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FISH MARKETING IN SOME LOCAL MARKETS OF CHUADANGA DISTRICT OF BANGLADESH

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Abstract: Fish trading is a vital economic activity in Bangladesh, but marketing and trading practice is quite inadequately studied. Therefore, a study was carried out from July to December 2002 to examine the marketing and trading of fish in the local markets of *Chuadunga* district. Questionnaire survey, personal interviews, and field survey were carried out in two prominent fish markets named *Rail Bazar* and *Sarojganj Bazar*. The study revealed that there were six kinds of marketing channel operating in the study areas. The market participants included fishermen, *aratder*, wholesalers, retailers, and consumers. The fisherman's share decreased with the number of intermediaries in a channel. Most market participants financed their business from own funds. A fisherman spent in an average Tk. 222.00 for marketing 100 kg of fish which covered mainly transportation, personal expenses, *aratder*'s commission, market tolls, and wastages. Whereas, an intermediary spent Tk.146.00-169.00 for marketing of 100 kg fish. Where, a fisherman spent a major share for paying transportation cost and *aratder*'s commission, an intermediary spent quite a big share for covering losses due to wastages. The marketing margin for intermediaries, ranged form 6-9%. The volume of fish trading depended on the supply of fish and the number of the buyers. The study also identified that inadequate and poor physical condition of the market place, transportation, and capital shortage were only a few of many problems in the study area. Considering the importance of these markets to the economy of the region, the study suggested upgradation of the existing physical facilities of the markets, and facilitation of institutionalized credit facilities for the stakeholders.

Key words: Fish marketing, cost, price, share, fisherman, *aratder, wholesaler*

Introduction

Marketing system of any goods includes all activities involved in the flow of goods from the point of initial production to the ultimate consumers. The marketing system plays two important roles. The role of physical distribution, which is concerned with the physical handling and transfer of products as they move from producers to consumers and the role of adding value to farm commodities, facilitating the exchange process between buyers and sellers (Kohls and Uhl, 1980). As a perishable item fish and fishery products face great challenge from marketing point of view. Fish production is an integral part of the marketing process as fish and fishery products are highly traded commodities (Deomampo, 1998). Production of fresh water fish can be increased by

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making best utilization of the existing inland resources through modern and scientific method of fish culture and fishing. But the ultimate consumers have to depend on an efficient marketing system to make this fish available at reasonable prices with good quality.

The total fish production in Bangladesh was 1.78 million tons in 2000-2001, of which 1.4 (79%) and 0.38 (21%) million tons came from inland and marine water respectively (Anon, 2002a). About 97% of the total production is marketed internally for domestic consumption while the remaining 3% exported (Anon, 2002a). As compared to export market, domestic market is huge is number and varied and complex in terms of volume, value and employment. A large number of people, living below the poverty line, find employment in domestic fish marketing chain in the form of farmers, processors, traders, intermediaries, day laborers and transporters (Ahmed *et al*., 1993; Anon, 2002b). However, the most serious difficulties seem to occur in the marketing and distribution channel, where the farmers are in a weak position. In addition, the middlemen have established a new marketing chain based on the extreme exploitation of the fish farming communities by setting up an artificial pricing policy through intermediaries at different levels (Rahman, 1997; Kleih, 2001).

Steps are being taken to increase production but little emphasis has been given to improve the existing marketing system though production and marketing both are interrelated. During the fishing season, a huge quantity of fish is not marketed and wasted due to inadequate transport facilities (Rahman, 1997). Therefore, it is important to investigate the existing fish marketing system to identify marketing inefficiencies that have negative impact on poor fishermen/farmers and traders. The water body of *Chuadanga* district and its production is highly potential but both fishermen and consumers are being exploited due to poor and inefficient marketing system. The total area of water bodies in *Chuadanga* district is about 2849.77 hectare including 11 *baors* area of 513.42 hectare, 63 *beels* of 501.90 hectare, 12 canals of 19.90 hectare, rivers of 499.45 hectare, and flood plains of 330.58 hectare. The production from these water bodies was about 7500 metric tons in 2002 (Anon, 2002a). The present study mainly focused on the marketing channels, institutions, functions and other problems in the marketing of fish in *Chuadanga* district.

The main objective of the present study was to observe the existing fish marketing with a view to assess the performance of the marketing system, estimate costs and margins, to identify problems associated with the fish marketing and remedial measures of fish marketing problems. The suggestions based on findings of the study will help to improve operation in the area concerned.

Materials and Methods

The study was conducted in *Rail Bazar* and *Sarojganj Bazar* under *Chuadanga* district from July to December, 2002. Primary data were collected by using questionnaire interviews with fishermen and intermediaries. A total of 25 fishermen and 75 intermediaries were randomly selected from different stages of fish marketing for the study. Among the intermediaries 15 were *aratdar*, 37 were a wholesaler and 23 were retailers operating in

the two primary markets chosen. The two villages namely *Vultia* and *Nihalpur* under *Chuadanga* district were also selected for interviewing of the fishermen because of their vicinity to the markets. The information gathered through these interviews was used to establish the complete picture of both wholesale and retail market that included market participants, the marketing channel, the marketing cost, the marketing margin and fishermen's share. Secondary data about fish distribution and marketing information were collected from government and non-government organizations and personnel such as Department of Fisheries (DoF), Upazilla Fisheries Officer, fisheries extension workers.

Results

Marketing channel: Mainly six channels were identified in the study area depending on the number of market participants which comprised of fishermen, *aratder*, wholesaler, retailer, and consumers (Table 1).

Table 1. Composition of different marketing channels of Railabazar and Sarojganj Bazar.

Channel	*Composition*
I	*Fishermen → Consumer*
II	*Fishermen → Wholesaler → Consumer*
III	*Fishermen → Wholesaler → Retailer → Consumer*
IV	*Fishermen → Aratder → Retailer → Consumer*
V	*Fishermen → Aratder → Wholesaler → Consumer*
VI	*Fishermen → Aratder → Wholesaler → Retailer → Consumer*

Table 2. Sources of finance of fishermen and intermediaries.

Fishermen and Intermediaries	*Own fund %*	*Friends and relatives %*	*Money lenders%*	*Traders %*
Fishermen	*60*	*10*	*8*	*22*
Aratdar	*75*	*5*	*10*	*10*

Financing: Both fishermen and intermediaries had the similar source of financing (Table 2). They tried to finance their business primarily on their own. For additional financing they turned mainly to the money lenders.

Marketing expenses of fishermen: Average expense for marketing of 100 kg fish was about Tk. 222 Transportation, personal expenses, *aratdar*'s commission, market tolls, entertainment and wastages were the major items of expense for the fishermen (Table 3). They spent half of their total expenses for paying transportation cost and *aratder*'s commission.

Table 3. Marketing cost of fishermen (in Tk. per 100 kg).

Cost item	Cost /100 kg	% of total cost	Rank order
Transportation	68.50	30.90	1st
Personal expenses	28.25	12.74	4th
Aratder's commission	57.50	25.92	2nd
Wastages	32.50	14.65	3rd
Market tolls	20.0	9.03	5th
Others	15.0	6.77	6th
Total	221.75	100	

Marketing expenses of intermediaries: Average expenses for marketing 100 kg fish varied from intermediaries to intermediaries (Table 4). The retailers spent the highest amount of money (about Tk. 182) followed by the wholesalers (Tk. 169) and the *aratder* (Tk. 146). Wastage, transportation, personal expenses, market tolls, and wages were five major items of expenses which accounted for about 80% of their total expenditure.

Table 4. Marketing cost of different intermediaries (Tk. per 100 kg).

Cost items	Aratdar	Wholesaler	Retailer	Average of all intermediaries	Rank order of cost items
Transportation	-	35.25 (20.97)	30.0 (16.49)	21.75 (12.49)	3rd
Wages and salaries	45.25 (31.05)	-	-	15.08 (10.35)	5th
Market tolls	11.37 (7.81)	15.85 (9.43)	25.30 (13.91)	17.51 (10.38)	4th
Storage	-	12.25 (7.29)	-	4.08 (2.43)	9th
Wastage	38.10 (26.25)	30.50 (18.15)	60.05 (33.02)	42.88 (25.82)	1st
Grading	-	13.0 (7.73)	-	4.33 (2.58)	
Aratdar's commission	-	25.25 (15.02)	-	8.42(5.00)	7th
Containers	-	-	15.75 (8.66)	5.25 (2.89)	8th
Personal expenses	23.15 (15.86)	20.33 (12.10)	50.50 (27.77)	31.33 (18.58)	2nd
Entertainment	18.42 (12.66)	15.62 (9.29)	-	11.35 (7.32)	6th
Stationary	9.25 (6.36)	-	-	3.08 (2.12)	10th
Total cost	145.54 (100)	168.05 (100)	181.60 (100)	165.06 (100)	-

Note: Figures in parentheses indicate percentages

Marketing margin of intermediaries: Net margin for the intermediaries ranged from Tk. 200 to Tk. 400 for marketing 100 kg fish. For this purpose, their investment ranged from Tk. 3800 to Tk. 4700. The wholesaler got the highest return over investment which was about 9% whereas for *aratder* and retailer it was about 6% (Table 5).

Table 5. Marketing margin of different intermediaries (Tk./100 kg).

Intermediaries	Purchase price	Sale price	Marketing margin	Marketing cost	Net margin	IBS	ROI
	1	2	3=(2-1)	(4)	5=(3-4)	6=(1+4)	7=(5/6) X 100
Aratder	3712.00	4091.00	397.00	145.55	233.45	3858.32	6.05
Wholesaler	4021.00	4570.00	549.00	168.05	380.95	4189.25	9.10
Retailer	4515.00	5021.00	506.00	181.60	324.40	4697.35	6.91

IBS = Invested business capital, ROI = Return over investment

Price spread and fishermen's share in retail price: Price spreads and fishermen's share for channel V and Channel VI are shown in table 5. The fishermen's share decreases with the increases of middlemen in the marketing channel.

Table 6. Price spread and fishermen's share of consumer's price.

Item	Marketing channels V	Marketing channel VI
Retail price Tk. per 100 kg.	4570.00	5021.00
Fishermen's gross price Tk. per 100 kg	3712.00	3712.00
Fishermen's net price Tk. per 100 kg (b)	3490.25	3490.25
Price spread (Tk.)	858.00	1309.00
Fishermen's gross share (% of retail price)	81.22	73.93
Fishermen's net share (% of retail price)	76.37	69.51

Discussion

The study revealed that in both wholesale and retail market fish trading consisted of several intermediaries in between fishermen and consumers. The greater the number of the intermediaries, the higher was the price of fish. These intermediaries were locally known as *aratdar*, *wholesaler* and retailers. Basically, two marketing channels were identified. One channel consisted of fishermen-*aratdar*- *wholesaler*-consumer. The other channel was *aratdar*- *wholesaler*-retailer-consumer. In most cases, *aratdars* purchased fish directly from the fishermen and sold the same to the *wholesaler*. *wholesaler* sold the same to the retailers and the retailers sold the same to the consumers. Moreover, fishermen

also sold fish directly to the *wholesaler* who sold them to consumers. However, the intra intermediary relationship made this kind of marketing channel more complex. The fish marketing channels of the study area were evaluated using two criteria, namely, marketing margin and availability of physical marketing facilities.

The fishermen's share is widely regarded as a measure of fairness of farm price and the efficiency of marketing system (Kohls and Uhl, 1980). For this the term 'price spread' is used which is synonymous to 'marketing margin' (Rashid and Chowdhury, 1973). But the important aspect of 'price spread' is the size of the share rather than the total return received by the producer for the sale of their product. The size of the share must be adequate to cover their production cost and to give a fair rate of return for the risks and labor undertaken. In this study, the fishermen's share of the consumer's price was however, found to be inversely related with the length of the channel; the shorter the channel, the higher was the share. High marketing cost is due mainly to the functional inefficiency of the marketing system. Again, lack of transportation, storage, preservation, and lack of market information indicate some degree of inefficiency in the inland fish marketing system. This situation can be improved by improving physical marketing facilities and eliminating unnecessary and insufficient and exploitative middlemen from the marketing channel. Inefficient transportation and inadequate and unscientific storage facilities for fish signify lack of efficiency in the existing fish marketing system. The profit component in the margin for all intermediaries was higher than the cost component. Profit margin of intermediaries of fish marketing, however, does not seem to be unusual in the context of developing country like Bangladesh.

Marketing functions studied from the view point of buying and selling, transportation, grading, storing, weighing, financing and market information. It has been found that prices of fish were determined by the method of open bargaining between buyers and sellers. Market price depended mainly on the supply of fish and number of buyers in the market. Payment was mostly in cash; however, credit was also common. The means of transportation of fish was mostly shoulder load, head load, and rickshaws. Storage facilities at various levels of fish trading were quite unsatisfactory. Due to the lack of storage facilities it was observed that significant part of the traded fish was wasted. A very few cases of grading of fish according to their sizes were observed. This study recognized that the fishermen, *aratdars, wholesaler* and retailers were not self sufficient in respect of their capital needs. They borrowed money from their friends and relatives, money lenders and fellow traders. In many cases, *aratdar* paid advance money to the fishermen. In the lean season when fishermen find no way to earn, they take loan from the local *aratdar* under a condition that they will have to sell their entire catch to the loan provider, at a certain price fixed earlier. Through such conditional trading local producers never get the actual price of their catch. The cost of fish trading varied from level to level and each level had different component which contributed to the overall cost of operation such as *aratdars* considered wages and salaries as the main component of their cost whereas *wholesaler* considered transportation as their primary cost.

The study identified some problems as reported by the fishermen and the intermediaries. The problems reported by the fishermen included, lack of marketing facilities, poor communication and higher transportation cost, lack of financial support, higher market

tolls, and lower price of fish. Whereas, the problems noted by the intermediaries included, shortage of capital, price fluctuation, perishability of fish, inadequate storage facility, inadequate transportation facility, and lack of marketing facilities.

Conclusion

This study primarily suggests that the fishermen need to be integrated with market by forming collectors' association. Secondly, the government should invest for market infrastructure development. Thirdly, all intermediate players in fish trading should be brought under a single apex body or under a wing of Department of Fisheries so that their stakes and problems are taken care of, for them to help remaining in the business. Finally, institutional intervention is necessary to control conditional trading. In this regard, pro-poor micro credit facility should be ensured for the fishermen.

References

Ahmed, M.; Rab, M.A. and Bimbao, M.A.P. 1993. Household socio-economics resource use and marketing in two *thanas* in Bangladesh. *ICLARM Technical Report*, 4: 34.

Ahmed, N.; Rahman, M.M. and Rahman, M.M. 2005. A study on fish marketing systems in Gazipur, Bangladesh. *Pakistan Journal of Biological Science*, 8 (2): 287-292.

Alam, M.J. and Palash, M.S. 2006. Marketing system of boro paddy in greater Mymensingh district of Bangladesh. *Progressive Agriculture*, 17(1): 369-377.

Anon. 2002a. *Matsha Pakkha*. Department of Fisheries (DOF), Ministry of Fisheries and Livestock, Government of Bangladesh, Dhaka.

Anon. 2002b. Introduction to sustainable livelihoods (SL) and its relationship to project work. URL: <www.livelihoods.org>.

Deomampo, N.R. 1998. Farming system, marketing and trade for sustainable aquaculture. *In*: *Report on a Regional Study and Workshop-Aquaculture Sustainability and the Environment*, Network of Aquaculture Centers in Asia-Pacific, pp. 203-217.

Kleih, U. 2001. Fish distribution from coastal communities-market and credit issues. Workshop at the CARITAS auditorium, Chittagong, on Poverty Alleviation and Livelihood Security among the Coastal Fishing Communities, pp. 27-28.

Kohls, R.L. and Uhl, J.N. 1980. *Marketing of Agricultural Products*. 5th edn., Macmillan Publishing Co. Inc., New York.

Rahman, A.K.A. 1997. Fish marketing in Bangladesh: Status and Issues. *In*: Chu-fa, Tsi and Ali, M.Y. (eds.), *Open Water Fisheries of Bangladesh*, The University Press Limited, Dhaka, Bangladesh, pp. 99-114.

Rashid, A. and Chowdury, M.A. 1973. *Marketing Efficiency in Theory and Practice*. A.D.C. Teaching Forum, Agricultural Development Council, No. 28, New York.

Wee-Yet, L. 1974. Gabbage Marketing Problems in West Malaysia. *In:* Southworth, H. (ed.), *Some Studies of Fresh Fruits and Vegetables Marketing in Asia*. The Agricultural Development Council Inc., New York.