

Supply Chain Management of Dry Fish in Sangali- Miraj Twin City of Maharashtra State

Vivekanand A. Mane¹, D. H. Mitrannavar²

¹Assistant Professor (Selection Grade) and Head, Department of Commerce, Government First Grade College, Raibag-591 317, Dist. Belagavi, Karnataka State

²Assistant Professor (Selection Grade), Department of Agribusiness Management, University of Agricultural Sciences Dharwad, Dist. Dharwad, Karnataka State

ABSTRACT

India is the second largest country in the world to produce fish from aquaculture and third position in fisheries. During 2018-19 the total fish production is 7 million MT. Out of total fish production, Inland fish production is 3.2 million MT., marine fish production is 3.8 million MT and 20 per cent of dry fish production is in India. Maharashtra contributes 4.64 per cent to total fish production of India. During 2021-22, the total fish production was 5,87,412 MT. Among that the marine fish production was 3,89,491 MT and Inland fish production was 2,57,921 MT in Maharashtra. The present study was conducted to study the supply chain management of dry fish in Sangali- Miraj twin-city of Maharashtra State. The study was based on the primary data(2021-22) collected from wholesalers, retailer's consumers and marketing intermediaries through personal interview method. The primary data pertaining to marketing cost, margin, price spread, producers share in consumer rupee and marketing efficiency of dry fish in Sangali- Miraj twin city. To fulfill the objective of the study simple statistical tools like the tabular analysis and Shepherds index method was adopted. The study revealed that, there were three marketing channels identified by the marketing of dry fish which were Channel-I (Fish Processor-Wholesaler-Vendors-consumers), Channel-II, (Fish Processor-Wholesaler-Retailers-Consumers), and Channel-III, (Fish Processor-Retailers-Consumers). The results observed among all the three identified marketing channels, the channel- III was more efficient other than the two channels and among all the varieties the marketing efficiency was highest for Prawn variety. The results further revealed that with the increase in the length of marketing channel, the marketing efficiency decreases and vice-versa.

Keywords: Supply Chain, Dry fish, Marketing cost, Price spread, Marketing efficiency, Sangali- Miraj.

INTRODUCTION

Fish is one of the most essential sources of animal protein and nutrients for the maintenance of a healthy body of which a remarkable part comes from dried fishes. Dry fish is an important source of animal protein supplement which is preferred as a key dish or used as a flavoring agent in combination with other food items. The dry fish can be kept for in longer period and available throughout the year for consumption.

Major advantages of dried foods are less expensive to produce, stable at ambient temperature and retains most of the major nutrients with higher concentration of proteins, vitamins and calcium. There is a great demand of dried fish in all coastal areas of India. In addition, there is a good export market too available for dry fish. However, all dry fish in great demand during the fishing ban period when availability of fresh fish in market is low.

India is the second largest country in the world to produce fish from aquaculture and third position in fisheries. During 2021-22 the total fish production is 7 million MT. Out of total fish production, Inland fish production is 3.2 million MT., marine fish production is 3.8 million MT and 20 per cent of dry fish production is in India. Maharashtra contributes 4.64 per cent to total fish production of India. During 2021-22, the total fish production was 5,87,412 MT. Among that the marine fish production was 3,89,491 MT and Inland fish production was 2,57,921 MT in Maharashtra.

The dry fish market is extremely small compared to the fresh fish available in the market. There are different varieties of dry fish are available in twin-city of Sangali- Miraj market. They are Prawn, Bangada, Bambil, Nathali, Jim, Dandi, and Muguzingi with the price ranging between ₹ 150-350 per Kg. Keeping in view the about facts, the present study provides useful information on marketing cost, margins, price spread, producers share in consumers' rupee and marketing efficiency of dry fish in Sangali- Miraj twin city markets, which helped in analyzing the present marketing practices and suggesting measures for improved marketing of dry fish in Sangali- Miraj twin city market.

METHODOLOGY

The present study was entirely based on primary data that was collected from wholesalers, retailers and other marketing intermediaries by using well-structured pretested schedules through personal interview method in Sangali- Miraj twin city. The respondents were selected through simple random sampling method. The survey was conducted during the period of 2018-19 in Sangali- Miraj city. The main objective of the survey was to study the marketing management of dry fish in Sangali- Miraj twin-city. Sample markets from in Sangali city market and in Miraj fish market were selected for this study. To fulfil the objective of the study simple statistical tools like the tabular analysis and Shepherd's formula was adopted.

1. Tabular Analysis

Tabular analysis was adopted to process the data in the objective, in general. Simple statistical measures like averages, ratios and percentages were used to compare, contract or interpret the results meaningfully.

2. Shepherd's formula

Shepherd has suggested that the ratio of total value of goods marketed to the marketing cost is used as a measure of efficiency. The higher the ratio, higher is the marketing efficiency and vice-versa.

A better expression for Shepherd's idea is:

$$ME = \frac{V}{(MC+MM)}$$

Where,

ME = Index of Marketing Efficiency
V = Value of dry fish sold (consumers price)
MC = Total marketing cost
MM= Total marketing margin

3. Price spread

The difference between the price paid by consumer and price received by the producers is the marketing margin or price spread. Lesser price spread marketing channel is more efficient. Price spread of dry fish varieties (Bangada, Prawn, Bombil, and Nathali) and overall average was estimated by using following formula:

$$PS=CP-PP$$

Where,

PS= Price spread
CP=Consumer price
PP= Producer price

4. Producers share in consumer rupee

Producers share in consumer rupee is defined as producers' net price expressed as a percentage of retail prices.

$$\text{Producers share in consumer rupee} = \frac{\text{Producer's net price}}{\text{Retail price}} \times 100$$

RESULTS AND DISCUSSION

1. Marketing management of dry fish in the study area

The marketing cost was different for different market intermediaries, involved in marketing of dry fish in the study area. The detailed marketing costs and margins of wholesalers, retailers and vendors in Sangali- Miraj market is presented below.

1.1 Marketing cost of wholesalers in Sangali market

The result on the marketing cost of wholesalers in Sangali market presented in Table 1. Wholesalers were available only in Sangali market. They purchased dry fish in bulk through open market and sold directly to the retailers and vendors.

Transportation cost was the major marketing cost for wholesaler along with loading and unloading charges which accounts for 91 per cent of total marketing cost and packaging cost was about 9 per cent of total marketing cost. It was noticed that the wholesalers procured only required quantity and supplied to the retailers and vendors without any delay. Stock maintenance was not observed at the wholesaler stage. So there was a little chance of incurring loss to wholesalers in Sangali market.

1.2 Marketing cost of retailers in Sangali- Miraj market

Table 2 indicated that the result on the marketing cost of retailers in Sangali- Miraj market. Retailers purchased dry fish from fish processors or wholesalers and they sold it to the consumers. The major marketing cost was market fee which accounts for ₹ 3.2 per Kg (47.01 %) followed by transportation cost, loading charges and packaging cost in Sangali. In Sangali, marketing cost of ₹ 80 was incurred by retailers for fortnightly in local market. For retailers, transportation cost was the major marketing cost which accounted for about 59.52 per cent (₹5/Kg) in Miraj. Since retailers of Miraj purchased dry fish from wholesalers of both Sangali and Maishal fish market.

1.3 Marketing cost of vendors in Sangali- Miraj market

Table 3 presented in the result on the marketing cost of vendors in Sangali- Miraj market. Vendors incurred the total marketing cost of ₹4.50 per Kg. The major marketing cost was transportation cost which accounts for 55.55 per cent (₹ 2.50/Kg), followed by packaging cost and the least marketing cost was loading charge which accounts for about 22.23 per cent (₹0.80/ Kg) in Sangali market.

Likewise in Miraj market, vendors incurred the total marketing cost of ₹9.80 per Kg. The major marketing cost was transportation cost which accounted to 50 per cent (₹2/ Kg) followed by packaging cost and the least marketing cost was loading charge which accounts for 25 per cent (₹0.80/Kg). Because the transportation cost was the major expenses for the vendors compared to retailers, as they purchased dry fish from Sangali wholesalers and sold it to different villages.

1.4 Marketing costs and margins under channel-I for dry fish in Sangali market

Table 4 indicated that the marketing costs and margins in channel-I for dry fish marketing in Sangali market. The percentage of wholesaler's margin was in between 4.58 to 9.75 per cent. The marketing margin was different for different varieties like Bangada (9.75%) followed by Nathali (7.10%), Bombil (5.57%), Prawn (4.58%) and overall average marketing margin was 6.24 per cent. Maximum marketing margin percentage was observed for low priced varieties. The marketing margin percentage for vendors was in between 22.18 per cent to 34.31 per cent. The marketing margin was highest for Nathali (34.31%) variety, followed by Prawn (28.08%), Bombil (26.97%), Bangada (22.18%) and overall average was 28.08 per cent. Vendors marketing margin was more than wholesalers, as the risk factor was more to the vendors compared to wholesalers and fish processor. The findings of the study were on par with the study conducted by the Aswathy *et.al* (2014) on Marketing costs, margins and efficiency of domestic marine fish marketing in Kerala.

1.5 Marketing costs and margins under channel-II for dry fish in Sangali market

Table 5 presented that the marketing costs and margins in channel-II for dry fish marketing in Sangali market. The percentage of wholesaler's margin was in between 4.88 per cent to 10.40 per cent. The marketing margin was different for different varieties like Bangada (10.40%) followed by Nathali (7.80%), Bombil (5.57%), Prawn (4.88%) and overall average was 6.56 per cent.

Maximum marketing margin percentage was observed for low priced varieties. The marketing margin percentage for retailers was in between 15.47 per cent to 26.60 per cent. The marketing margin highest for Nathali (26.60%) variety followed by Bombil (26.14%), Prawn (22.87%), Bangada (15.47%) and overall average was 23.45%. Retailers marketing margin was more than wholesalers, as the risk factor was more to the retailers compared to wholesalers and fish processor. The findings of the study were on par with the study conducted by the Aswathy *et.al* (2014) on Marketing costs, margins and efficiency of domestic marine fish marketing in Kerala.

1.6 Marketing costs and margins under channel-III for dry fish in Sangali market

The marketing costs and margins in channel-III for dry fish marketing in Sangali market presented in Table 6. The marketing margin percentage of retailers was in between 19.00 per cent to 36.60 per cent. The marketing margin was highest for Nathali (36.60%), followed by Bombil (30.82%), Prawn (19.00%), Bangada (15.47%) and overall average margin was 23.45%. The result clearly indicates that the marketing costs and margins percentage of channel-III was more than channel-I and channel-II. The findings of the study were on par with the study conducted by the Aswathy *et.al* (2014) on Marketing costs, margins and efficiency of domestic marine fish marketing in Kerala.

1.7 Marketing costs and margins under channel-I for dry fish in Miraj market

Results in the Table 7 revealed that the marketing costs and margins in channel-I for dry fish marketing in Miraj market. The percentage of wholesaler margins was in between 4.58 per cent to 9.75 per cent. The marketing margin was different for different varieties like Bangada (9.75 %) followed by Nathali (7.10%), Bombil (5.57%), Prawn (4.58%)

and overall average was 6.24 per cent. Maximum marketing margin percentage was observed for low priced varieties. The marketing margin percentage of vendors was in between 22.18 per cent to 34.32 per cent. The marketing margins highest for Nathali (34.32 %), followed by Bombil (31.84 %), Prawn (30.15 %), Bangada (22.18%) and overall average was 30.30 %. Vendors marketing margin was more than wholesalers, as the risk factor was more to the vendors compared to wholesalers and fish processor. The findings of the study were on par with the study conducted by the Aswathy *et.al* (2014) on Marketing costs, margins and efficiency of domestic marine fish marketing in Kerala.

1.8 Marketing costs and margins under channel-II for dry fish in Miraj market

The marketing costs and margins in channel-II for dry fish marketing in Miraj market represented in Table 8. The percentage of wholesaler's margin was in between 4.60 per cent to 9.75 per cent. The marketing margin was different for different varieties like Bangada (9.75%) followed by Nathali (7.90%), Bombil (5.58 %), Prawn (4.60%) and overall average was 6.24 per cent. Maximum marketing margin percentage was observed for low priced varieties. The marketing margin percentage of retailers was in between 14.50 per cent to 26.15 per cent. The marketing margins highest for Bombil (26.15%), followed by Nathali (24.19%), Prawn (21.53%), Bangada (14.50%) and overall average was 22.29%. Retailers marketing margin was more than wholesalers, as the risk factor was more to the retailers compared to wholesalers and fish processor. The findings of the study were on par with the study conducted by the Aswathy *et.al* (2014) on Marketing costs, margins and efficiency of domestic marine fish marketing in Kerala.

1.9 Marketing costs and margins under channel-III for dry fish in Miraj market

The marketing costs and margins in channel-III for dry fish marketing in Miraj market given in Table 9. The marketing margin percentage of retailers was in between 22.57 per cent and 35.80 per cent. The marketing margin highest for Nathali (35.80%), followed by Bombil (32.72%), Prawn (28.62%), Bangada (22.57%) and overall average margin was 30.46%.

The result clearly indicates that the marketing costs and margins percentage of channel-III was more than channel-I and channel-II. The findings of the study were on par with the study conducted by the Aswathy *et.al* (2014) on Marketing costs, margins and efficiency of domestic marine fish marketing in Kerala.

1.10 Price spread of dry fish in Sangali- Miraj market

Table 10 and Figures 1 and 2 are showed result of price spread of dry fish in Sangali- Miraj market. In Sangali market price spread was observed to be highest for Prawns in channel-I (₹ 120 per kg) and channel-II (₹ 100 per kg). In channel-III, highest price spread was observed for Bombil (₹ 90 per kg). Among the observed channels, the price spread was more in Channel-I (₹ 95 per kg) compare to other channels (channel- II and III).

In Miraj market price spread was observed to be highest for Prawns in channel-I (₹ 120 per kg) and channel-II (₹ 100 per kg). In channel-III, highest price spread was observed for Bombil (₹ 90 per kg). Among the observed channels, the price spread was more in channel-I (₹ 102.50 per kg) compare to other channels (channel- II and III). The findings of the study were on par with the study conducted by the Aswathy *et.al* (2014) on Marketing costs, margins and efficiency of domestic marine fish marketing in Kerala.

1.11 Producers share in consumer rupee in the marketing of dry fish in Sangali- Miraj market

Table 11 and Figures 3 and 4 presented results of the producers share in consumer rupee in the marketing of dry fish in Sangali- Miraj market. In Sangali market, among all the varieties, prawns recorded highest producer's shares in consumer's rupee viz, channel-I (64.70%), channel-II (68.75%) and channel-III (78.58%). Among the observed channels, channel-III was having the more producers' share in consumer's rupee (66%) than the other channels viz, channel-II (65.27%) and channel-I (62%).

In Miraj market, among all the varieties, prawns recorded highest producer's share in consumer's rupee viz, channel-I (62.85%) and channel-II (64.70%). In channel-III (71.43 %) the producer's share in consumer's rupee was more for Bangada variety compared to the other varieties. Among the observed channels, producers share in consumer rupee was more for channel-III (66%) compared to other channels viz, channel-II (65.27%) and channel-I (62%).

The higher the price received by the fish processors, higher is the marketing efficiency. It was evident that the share of the producer inversely varies with the length of the marketing channel. Producers share was observed to be highest in channel III in which the number of intermediaries was less. The producers share was decreased with the increase in the number of intermediaries in marketing of dry fish. The producers share was observed to be lowest in channel I, where the numbers of intermediaries were more. Thus, with an increase in the length of marketing channel, the producers share in consumer rupee decreased thereby decrease in the marketing efficiency. This type of findings agrees with Soumyadip *et al.*, 2014.

1.12 Marketing efficiency of dry fish in Sangali- Miraj market

Table 12 and Figures 5 and 6 indicated that the results of marketing efficiency of dry fish. As the total marketing costs and total marketing margins of Prawn was less compared to other varieties, it was having more efficiency viz, channel-I

(2.84), channel-II (3.20) and channel-III (4.67). Among the observed channels, on an average channel-III was having the more efficiency(3.41) compared to channel-II (2.88) and channel-I (2.64). With decrease in the length of marketing channel, themarketing efficiency wasincreased in Sangali market.

As the total marketing costs and total marketing margins of Prawn was less compared to other varieties, it was having more efficiency viz, channel-I (2.84), channel-II (3.20) and channel-III (4.67).

Among the observed channels, on an average channel-III was having the more efficiency (3.41) than channel-II (2.88) and channel-I (2.64). We can say that, with decrease in the length of marketing channels, the marketing efficiency was more in Miraj market.

Thus the Miraj fish market had more marketing efficiency than Sangali fish market. The findings of the study were on par with the study conducted by the Ganesh Kumar*et.al* (2008) on Domestic Fish Marketing in India – Changing Structure, Conduct, Performance and Policies.

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Table 1: Marketing cost of wholesalers in Sangali market

(₹. / Kg)

Particulars	Sangali market	
	Average cost	Percentage
Transportation cost plus Loading and unloading charges	4.00	91.00
Packaging cost	0.40	9.00
Total	4.40	100.00

Table 2: Marketing cost of retailers in Sangali- Miraj market

(₹. / Kg)

Particulars	Sangali market		Miraj market	
	Average cost	Percentage	Average cost	Percentage
Loading charges	0.80	11.77	1.00	11.90
Transportation cost	2.00	29.45	5.00	59.52
Packaging cost	0.80	11.77	0.80	9.53
Market fee	3.20	47.01	1.60	19.05
Total	6.80	100.00	8.40	100.00

Table 3: Marketing cost of vendors in Sangali- Miraj market

(₹. / Kg)

Particulars	Sangali market		Miraj market	
	Average cost	Percentage	Average cost	Percentage
Loading charges	1.00	22.22	1.00	25.00
Transportation cost	2.50	55.55	2.00	50.00
Packaging cost	1.00	22.23	1.00	25.00
Total	4.50	100.00	4.00	100.00

Table 4: Marketing costs and margins under channel-I for dry fish in Sangali market

(₹. / Kg)

Particulars	Channel-I								Overall average	
	Bangada		Prawn		Bombil		Nathali			
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Fish processor										
Price received	100	62.50	220	64.70	180	64.29	120	54.54	155	62
Processing cost	5.65	3.54	4	1.17	4	22.97	4	1.82	4.41	1.77
Purchase price of fish	90	56.25	180	52.95	150	53.57	100	45.45	122.50	49
Marketing margin	4.35	2.72	36	10.59	26	9.29	16	7.27	28.10	11.25
Wholesaler										
Purchase price	100	62.50	220	64.70	180	64.29	120	54.54	155	62
Marketing cost	4.40	2.75	4.40	1.30	4.40	1.57	4.40	2	4.40	1.76
Marketing margin	15.60	9.75	15.60	4.58	15.60	5.57	15.60	7.10	15.60	6.24
Vendors										
Purchase price	120	75	240	70.59	200	71.43	140	63.64	175	70
Marketing cost	4.50	2.82	4.50	1.33	4.50	1.60	4.50	2.04	4.50	1.80
Marketing margin	35.50	22.18	95.50	28.08	75.50	26.97	75.50	34.31	70.50	28.20
Consumer price	160	100	340	100	280	100	220	100	250	100

Table 5: Marketing costs and margins under channel-II for dry fish in Sangali market

(₹. / Kg)

Particulars	Channel-II								Overall average	
	Bangada		Prawn		Bombil		Nathali			
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Fish processor										
Price received	100	66.67	220	68.75	180	64.29	120	60	155	65.27
Processing cost	5.65	3.77	4	1.25	4	1.42	4	30	4.41	1.85
Purchase price of fish	90	60	180	56.25	150	53.57	100	50	122.50	51.58
Marketing margin	4.35	2.90	36	11.25	26	9.29	16	8	28.10	11.84
Wholesaler										
Purchase price	100	66.67	220	68.75	180	64.29	120	60	155	65.26
Marketing cost	4.40	3	4.40	1.38	4.40	1.57	4.40	2.20	4.40	1.85
Marketing margin	15.60	10.40	15.60	4.88	15.60	5.57	15.60	7.80	15.60	6.56
Retailer										
Purchase price	120	80	240	75	200	71.43	140	70	175	73.68
Marketing cost	6.80	4.54	6.80	2.13	6.80	2.43	6.80	3.40	6.80	2.87
Marketing margin	23.20	15.47	73.20	22.87	73.20	26.14	53.20	26.60	55.70	23.45
Consumer price	150	100	320	100	280	100	200	100	237.50	100

Table 6: Marketing costs and margins under channel-III for dry fish in Sangali market

(₹. / Kg)

Particulars	Channel-III								Overall average	
	Bangada		Prawn		Bombil		Nathali			
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Fish processor										
Price received	100	71.42	220	78.58	180	66.67	120	60	155	66
Processing cost	5.65	4.04	4.00	1.43	4	1.49	4.00	2.00	4.41	1.88
Purchase price of fish	90	64.29	180	64.29	150	55.55	100	50	122.50	52.13
Marketing margin	4.35	3.10	36	12.86	26	9.62	16	8	28.10	11.95
Retailer										
Purchase price	100	71.43	220	78.57	180	66.67	120	60	155	65.95
Marketing cost	6.80	4.85	6.80	2.43	6.80	2.52	6.80	3.40	6.80	2.90
Marketing margin	33.20	23.72	53.20	19	83.20	30.82	73.20	36.60	60.70	25.83
Consumer price	140	100	280	100	270	100	200	100	235	100

Table 7: Marketing costs and margins under channel-I for dry fish in Miraj market

(₹. / Kg)

Particulars	Channel-I								Overall average	
	Bangada		Prawn		Bombil		Nathali			
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Fish processor										
Price received	100	62.50	220	62.85	180	60	120	54.55	155	60.20
Processing cost	5.65	3.54	4	1.14	4	1.34	4	1.82	4.41	1.71
Purchase price of fish	90	56.25	180	51.43	150	50	100	45.45	122.50	47.57
Marketing margin	4.35	2.71	40	11.42	26	8.67	16	7.27	28.10	10.92
Wholesaler										
Purchase price	100	62.50	220	62.85	180	60	120	54.54	155	60.20
Marketing cost	4.40	2.75	4.40	1.25	4.40	1.46	4.40	2	4.40	1.70
Marketing margin	15.60	9.75	15.60	4.47	15.60	5.20	15.60	7.10	15.60	6.05
Vendors										
Purchase price	120	75	240	68.57	200	66.67	140	63.64	175.00	67.97
Marketing cost	4.50	2.82	4.50	1.28	4.50	1.50	4.50	2.10	4.50	1.75
Marketing margin	35.50	22.18	105.50	30.15	95.50	31.84	75.50	34.32	78	30.30
Consumer price	160	100	350	100	300	100	220	100	257.50	100

Table 8: Marketing costs and margins under channel-II for dry fish in Miraj market

(₹. / Kg)

Particulars	Channel-II								Overall average	
	Bangada		Prawn		Bombil		Nathali			
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Fish processor										
Price received	100	62.50	220	64.70	180	64.28	120	54.54	155	62
Processing cost	5.65	3.54	4	1.18	4	1.43	4	1.85	4.41	1.77
Purchase price of fish	90	56.25	180	52.94	150	53.57	100	45.45	122.50	49
Marketing margin	4.35	2.71	36	10.59	26	9.29	16	7.27	28.10	11.24
Wholesaler										
Purchase price	100	62.50	220	64.70	180	64.28	120	54.54	155	62
Marketing cost	4.40	2.75	4.40	1.30	4.40	1.57	4.40	2	4.40	1.76
Marketing margin	15.60	9.75	15.60	4.60	15.60	5.58	15.60	7.90	15.60	6.24
Retailer										
Purchase price	120	75	240	70.58	200	71.43	140	63.64	175	70
Marketing cost	8.40	5.25	8.40	2.47	8.40	3	8.40	3.82	8.40	3.37
Marketing margin	23.20	14.50	73.20	21.53	73.20	26.15	53.20	24.19	55.70	22.29
Consumer price	160	100	340	100	280	100	220	100	250	100

Table 9: Marketing costs and margins under channel-III for dry fish in Miraj market

(₹. / Kg)

Particulars	Channel-III								Overall average	
	Bangada		Prawn		Bombil		Nathali			
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Fish processor										
Price received	100	71.43	220	68.75	180	64.28	120	60	155	65.95
Processing cost	5.65	4	4	1.25	4	1.43	4	2	4.41	1.87
Purchase price of fish	90	64.28	180	56.25	150	53.57	100	50	122.50	52.12
Marketing margin	4.35	3.10	36	11.25	26	9.29	16	8	28.10	11.95
Retailer										
Purchase price	100	71.43	220	68.75	180	64.28	120	60	155	65.95
Marketing cost	8.40	6	8.40	2.65	8.40	3.00	8.40	4.20	8.40	33.57
Marketing margin	31.60	22.57	91.60	28.62	91.60	32.72	71.60	35.80	71.60	30.46
Consumer price	140	100	320	100	280	100	200	100	235	100

Table 10: Price spread of dry fish in Sangali- Miraj market (₹. / Kg)

Sangali market					
Channel	Bangada	Prawn	Bombil	Nathali	Overall average
I	60.00	120.00	100.00	100.00	95.00
II	50.00	100.00	100.00	80.00	82.50
III	40.00	60.00	90.00	80.00	80.00
Miraj market					
Channel	Bangada	Prawn	Bombil	Nathali	Overall average
I	60.00	130.00	120.00	100.00	102.50
II	60.00	120.00	100.00	100.00	95.00
III	40.00	100.00	100.00	80.00	80.00

Table 11: Producers share in consumer rupee in the marketing of dry fish in Sangali-Mirajmarket (%)

Sangali market					
Channel	Bangada	Prawn	Bombil	Nathali	Overall average
I	62.50	64.70	64.29	54.54	62.00
II	66.67	68.75	64.29	60.00	65.27
III	71.42	78.58	66.67	60.00	66.00
Miraj market					
Channel	Bangada	Prawn	Bombil	Nathali	Overall average
I	62.50	62.85	60.00	54.55	60.20
II	62.50	64.70	64.28	54.54	62.00
III	71.43	68.75	64.28	60.00	65.95

Table 12: Marketing efficiency of dry fish in Sangali- Miraj market

Sangali market					
Channel	Bangada	Prawn	Bombil	Nathali	Overall average
I	2.67	2.84	2.80	2.20	2.64
II	3.00	3.20	3.11	1.75	2.88
III	3.50	4.67	3.00	2.50	3.41
Miraj market					
Channel	Bangada	Prawn	Bombil	Nathali	Overall average
I	2.34	2.46	2.34	2.00	2.30
II	2.67	2.84	2.80	2.2	2.63
III	3.50	3.20	2.80	2.50	3.00



