Stall rent	0.1	0.1	0.1	0.1	0.1	0.1
Labour cost	3	3	3	3	3	3
Other costs	0.2	0.2	0.2	0.2	0.2	0.2
Retail price	36	51	69	66	230	67
Marketing costs	7	7	8	7	8	8
Share of marketing costs in price spread (%)	43.75	35.29	57.14	23.33	11.43	61.54
Marketing margin	9	10	6	23	62	5
Share of marketing margins in price spread (%)	56.25	64.71	42.86	76.67	88.57	38.46
Price spread	16	17	14	30	70	13
Share of marketing margins in consumers' rupee (%)	25.00	19.61	8.70	34.85	26.96	7.46
Index of marketing efficiency	2.25	3.00	4.93	2.20	3.29	5.15

IV. CONCLUSIONS

The study showed that barracudas and pigface breams had the highest marketing efficiency and the maximum percentage share of fishermen in the consumers' rupee whereas seer fishes showed the highest percentage share of marketing margins in consumers' rupee. The extent of marketing margins in varieties like rays, goatfishes and silver bellies indicated the huge margin grabbed by the intermediaries. A large number of intermediaries and high marketing margins indicate a less efficient marketing system. Inelastic supply of fish results in slashing down of prices with heavy catches which in turn leads to high price fluctuations at landing points when compared to retail markets. The perishable nature of fish and lack of proper storage and processing facilities force the fishermen to dispose the produce immediately after harvest. In addition, most of the fishermen are indebted to the money lenders cum middlemen who finance the fishing operations which force them to sell the produce at a lower price. The involvement of too many intermediaries needs to be curbed in order to increase the efficiency of fish marketing system and ensure remunerative price to the fisherfolk. Introduction of co-operative marketing system in the region will help to protect the interest of both fishermen and consumers. It is also necessary to create proper institutional support mechanism for fishing and marketing activities as well as creation of adequate infrastructural facilities for storage and processing for improving the efficiency of fish marketing.

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