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Price spread, marketing efficiency and constraints in fish marketing in Raipur district of Chhattisgarh

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Abstract

The present study is based on primary data collected from 20 fishermen, 16 wholesalers and 30 retailers in Raipur district engaged in marketing of fish. The results of the study revealed that the fish of the area was marketed through three marketing channels 1. Producer–Consumer. 2. Producer–Retailer–Consumer. 3. Producer–Wholesaler–Retailer–Consumer. The study further revealed that among all the three marketing channels identified for fish marketing, the highest percentage of fisher's share was in channel 1st being 98.33 percent because of the fact that there were no intermediaries involved in this channel. The fisher's share in consumer rupee was 86.74 percent in channel 2nd while it was lowest 69.52 percent in case of channel 3rd. it was clear from the results that the absolute advantage of fisher was the highest in channel 3rd being Rs. 150/kg. As compared to Rs. 124.5/ kg and Rs. 145/ kg in channel 1st and 2nd. The results also depicted that the marketing efficiency was highest in marketing channel 1st (59.2) while it was lowest in channel 3rd (4.8).

Keywords: Marketing margins, marketing cost, price spread, marketing efficiency, marketing channel

Introduction

The Indian economy is highly reliant on the fishing industry. It increases national income, exports, food and nutritional security, and employment creation. The fisheries sector offers a livelihood for more than 2.8 crore primary-level fishers and fish farmers, as well as many more people farther down the fishing value chain. This sector also provides a considerable segment of the economically underprivileged people of the nation with a significant source of income. The export of marine products reached 12.9 lakh metric tons in 2019–20 and was valued at Rs 46662.85 crores. Almost 17% of our country's agricultural exports are fish and fish products. With its 8118 kilometers of coastline, the country has an exclusive economic zone covering 2.02 million square miles. The availability of inland and marine resources demonstrates the sector's potential for significant expansion. For millions of people, fishing and aquaculture remain significant sources of food, nutrition, money, and a way of living. During 2019-20, the Fisheries sector generated export revenue of Rs. 46,662.85 crores. About 280 lakh people receive livelihood support from the sector at the primary level, and about twice as many do so further down the value chain. One of the best solutions to reduce hunger and dietary deficiencies is fish, which is a cheap and abundant source of animal protein. The state of Chhattisgarh is playing a significant role by fostering rural self-employment through fishing, which in turn gives three rural residents access to wholesome food. 2.20 lakh people have the capacity to find work in the fishing industry. Large carp fish group play a prominent role in fishing, which is mostly dependent on culture. The majority of fish produced and caught in India is sold in regional domestic markets. Market conditions differ from one location to another. The majority of fish markets currently lack many infrastructures and are in the development stage. Both physical infrastructure and facilities of the Indian fish market are quite lacking. In the majority of fish markets, cleanliness and hygiene are given very little priority. Perishability, huge quantity, storage, transportation, commodity quality and quantity, poor demand elasticity, and a big price spread are the major barriers to selling fish.

Materials and Methods

For the present study, the Raipur fish market of Chhattisgarh was purposively selected. A total number of 20 fishers were selected from 20 villages namely Dharsiwa, Dharampura, Jora, Mana, Kandul, Abhanpur, Banjari, Gatapar, Parsada, Uparwara, Arang, Chorhadih, Gidhawa, Khapri, Nardaha, Tilda, Sarora, Sankara, Deori and Ganiyari (1 from each village) to collect

the marketing information, besides 16 wholesalers and 30 retailers dealing with the fish trade were also selected for detailed investigation. The survey method was used to conduct analysis through personal interview with the help of well-structured, pre-tested interview schedules, specially designed for the study. Marketing efficiency in different channels was computed by using Acharya's approach.

$$MME = \frac{FP}{(MC+MM)}$$

Where

MME = modified measure of marketing efficiency MC = Marketing cost

MM = Marketing margin

FP = Net price received by farmers

The value of goods marketed to the cost was used as the measure of efficiency. The higher the ratio in a channel, the highest is its efficiency.

Results and Discussion

After conducting research on the fish supply chain in Raipur district's market, it was observed that the distribution process involves various intermediaries, including wholesalers, retailers, and icing warehouse agencies. These intermediaries play a crucial role in ensuring the availability of fresh fish in the market and meeting the demand of consumers. However, their involvement also adds to the complexity of the supply chain and may lead to higher prices for end consumers. The most common marketing channels identified in the study area for fish were:

- 1. Producer–Consumer.
- 2. Producer–Retailer–Consumer.
- 3. Producer–Wholesaler–Retailer–Consumer.

The channel - I was the shortest channel found in the marketing of fish. In this channel as we can observed from the Table 1 that there is absence of intermediaries in between producer and ultimate consumer. The cost incurred by the producer was not high as those wholesalers/retailers incurred during the process, instead there is an addition on costs of labour around Rs 210.3 per quintal. The total cost incurred by the producer was Rs 210.3 per quintal and having the highest marketing efficiency of 59.2. The total quantity of fish sold by Fishermen was 3.21 quintals.

Table 2 displays the producer's net price as well as the marketing margins, pricing spread, and marketing effectiveness for channel II. The retailer serves as the sole intermediary between the producer and the customer in this channel, as they acquire products straight from the producer. The producer's portion of the consumer price was 86.74%. The retailer's marketing expenses came to Rs 665.30 per quintal, or 3.98 percent of consumer shares. The different expenses spent in this channel comprised 75 rupees per quintal for loading and unloading, 97.64 rupees for icing, 126 rupees for transportation, 250 rupees for spoiling, and 116.66 rupees for other expenses. Consumers paid Rs 16715.5 per

quintal, which is the price at which the shop sold the product. With a marketing efficiency of 6.5, retailers make a profit of Rs.1550.2 per quintal.

Table 3 displays the results for fishermen. It demonstrates that there are two market intermediaries-wholesaler and retailerbetween the producer and the final consumer in channel III. On the sale of their produce, producers or farmers received Rs 15000 per quintal, or 69.52. The wholesaler who had originally bought the product from the farmer then adds some marketing. Cost and market margin were considered before selling the produce to the last customer. In this manner, the seller's marketing expenses came to Rs 21577.6 per quintal.

Finally, on comparing all three-marketing channel it was found that the marketing channel having less no. of intermediaries has greater marketing efficiency, as it was observed in the channel I, II, III has 59.2 & 6.5, 4.8 respectively. The increment in producer's share in consumer's rupee results due to gradual absence of intermediaries in the following marketing channel. The disposal pattern of fish in the channel – I, channel – II and channel – III was found 3.21 quintals, 8.49 quintals and 15.6 quintals respectively.

In contrast with fisherman's the constraints faced by majority of them were found to be lack of cold storage facilities (76.9), Lack of primary Storage facility fish box (74.85), Lack of Proper training (74.3), Lack of quality seed (74), Lack of knowledge about adequate feeding (72.3), Weight loss with time (70.55), Improper management (63.7), Inadequate support from the bank), Problem of theft by local people (58.15), Delay or irregularity in payment (55.5), Selling of fish under market price due to village panchayat (50.3), Dependent on middleman for supply (48.85), Some restriction faced in public Ponds (39.4), Fluctuation in price (31.95), At time of harvesting non availability of labour (31.85).

Table 1: Price spread of fish marketing channel – I

| Particular's | Rs/quintal | Percent | | |
|---|------------|----------|--|--|
| Net price received by Producer | 12450.00 | 98.3389 | | |
| Disposal of fish (q) | 3.21 | | | |
| Cost incurred by the producer | | | | |
| Labour cost | 210.3 | 1.661098 | | |
| Sale price of producer/purchase price of consumer | 12660.30 | 100 | | |
| Marketing Efficiency | 59.2 | | | |

Table 2: Price spread of fish marketing channel – II

| Particular's | Rs/quintal | Percent | | |
|--|------------|----------|--|--|
| Net price received by Producer/purchased by retailer | 14500.00 | 86.74583 | | |
| Total quantity sold (q) | 8.49 | | | |
| Cost incurred by the retailer | | | | |
| 1. Loading and unloading | 75.00 | 0.448685 | | |
| 2. Icing | 97.64 | 0.584129 | | |
| 3. Transportation charge | 126.00 | 0.753791 | | |
| 4. Spoilage | 250.00 | 1.495618 | | |
| 5. Other | 116.66 | 0.697915 | | |
| Sub total | 665.30 | 3.980138 | | |
| Net margin of retailer | 1550.2 | 9.274027 | | |
| Sale price of retailer/purchase price of consumer | 16715.5 | 100 | | |
| Marketing Efficiency | 6.5 | | | |

| Particular's | Rs/quintal | Percent |
|--|------------|---------|
| Net price received by producer/Purchased by wholesaler | 15000.00 | 69.52 |
| Total quantity sold (q) | 15.6 | |
| 1. Loading and unloading | 78.64 | 0.36 |
| 2. Icing | 113.42 | 0.53 |
| 3. Transportation charge | 135.46 | 0.63 |
| 4. Commission charge | 520.5 | 2.41 |
| 5. Spoilage | 440.00 | 2.04 |
| 6. Other | 160.00 | 0.74 |
| Sub-total (1 to 6) | 1448.02 | 6.71 |
| Net margin of Wholesaler | 2060.46 | 9.55 |
| Sale price of wholesaler/purchase price of retailer | 18508.48 | 85.78 |
| 1. Loading and unloading | 88.56 | 0.41 |
| 2. Icing | 97.63 | 0.45 |
| 3. Transportation charge | 115.31 | 0.53 |
| 4. Spoilage | 530.36 | 2.46 |
| 5. Other | 256.44 | 1.19 |
| Sub-total (1 to 5) | 1088.30 | 5.04 |
| Net margin of retailer | 1980.83 | 9.18 |
| Sale price of retailer/purchase price of consumer | 21577.6 | 100.00 |
| Marketing Efficiency | 4.8 | |

Table 3: Price spread of fish marketing channel - III

Table 4: Constraints faced by fishermen's during production and marketing of fish

| S. No | S. No. Particulars | Fish farmer's |
|---------|---|---------------|
| 5. INO. | | Mean value |
| 1 | Lack of cold storage facilities | 76.9 |
| 2 | Lack of primary storage facility fish box | 74.85 |
| 3 | Lack of Proper training | 74.3 |
| 4 | Lack of quality seed | 74 |
| 5 | Lack of knowledge about adequate feeding | 72.3 |
| 6 | Weight loss with time | 70.55 |
| 7 | Improper management | 63.7 |
| 8 | Inadequate support from the bank officials | 60.1 |
| 9 | Problem of theft by local people | 58.15 |
| 10 | Delay or irregularity in payment | 55.5 |
| 11 | Selling of fish under market price due to village panchayat | 50.3 |
| 12 | Dependent on middleman for supply | 48.85 |
| 13 | Some restriction faced in public ponds | 39.4 |
| 14 | Fluctuation in price | 31.95 |
| 15 | At time of harvesting non-availability of labour | 31.85 |

Conclusion

The results of the current study showed that a significant number of middlemen are involved in the marketing of fish, and that each new route of distribution adds another middleman, diminishing the share of the fisher in consumer rupee. It was discovered that the percentage of the fisher in the consumer's rupee was inversely related to the quantity of middlemen present in the marketing channel. The study area needs to establish a well-organized fish market and appropriate marketing infrastructure, particularly with regard to post-harvest activities like fish processing and cold storage that will increase the participation of fishers in consumer rupee.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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