Research Note

Marketing Profile of Selected Fish Markets of Tripura

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Abstract

The study has analysed the marketing structure, marketing channels, producer's share, marketing margins and marketing efficiency in the selected fish markets of Tripura. The study has also identified the marketing channels for fish produced locally and fish brought in from other states. The marketing efficiencies have been found to vary from 51 per cent to 88 per cent, depending upon the length of marketing channel. The marketing efficiency is higher for fish produced locally than for fish brought in from other states. The fisher's share in consumer's rupee varies across different marketing channels and is more for fish produced and sold locally. The study has identified the constraints being faced by the fishers in marketing and has suggested some measures for easy operation and regulation of fish marketing in Tripura.

Key words: Price spread, marketing efficiency, fisher's share, fish marketing, Tripura

JEL Classification: Q13, Q12

Introduction

India is the third largest producer of fish and second largest producer of inland fish in the world. Since the beginning of 21st century, inland fish production in India has exceeded the marine fish landings. The inland fish production has increased from 2.85 million tonnes in 2000-01 to 4.86 million tonnes in 2009-10 — an increase of over 70 per cent (Indiastat, 2011).The expansion has mainly been due to research and development breakthroughs, compliance with consumer demands and improvements in aquaculture policy and governance. Aquaculture in India has now moved from a traditional activity to a well-developed industry.

Compared to the achievements in fish production, the fish marketing system is very poor and highly inefficient in India (Ganesh Kumar *et al.,* 2008). Unlike conventional marketing systems of agricultural products, fish marketing is characterized by heterogeneous nature of the products with respect to species, size, weight, taste, keeping quality and price. Market price of fish is determined by freshness, species and availability of fish in the market (Salim, 2008).The major problems in marketing include high perishability and bulkiness of the fish, high cost of storage and transportation, no guarantee of quality and quantity of commodity and high price spread (Ravindranath, 2008). Fish marketing in India has received little attention from public agencies and is mainly handled by the private sector. As a result, there are a large number of intermediaries in the marketing channels, especially in the freshwater fish sub-sector; thus reducing the share of fishers/aqua culturists in the consumer rupee, and contributing to the high retail prices. Hence, there are many challenges in developing an efficient domestic fish marketing system in India.

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The economy of the small North-Eastern state Tripura is based on agriculture and allied activities in general. Fisheries is particularly considered to be one of the vital sectors for its economic development. The fisheries sector of the state ensures nutritional security of rural masses; generates gainful rural employment and enhances income of the fish farmers. At present, 23.34 thousand hectares water area is available for fisheries in the state, out of which 13.342 thousand hectares is under culture fisheries. The state produced about 37 thousand metric tonnes of fish in 2009 from all the resources (GoT, 2009). Besides, the state has a large demand for fish as 95 per cent of the state population consumes fish. The requirement of fish in the state was estimated to be 41 thousand tonnes for the year 2009-10 (GoT, 2009). This fish supply-demand gap has attracted fish producers and traders from other states like Andhra Pradesh and even from Bangladesh(Nandeesha,2008).With this background, this study has analyzed the existing marketing structure, marketing channels, market intermediaries, producer share, marketing margins, price spread and marketing efficiency in fish marketing in Tripura.

Materials and Method

The study was carried out in Battala wholesale fish market and in Lake Choumoni retail fish market; the former being the largest wholesale market and latter being the largest retail market in the state, in volume of transactions per day (Upadhyay, 2008).The data were collected from primary as well as secondary sources. Semi-structured interview schedules were used to collect information from the primary sources like production areas and major wholesale/retail fish markets through surveys and discussions with the major stakeholders comprising traders, brokers/middlemen, retailers and officials of trader's association/ societies. The data were collected during May to July, 2011 from 10 auctioneers, 30 retailers, 30 wholesalers and 40 consumers and data from the fish traders of Andhra Pradesh were gathered over telephone. Information on fish prices, volume of trade, marketing functions, and marketing costs were collected and price spread was estimated using average and percentage analyses. Marketing efficiency was estimated as the ratio of consumer's price to total marketing cost and margins (Shepherd, 1972).The higher the ratio, the higher is the marketing efficiency and vice versa (Elenchezhian

and Kombairaju, 2004; Ganesh Kumar *et al.*, 2010; Roy, 2008). The constraints faced by the fishers were ranked by using Garrett's formula (Garrett and Woodworth, 1971).

Results and Discussion

Market Infrastructure

The market facilities considered essential for fish handling include off-loading docks, packaging materials, storage facilities, parking space, drinking water, electricity and telephones (Mukasa and Reynold, 1991). It was observed during the survey that both the markets lacked in basic infrastructure and services for fish handling. Both Battala and Lake Choumuni are the registered markets. The total area of Battala market is 0.80 ha and 36 commission agents/auctioneers, 42 wholesalers and 54 retailers function in this market with small space and temporary shelters. The storage facilities are very poor, the market is tin-shaded and the auctions are done on the ground itself. The total area of Lake Choumuni market is 0.28 ha. It is tin-shaded and 64 retailers function with this small space in this market. There is no parking space in both the markets.

Fish Marketing Channels

The fish marketing channel starts with a farmer and ends with the ultimate consumer involving a number of intermediaries in between. The involvement of these marketing intermediaries provides services of head loading, processing, preservation, packaging and transporting of fishes and these activities result in cost addition at every stage of marketing (Bishnoi, 2005). Major intermediaries involved in fish marketing channels in Tripura were identified as: fish traders, wholesalers, commission agents and retailers. It was observed that the farmers did not sell fish directly to the consumers in the urban markets, except a few in the rural markets. The major existing marketing channels for both types of fishes, locally-produced and brought from other states, in the state of Tripura were identified and are presented in Table 1. A perusal of Table 1 reveals that channel I (Fisher-Fish trader - Auctioneer-Wholesaler-Retailer-Consumer) was the most popular marketing mode for fish from other states and it was transacting about 86 percent of the total volume of transactions and channel III (Fisher-

Table 1. Different marketing channels in fish markets of Tripura

Marketing channels for fish brought from other states

Channel I   :   Fisher-Fish trader -Auctioneer-Wholesaler-Retailer-Consumer (86%).

Channel II   :   Fisher-Fish trader-Auctioneer cum wholesaler-Retailer-Consumer (14%).

Marketing channels for locally-produced fish

Channel III :   Fisher-Auctioneer-Wholesaler-Retailer-Consumer (64%).

Channel IV :   Fisher- Wholesaler-Retailer-Consumer (28%).

Channel V   :   Fisher-Retailer-Consumer (< 8%).

Auctioneer-Wholesaler-Retailer-Consumer) was the most popular marketing system for locally-produced fish, accounting for about 64 percent of the total volume of transactions.

Market Arrivals

On an average, 2-3 truck loads (about 13300 kg) of fishes were brought daily from other states in the wholesale market of Tripura. About 600 kg of locally-produced fishes were also sold daily in the retail market. The Indian major carps (IMC) and exotic carps constituted more than 80 per cent of the total fish arrival in the retail fish markets of Tripura, which corroborated with the finding of Upadhyay (2008). Rohu and catla were major fish species coming from Andhra Pradesh, while other species were mainly supplied by the local fish producers. Marketing agencies also experienced seasonal variations in the total arrival and species-mix of fishes in the markets. On an average, the total fish arrival in the Choumuni retail fish market of Tripura was about 1000 kg/day (Table 2). The major fish species sold in the markets of Tripura was rohu, accounting for 27.35 percent of the total arrivals in the markets, followed by catla (23.25%), exotic carps (20.51%), mrigal (13.67%), pabda (6.15%), hilsha (1.64%), bata (1.36%), prawn (0.68%), pangus (0.54%) magur (0.41%), singhi (0.27%), and other fishes like koi, Mystus sps, marine fishes (4.17%), etc. However, these species were short in supply as compared to their demand in the market/state.

Price Spread

The price spread of locally-produced fish and fish brought from other states was calculated across different identified marketing channels. Fish passed through several intermediaries before it reached the consumer and each step involved some cost and

Table 2. Species-wise market arrival of fishes in the Choumuni retail market of Tripura

Fish species	Fish arrival	
	Quantity (kg)	Percentage to total arrival
Rohu	269	27.35
Catla	229	23.25
Exotic carps	202	20.51
Mrigal	134	13.67
Pabda	61	6.15
Hilsha	17	1.64
Bata	13	1.36
Prawn	8	0.68
Pangus	5	0.54
Magur	4	0.41
Singhi	3	0.27
Other fishes (Koi, Mystus sps, marine fishes, etc.)	42	4.17
Total	987	100

margins to the intermediaries. The results of price spread analysis for fish markets of Tripura are presented in Table 3.

A perusal of Table 3 reveals that the fisher's share in consumer's rupee was highest in channel V (Fisher-Retailer-Consumer) at 88.74 per cent. The fisher's share in consumer's rupee decreased with increase in the length of marketing channel due to involvement of more number of intermediaries. The highest price spread was observed in the longest marketing channel due to involvement of highest number of marketing intermediaries. Marketing efficiency was highest in the shortest marketing channel, i.e. channel V (Fisher-Retailer-Consumer) and lowest in the longest channel I (Fisher-Fish trader -Auctioneer-Wholesaler-Retailer-

Table 3. Price spread for fishes in different marketing channels in Tripura

(₹/kg)

Particulars	Marketing channel				
	I	II	III	IV	V
Price received by fishers	52.12 (51.95)	63.87 (63.69)	84.37 (73.34)	89.76 (78.01)	102.10 (88.74)
Cost incurred by trader	15.30 (15.26)	15.30 (15.26)	-	-	-
Margin	4.68 (4.67)	4.68 (4.66)	-	-	-
Price paid by auctioneer	72.10 (71.90)	83.85 (83.61)	84.37 (73.34)	-	-
Cost incurred by auctioneer	1.96 (1.95)	1.96 (1.95)	1.96 (1.70)	-	-
Margin	2.87 (2.86)	2.87 (2.86)	3.45 (3.00)	-	-
Price paid by wholesaler	76.93 (76.72)	-	89.78 (78.03)	89.76 (78.01)	
Cost incurred by wholesaler	7.02 (7.00)	-	7.02 (6.10)	7.02 (6.10)	-
Margin	4.73 (4.72)	-	5.32 (4.62)	5.32 (4.62)	-
Price paid by retailer	88.68 (88.43)	88.68 (88.43)	102.12 (88.76)	102.10 (88.75)	102.10 (88.75)
Cost incurred by retailer	5.20 (5.18)	5.20 (5.18)	5.20 (4.52)	5.20 (4.52)	5.20 (4.51)
Margin	6.40 (6.38)	6.40 (6.38)	7.75 (6.75)	7.75 (6.75)	7.75 (6.74)
Price paid by consumer	100.28 (100.00)	100.28 (100.00)	115.05 (100.00)	115.05 (100.00)	115.05 (100.00)
Marketing efficiency (%)	51.95	63.87	73.34	78.01	88.74

Note: Figures within the parentheses indicate percentages in consumer price

Consumer). The variations in fisher's share in consumer's rupee resulted due to the presence of intermediaries and their marketing functions. A comparison of locally-produced fish and fish brought from other states clearly showed higher marketing efficiency and larger producer share for locally-produced fish than fish brought from other states.

A comparison of the retail prices of locally-produced fish and fishes brought from other states showed that fishes brought from other states were cheaper than locally-produced fishes, which showed the higher efficiency in culture practices in other states, mainly Andhra Pradesh. However, consumers preferred locally-produced fishes for their better taste.

Constraints

The fishers encountered a large number of marketing-related constraints which are enlisted in Table 4. In the present study, ten constraints were considered and ranked by using Garret ranking technique. The major marketing constraint faced by the fishers was the higher number of middlemen (mean score: 71.05), followed by high marketing cost (70.30), fluctuations in prices (68.32), poor storage facilities (67.33), lack of market information on price (66.65), delay in settlement of sale proceeds (66.11), lack of drinking water facilities in market yard (65.54), high degree of dependency on middlemen for financial support (65.43), poor infrastructural facilities in the

Table 4. Marketing constraints encountered by fishermen

Rank	Marketing constraint	Frequency	Mean score
I	Higher number of middlemen	88	71.05
II	High marketing cost	84	70.30
III	Fluctuations in prices	86	68.32
IV	Poor storage facilities	83	67.33
V	Lack of market information on price	80	66.65
VI	Delay in settlement of sale proceeds	80	66.11
VII	Lack of basic facilities like drinking water, etc.	79	65.54
VIII	High degree of dependency on middlemen for financial support	80	65.43
IX	Poor infrastructural facilities	78	65.06
X	Absence of cooperative marketing	79	62.93

market (65.06) and absence of cooperative marketing (62.93).

Conclusions and Policy Implications

Although domestic fish marketing plays an important role, it is still highly unorganized and unregulated (Ganesh Kumar *et al*., 2008). Like other states of India, the fish markets of Tripura have been found lacking in marketing infrastructure. Improvement in the fish marketing and distribution system in the state will not only reduce supply-demand gap, but will also help in ensuring food and nutritional security to the people of the state. Some suggestions are given below, which may help policy makers for improvement in fish marketing in the state.

Policy Implications

- The involvement of several marketing intermediaries which reduces producer's share in consumer's rupee and reduces marketing efficiency, could be minimized by evolving a co-operative fish marketing system with proper price monitoring system in the market yard.

- Unlike other agricultural commodities, where commission charges are paid by the traders, in fisheries these charges are paid by the fish farmers which reduces their share in consumer's rupee. As suggested by Ganesh Kumar *et al*. (2008), fish should be notified a commodity under APMS Act of 1966.

- For fishes being brought from other states, freshness and transportation are the main problems, as these fishes are brought only by roadways. A spectacular change in the transportation system and emphasis on transportation by rail can provide an efficient marketing system, as has been suggested by Rao (1984) also.

Acknowledgements

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