



Selling pattern and marketing system of *Boro* paddy in Purbadhala upazila of Netrakona district in Bangladesh

MR Miah, M Moniruzzaman

Department of Agribusiness and Marketing, Faculty of Agricultural Economics and Rural Sociology,
Bangladesh Agricultural University, Mymensingh2202, Bangladesh.

Abstract

Bangladesh is one of the major rice producing countries in the world; rice is the major crop of this highly populated agrarian country and this sector is by far the most important provider of rural employment. The study was designed to examine the marketing system with selling pattern of paddy in selected areas of Netrakona district which is one of the important paddy producing areas of Bangladesh. Samples were purposively selected in order to meet the objectives. The total sample size was 45 respondents including 20 paddy farmers, 7 Faria, 5 Bepari, 5 Paiker and 8 Aratdar-cum- wholesaler. Primary data were collected through face to face interview with the farmers and intermediaries by the researcher himself during the month of November, 2013. The marketed surplus of all types of farms represents 72.07 percent of total quantity of paddy produced in this study area. Marketing functions performed by the farmers in the study area were selling of paddy, transportation, storage, grading, financing and market information. The marketing functions performed by the intermediaries were buying and selling of paddy, transportation, storage, processing, grading, financing, pricing, market information and risk bearing. Farmers and intermediaries transported their paddy to the market for sale by head/shoulder load, rickshaw, van, trolley, push cart, bi-cycle etc. In this study the researcher had found 10 marketing channels of paddy in the study area. In describing selling pattern of boro paddy, the study showed that the small farmers sold 64.17 percent of paddy and the medium and large farmers sold 70.37 and 75.00 percent of paddy, respectively. The small farmers recorded the highest number of sale (7) and the quantity offered per sale was the lowest i.e. 8.25 quintal. The number of sale for the large farms was the lowest (4) but the quantity sold per sale was the highest (53.57 quintal). The small, medium and large farmers sold 74, 39 and 25 percent of their total sale at the farm-gate and 26, 61 and 75 percent in the primary and secondary markets, respectively.

Key words: Paddy, selling pattern, marketing system, farmers, Netrakona district

Progressive Agriculturists. All rights reserved

*Corresponding Author: moniruzzaman_am@bau.edu.bd

Introduction

Bangladesh is one of the most densely populated countries in the world and mainly depends on its agriculture. Agriculture has a great contribution to the Gross Domestic Product (GDP) of the country. Earlier

more than 50% of GDP came from this sector. When industrialization starts the activities of the population starts diversification towards different sectors. As a result, the contribution of the agriculture sector is

slowly reducing and now reached 20% share of country's GDP (BBS,2012). Still agriculture plays vital role and is known as the most important sector of the economy.

Rice is the staple food of the people of Bangladesh. About 80 percent of the agricultural production originates in the crop sector alone in Bangladesh of which rice contributes about 82 percent (The Monthly Technology Today, May 2011). Three types of paddy namely *aus*, *aman* and *boro* and another cereal crop, wheat are produced in this country, which are called major cereal crops. Boro is the most important cereal crop which shares about 57% of total paddy production (BBS 2008-09). The production of Boro largely depends on the use of fertilizers, irrigation etc. and also natural calamity like draught, flood, cyclone; tornado etc. is a very regular phenomenon which hinders the production of agriculture at a great extent. Cultivable land is being decreased due to the pressure of massive population. As a result, food security is being threatened.

Agricultural sector of Bangladesh is largely dominated by paddy production. It is very unlikely in Bangladesh that a farmer is involved in agricultural activities without cultivating paddy. About 80 percent on the agricultural production originated in the crop sector alone of which rice constituted about 65.2 percent (BBS, 2004). Thus, production and marketing of paddy play a significant role shaping the entire economy. In Bangladesh, there are three rice varieties *aus*, *aman*, *boro* accounted for about 74 percent the total cropped area. In order to meet the demand for food grain for the increasing population, the government has given emphasis on rice production and policy is also centered to rice.

Increasing farmers' participation in the paddy market is an important issue of price support program in Bangladesh. Different categories of farmers (namely small, medium, and large) sell their surplus production of the paddy. They produce in a crop season either from their home or at the market; this we call farmers

participation in the market. More than 70% of the farmers belong to the category of small group, and they hold only 29% of the total farmland. It is debated that the members of this category are the least beneficiaries from the purpose of the price support program. Farmers' participation in the market mainly depends on the volume of surpluses which the farmer produces during a crop season. Therefore, to identify the farmers' participation in the market according to different farm strata, we also need to know the volume of gross and net surpluses produced by the different farm size groups in subsistence agriculture like Bangladesh. The surplus production is marketed through different channels; Marketing of paddy in Bangladesh consists of two broad systems namely public food distribution system (PFDS) and the other is the private sector. The PFDS sector distributes less than 20% of the domestically produced rice, while the private sector distributes the rest of the surpluses that entered the market.

If the marketing system is not efficient, price signals arising at the consumers' level are not adequately transmitted to the producers. As a result, farmers do not get fair price incentive to increase the production of the commodities. Thus, inefficient marketing systems adversely affect the living standard of both the producers and the consumers. The study has mainly focused on two special features: i) to examine the selling pattern of paddy by the producers/farmers and ii) to investigate the marketing system of paddy to understand the selling behaviour of producers in the study area. This knowledge can be useful for the policy formulation in improving the paddy market.

Materials and Methods

Methodology is an indispensable and integrated part of any research. Careful considerations are needed by a researcher before conducting a study. The researcher has great responsibility to clearly describe what sorts of research design, method and procedure he would follow in selecting the study area, sampling technique

and to analyze and interpret those to arrive at correct conclusions. A chronological description of the methodology used for this piece of research is presented below:

Study area: For the present study Netrakona district was purposively selected because of the fact that Netrakona is one of the leading paddy producing areas in Bangladesh and the researcher had an easy access to that area. On the basis of higher concentration of paddy production, Purbadhala upazila under Netrakona district was purposively selected for this study. Then two unions namely Khalishaur and Purbadhala were selected from the Purbadhala upazila. The farmers' information was collected from four selected villages and the trader's information was collected from two selected markets of Purbadhala upazila. The selected villages were Shimulkhandi, Khalisha-ur (Khalisha-ur union), Kuti-ura, Narayondahar (purbadhala union) and the selected primary and secondary markets were Shimulkhandi, Narayondahar.

Selection of sample and sampling: Sampling is an important part of survey work. It was not possible to interview all farmers and traders of the study area due to time limitation and resource constrains. Both the paddy farmers and traders were selected purposively from the study area. Twenty farmers from four villages were chosen for this study. The selected paddy farmers were categories into three groups' viz. (i) small (ii) medium and (iii) large. Out of total 20 farmers, 5 were small and 8 were medium and the rest were large farmers. The farms having 0.01 to 1.00 hectare of total cultivated land were considered as small farm, farms having 1.01 to 2.00 hectares were medium farm and the farms having 2.01 hectares of land and above were termed as large farms. The intermediaries involved in the marketing of paddy were categories into several groups, viz. (i) *faria* (ii) *bepari* (iii) *paiker* and (iv) *aratdar-cum- wholesaler*. The intermediaries were as 7 *faria*, 5 *bepari*, 5 *paiker* and 8 *aratdar-cum-wholesaler* (Table 1). Traders in the two selected primary and secondary markets were selected as respondent for this study.

Table 1. Total number of sample

Respondent category		Union		Total sample size
		Khalisha-ur	Purbadhala	
Farmers	Small, medium and large	10	10	20
Traders	<i>Faria</i>	3	4	7
	<i>Bepari</i>	3	2	5
	<i>Paiker</i>	3	2	5
	<i>Aratdar-cum-wholesaler</i>	4	4	8
Total		23	22	45

Survey instrument: The success of a study and survey depends on the proper design of the survey schedule. Keeping in mind the study objectives, a preliminary structured interview schedule was carefully designed for collecting data. The preliminary survey schedule was pre-tested with a few farmers by the author himself. During interview, if any correction, change or modifications were needed then field editing was done and thus some parts of the draft schedule were improved, modified and re-arranged in the light of the actual and practical experience gained from the pretesting. The schedule was finally developed in a simple manner so that accurate information could be obtained without repetition and misunderstanding. Author followed the main aspects of a schedule viz. the general form, question sequence and question formulation and wording to prepare schedule etc. Different set of questionnaires were prepared for different intermediaries. Questionnaire contained such type of questions which are relevant to the study objectives.

Sources of data: Primary data were collected through personal interview with the respondents using questionnaire. Time series data of monthly average price of paddy from *aratdar-cum-wholesaler* were collected from Khalishaur union of Purbadhala upazila in Netrakona district. In this study, besides primary data, secondary data were also collected from different

sources. Data include world paddy statistics, acreage and production of paddy over the years etc. The sources of secondary data were Bangladesh Bureau of Statistics (BBS).

Period of data collection: Data were collected from the respondents (farmers and traders). Primary data were collected from Khalisha-ur and Purbadhala union of Netrakona district on November, 2013.

Collection of data: Data were collected from the respondents through face to face interview. During data collection the objectives of the study were clearly explained to the respondents so that they could understand and respond freely. The traders were interviewed in paddy markets and Hats. Farmers were interviewed at the selected village under Purbadhala upazila. The respondents were interviewed during their leisure time so that they could respond easily. The questions were asked systematically and in a very simple manner and the information was recorded on the interview schedule. In order to minimize errors, data were collected in local units. However, those units were later converted into standard unit.

After completion of each interview, each schedule was checked and verified to make sure that answer to each item had been properly recorded. If there were any items which were overlooked and contradictory, the respondents were again interviewed for relevant correction. Adequate measures were taken to make the information reliable and accurate and thereby to make them meaningful.

Data processing: After data collection each schedule was verified for the sake of consistency and completeness. Editing and coding were done before putting the data in computer. All the collected data were summarized and scrutinized carefully to eliminate all possible errors. The summary Tables were made in MS Excel work sheet. Interpretation, discussion of findings was presented in simple terms and finally all were arranged and compiled in the form of the thesis.

Results and Discussion

Paddy is traded through two different systems. One is controlled by the government, which is known as the Public Food Distribution System (PFDS) and the other is the private sector. The PFDS sector distributes less than 20% of the domestically produced rice, while the private sector distributes the rest of the surpluses that entered the market. Among the 20 sample farmers, 5 (25%) from the small farm groups, 8 (40%) from medium farm groups and 7 (35%) from large farm groups were selected for this research (Table 2). Although the sample structure might not represent the whole village structure, but this would reflect the pattern of boro paddy marketing among the sample farmers of the surveyed village at least.

Economic background of the selected farms: In the present study there are 20 samples from all categories of farms. The sample farms were classified into three groups on the basis of their average farm size under operation. The selected categories of farms were termed as small, medium and large farms. The farms having 0.01 to 1.00 hectare of total cultivated land were considered as small farm, farms having 1.01 to 2.00 hectares were medium farm and the farms having 2.01 hectares of land and above were termed as large farms (Table 2). Out of 20 farms 5 were small and their total paddy cultivated land was 4.50 hectares, 8 were medium and their total paddy cultivated land was 14.50 hectares. The rest 7 were large farms and their land under cultivation was 22.00 hectares. It is revealed from the table that large farms operated highest (53%) portion of land followed by medium farms (36%) during the survey period. The medium farmers are more efficient for total area under cultivation and they cultivate major portion of their land. Small farmers could not cultivate more land due to the lack of capital especially in Boro season, because Boro cultivation is more capital intensive. It required more cash for water charge and fertilizer. Average per farm paddy cultivated land under of small, medium and large farms were 0.90, 1.81 and 3.14 hectares respectively. Total

paddy cultivated area was 91, 95 and 97 percent of total land cultivated for three categories of farms, respectively. On an average for all farms 95 per cent of total cultivated land was under paddy cultivation in

2013. Per hectare paddy production of small, medium and large farms were 58.28, 59.00 and 59.50 quintals, respectively while the total average production of all farms was 58.93 quintal per hectare (Table 2).

Table 2. Farm size and per hectare production of paddy in the study area.

Farm size (ha)	No. of farms	Av. Farm size (ha)	Land under operation (ha)	Land under paddy cultivation	Land under paddy cultivation per farm	Total production (quintal)	Per hectare yield (quintal)
Small (0.01-1.00)	5	0.99	4.95 (11.52)	4.50 (10.98)	0.90 (90.90)	450.00	58.28
Medium (1.01-2.00)	8	1.91	15.28 (35.55)	14.50 (35.37)	1.81 (94.76)	1350.00	59.00
Large (2.01 and above)	7	3.25	22.75 (52.93)	22.00 (53.66)	3.14 (96.61)	2000.00	59.50
All group	20	2.05	42.98 (100)	41.00 (100)	1.95 (95.12)	3800.00	58.93

Note: Figures in parentheses indicate percentages.

The study showed that per hectare production (59.50 quintal) was the highest for large farmers followed by medium (59.00 quintals) and small farmers (58.28 quintals).

Marketed surplus: Marketed surplus represents only that portion of the total produce, which is actually brought into the market for sale. Net marketed surplus

may be defined as that portion of the total produce which is actually sold for cash minus the quantity bought back, since some of the paddy farmers later buy back a part of what they marketed earlier. It may be higher or lower than marketable surplus. The study indicates that for all types of farmer marketed surplus increases with the increase of farm size in the study area.

Table 3. Quantity and selling pattern of paddy by the farmers (quantity in quintal).

Categories of farmers	Quantity produced	Quantity sold (marketed surplus)	Total No. of sale	Number of sale per farm	Average quantity in each sale
Small	450.00	288.75 (64.17)	35	7	8.25
Medium	1350.00	950.00 (70.37)	40	5	23.75
Large	2000.00	1500.00 (75.00)	28	4	53.57
All group	3800.00	2738.75 (72.07)	103	5.15	26.59

Note: Figures in the parentheses indicate percentages of quantity sold over quantity produced in each category.

From the study of Ahmed et al. (1980), it was found that 8 percent farmers irrespective of any farm size made no sales of paddy during the study period. But in the present study all the farmers were found to sell

some portion of their produce during the period of investigation.

The small farmers sold 64.17 percent of paddy produced during the study period and the medium and

Selling pattern and marketing system of paddy

large farmers sold 70.37 percent and 75.00 percent of paddy in the same period respectively (Table 3). Thus, it is clear that the proportion of paddy sold by farmers was positively related to farm size. Regarding the number of sale per farm, the small farmers recorded the highest (7) and the quantity offered per sale was lowest i.e. 8.25 quintal (Table 3). The number of sale per farm for the large farms was the lowest (4) but the quantity sold per sale was the highest (53.57 quintal). All the farms sold 72.07 percent of paddy they produced during the study period, the number of sale was 103 and the

average quantity sold per sale was 26.59 quintal (Table 3).

Place of sale: Normally, the farmers sell paddy at the farm-gate, in the primary and secondary markets and at the procurement centers. As regards the place of sale of paddy, the small, medium and large farmers sold 74, 39 and 25 percent of their total sale at the farm-gate and 26, 61 and 75 percent in the primary and secondary markets respectively. The small farmers sold the highest percent (74 percent) of paddy at the farm-gate (Table 4). On the other hand, most of the large farmers sold their produce in the market.

Table 4. Per farm sale of paddy to different buyer at different places (quintal).

Farm size	Buyer					Places		
	Faria	Bepari	Paiker	Aratdar-cum-wholesaler	Miller	Total	Farm gate	Market
Small	19.21 (33)	20.52 (36)	13.00 (23)	3.02 (5)	2.00 (3)	57.75 (100)	42.74 (74)	15.01 (26)
Medium	23.12 (20)	31.44 (26)	43.30 (36)	9.01 (8)	11.88 (10)	118.75 (100)	46.31 (39)	72.44 (61)
Large	22.57 (11)	40.14 (19)	110.00 (51)	18.01 (8)	23.57 (11)	214.29 (100)	53.57 (25)	160.72 (75)
All	21.63 (17)	30.70 (23)	55.43 (42)	10.68 (8)	12.48 (10)	130.26 (100)	59.92 (46)	70.34 (54)

Note: Figures in parentheses indicate the percentages of per farm sale of paddy to different buyer at different places.

The farmers in the study area were found to sell 46 percent of their paddy at the farm-gate and the rest 54 percent in the nearest markets either primary or secondary. None of the farmers interviewed was found to sell to the procurement centers (Table 4).

Sales to different types of buyers: The small farmers sold 33, 36, 23, 5 and 3 percent of paddy to the *faria*, *bepari*, *paiker*, *aratdar-cum-wholesaler* and miller respectively but nothing to procurement centres. The medium farmers sold 20, 26, 36, 8 and 10 percent of paddy to the *faria*, *bepari*, *paiker*, *aratdar* and miller respectively, while the corresponding figures for the large farmers were 11, 19, 51, 8 and 11 percent, respectively. The farmers of all categories in the study areas sold 17, 23, 42, 8 and 10 percent of the marketed

surplus to the *faria*, *bepari*, *paiker*, *aratdar-cum-wholesaler* and miller, respectively (Table 4). From Table 4, it is seen that the small, medium and large farmers sold their highest proportion of paddy to the traders.

Marketing channels of paddy: Marketing of any product means a process through which the products are transferred from the producers to the ultimate consumers. It is essential to transfer the product to the consumers from widely scattered producing points for marketing. Agricultural marketing is defined as the performance of all business activities involved in the flow of goods and services from the points of initial agricultural production until they are in the hands of ultimate consumers (Kohls and Downey, 1972).

Marketing is the process in a society by which the demand structure for products and services is anticipated or enlarged and satisfied through the conception, promotion, exchange and physical distribution of goods and services. One method of classifying the activities that occur in the processes is to breakdown the processes into functions. The physical functions are those activities that involved handling, movement and physical changes of the actual commodity (Kohls and Uhl, 1980).

Marketing channels are the alternative routes of product flow from producers to consumer (Kohls and Uhl, 1980). In the study area-the paddy moved from the producer-seller to the consumers through some market intermediaries such as *faria*, *beparis*, *paiker* and *aratdar-cum-wholesaler*. The most common channels of marketing of paddy from producer to users were identified as follows in the study area (Figure 1 & 2).

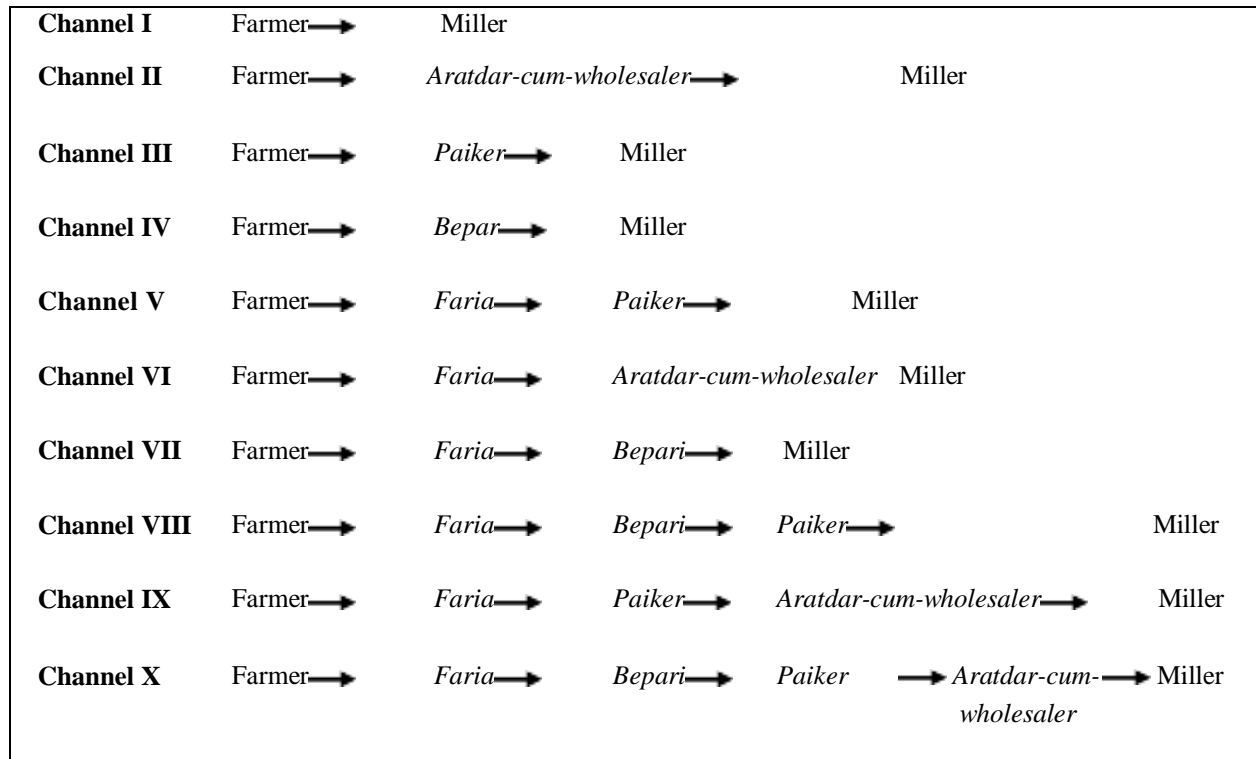


Figure 1. Marketing channels of paddy from producers to rice millers

Farmer: The marketing channel is started from farmer. Farmers sold paddy at their farmyard and nearby market to the *faria*, *bepari*, *paiker*, *aratdar-cum-wholesaler* and miller.

Faria: Faria are small traders and one of the basic institutions in the traditional marketing system. They are usually non-licensed, buy comparatively lower quantity paddy from farmer either at farm gate or in the local market and sell those to *Bepari* or *Paiker* or

Aratdar-cum-wholesaler. They are mostly seasonal.

Some of them had other occupations such as small size of farming, selling labours to others and similar activities.

Bepari: *Bepari*s are the traditional traders or itinerants. They serve as the other basic institution in the marketing system in addition to the *Faria*. Both their area and volume of operation are higher than *Faria*. Some of them have permanent shops in local market

Selling pattern and marketing system of paddy

and usually trade as a regular occupation. They are normally the large farmer-trader and purchase paddy from producers as well as Faria and sell to the miller through the Paiker or commission agents.

Paiker: Paiker are large trader than Faria and Bepari. They are more or less regular and full time merchant or traders. They have permanent establishment. They handle larger volume of paddy in primary or secondary, markets. They generally purchase paddy from the farmers. Faria and Bepari then assemble it and sell to the large rice millers of other district, like

Sherpur on commission basis. Sometimes they process paddy by themselves and sell it to the local Paiker at Netrakona.

Aratdar-cum-wholesaler: They are big paddy traders. They are commission agents and have fixed establishment. Farmer, *faria*, *bepari*, *paiker* sell their product to the *aratdar* by a fixed commission. Sometimes the *aratdar* offered a variety of services in addition to buying and selling, such as storage facilities, short term loan to other middlemen, housing for visiting *faria* and *bepari* and the like.

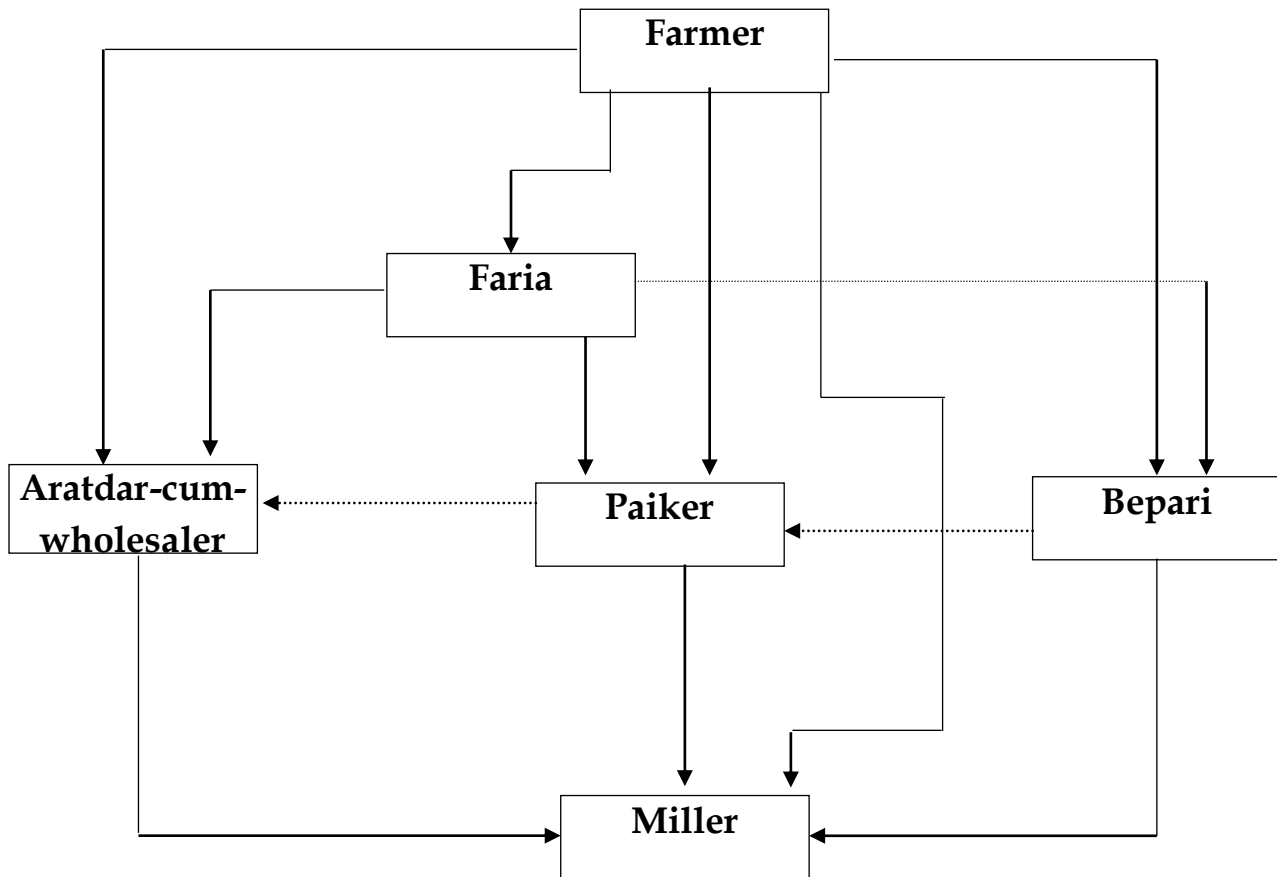


Figure 2. Marketing Channels of Paddy in Netrakona district.

Purchase and sale of paddy by the middlemen: The middlemen purchased paddy from farmer's house or from local markets. Then they sold paddy to other intermediaries or to the consumers for final uses. Farias

purchased paddy from the farmer house or farm gate and primary markets and sold it to Beparis, Paikers and sometimes to the rice millers. They purchased 6-8 quintal of paddy in a week and their average

purchasing price were Tk.1875 per quintal. The Bepari purchased paddy from farmers and Faria from farmyard and local markets and sold it to the Paiker and sometimes to the millers. Their volumes of average purchase were 8-10 quintal of paddy per week and purchasing price were Tk. 1900 per quintal. The Paiker purchased paddy from farmers, Faria and Bepari from farm gate and local markets and sold to the rice millers.

This Paiker were the main components of marketing channel in the study area. They purchased paddy for rice millers of other district. The large miller from Netrakona bought paddy from the Paiker. Sometimes they processed paddy and sold clean rice to the Aratder. The Paiker' volume of business was 20-40 quintals per week and average purchasing price were Tk. 1910 per quintal (Table 5).

Table 5. Sources of purchase and sale of paddy by the middlemen.

Types of Middlemen	Purchase From	Sales to	Quantity (quintal in a week)	Price (Tk/quintal)	Place of purchase
<i>Faria</i>	Farmer	<i>Bepari, Aratdar-cum-Wholesaler</i>	1-2	1850	Farmgate, primary market
<i>Bepari</i>	Farmer, <i>Faria</i>	Miller, paiker	6-8	1880	Farmgate, primary market
<i>Paiker</i>	Farmer, <i>Faria, Bepari</i>	Miller	8-10	1900	Farmgate, primary market
<i>Aratdar-cum-wholesaler</i>	Farmer, <i>faria, bepari, paiker</i>	Miller	20-40	1910	Farmgate, primary market

Characteristics of middlemen involved in paddy marketing: Faria operated their business in 1-2 local markets and they were mostly part timer and seasonal. Average working capital of Faria were about Tk. 5-10 thousand and the sources of finance were own. Areas covered by *bepari* were 2-3 local markets and they were also part- timer. Their average working capital ranged from Tk.10 to Tk.40 thousands. They were also self-financed. Paiker worked in 4-5 local markets. They

were permanently settled in this business. They have permanent shops in the local market. Their average capital varied from Tk. 20 to 60 thousand with an average being Tk. 40 thousands. Aratdar-cum-wholesaler worked in 4-7 local markets. They were permanently settled in this business. They have permanent shops in the local market like Paiker. Their average capital varied from Tk. 40 to 80 thousand (Table 6).

Table 6. Characteristics of middlemen involved in paddy marketing.

Types of middlemen	Area of operation	Duration of Business	Sources of finance
Faria	1-2 local markets	Part-time	Own
Bepari	2-3 local markets	Part-time	Own
Paiker	4-5 local markets	Part-time & permanently	Own & credit
Aratdar-cum-wholesaler	4-7 local markets	Part-time & permanently	Own & credit

Marketing functions performed by the farmers

The most important and common components of the

marketing functions at the producer levels are transportation, storage, grading and standardization, financing, market information etc. A brief description

Selling pattern and marketing system of paddy

of the above mentioned functions are given below.

Transportation: The speed and flexibility of the transportation system can affect inventory and other storage costs throughout the food system. Finally, transportation expenses contribute to the size of the good marketing margin and thus influence farm and consumer food prices (Kohls and Uhl, 1980). Transportation is very important among the marketing functions, which are performed at farm level. The function of transportation influences other marketing functions and decisions. Transportation system was not so much developed in the study area. Some of the villages were connected with katcha roads which were

again connected with metal road. Although the sample villages were not connected with the communication network of study area but most of them were situated nearby Dhaka-Netrakona highway.

Farmers transported their paddy to the market for sale by the most traditional method like head/shoulder load, rickshaw, rickshaw van, trolley push cart, bi-cycle etc. Table 7 shows that 46.67, 33.33 and 20 per cent of the small farmer transported their product to the market for sale by head/shoulder load, rickshaw and trolley push cart respectively and their per quintal average transportation cost was Tk. 15.

Size group	Mode of transportation used by the farmers					Cost (Tk./quintal)
	Head/shoulder load	Rickshaw	Rickshawvan	Trolley push cart	Bi-cycle	
Small	46.67	-	33.33	20	-	15
Medium	30.	20	20	20	10	16
Large	-	20	40	20	20	16
All	33.33	10	30	20	6.66	15.67

On the other hand, 30, 20, 20, 20 and 10 per cent medium farmers used transport to carry their paddy to the market for sale by head/shoulder load, rickshaw, rickshaw van, trolley push cart and bi-cycle respectively. Their average transportation cost was Tk. 16/quintal. The large farmer did not use head load at all 20, 40, 20 and 20 per cent of large farmer transported their paddy to the market by rickshaw, rickshaw van, trolley push cart and bi-cycle respectively and their average cost was Tk. 16 per quintal. On an average the majority (33 per cent) portion of the farmer transported their paddy by head/shoulder load followed by rickshaw/van (30%), trolley push cart (20%) and rickshaw (10%).

Storage system for producers and intermediaries: Storage is a necessary part of the marketing system. The creation of time utility by holding and preserving products and services are called storage. It is necessary throughout the marketing process for a variety of

reasons. For agricultural products the typical situation is that of a fairly steady demand and seasonal production (James et al., 1973). Storage operation is associated with creation of value addition and bridge the time gap between periodic harvest and marketing of relatively stable consumption goods on a year basis. It immediate balances between supply and demand seldom. This is also true for many manufactured products (Carman and Uhl, 1973). The farmers in the study area had no exclusive grain storage facilities. They usually used a part of their dwelling house as 'store house' named as locally 'GolaGhar'. In addition, they used 'Dull' which was made of bamboo, burnt clav made 'jala', drums and gunmbags. All of these were traditionally and unscientifically made. So the stored paddy often got damped and infested by the insect causing great loss of quality and quantity.

Storage is interrelated with other marketing functions such as transportation, processing, financing, etc. In a

sense farm products are being stored at the time they are in transit or are in the processing operation. The relationship of storage and transportation is particularly critical at harvest time (Kohls and Uhl, 1980).

Storage function is primarily concerned with making goods available at desired time. Storage provides facilities for holding a large quantity of raw materials until they are needed for further processing. So, storage is an important function in paddy marketing system.

Storage facility of foodgrain was not well developed in the study area. After purchasing of paddy from both the local markets and farmers house, the *faria* and *bepari* generally used a part of their dwelling houses to store their paddy for a few days. The Bepari also had no facilities to store their product, but they sometimes used others store house at market places for that they had to pay some rent.

Grading: Grading generally means the sorting of product into different categories according to some criteria. In the study area no standard grading system was practiced by the farmers, but the farmers tried to grade their product roughly by eye estimation, on the

basis of different varieties, colour, size of grain, moisture content etc.

Financing: The farmers in the study area were mostly (73%) self-financed. Only 27 per cent farmers of the study area borrowed money from other sources for marketing purposes. The other sources of credit were institutional and non-institutional. Institutional sources were bank and NGO. Non-institutional sources were friends and relatives, village money lender and Mohazons. Table 8 shows that 20 per cent of large and 10 per cent of medium farmers got institutional loan from bank. None of the farmers in the study area got loan from NGO. In case of non-institutional source about 13 per cent of the small farmers borrowed loan from their relatives and friends. About 20 per cent of farmers borrowed credit from village money lender and Mohazons. The rate of interest of such loan was very high. In some cases, this rate was about 200 per cent. The farmers in the study area reported that they were compelled to sell their paddy during harvesting period at a lower price for repayment of non-institutional loans.

Table 8. Sources of finance (Percent of farmer).

Farm size	Sources of finance				
	Own	Institutional		Non-Institutional	
		Bank	NGO	Friends and relatives	Money lender and Mohazon
Small	66.67	-	-	13.33	20.00
Medium	80.00	10.00	-	10.00	-
Large	80.00	20.00	-	-	-
All	73.33	6.67	-	10.00	10.00

Market information: Market information is a facilitative functions required for an efficient marketing system. Table 9 shows the different sources of market information. Visiting market places, personal observation and fellow farmers and relative were the main sources of getting market information in the study area. It may be observed from the table that visiting

market place was the main source of collecting information. About 60 percent, 50 percent and 60 percent of small, medium and large farmers got market Information through their personal visit to market places. On an average, 57 percent farmers got market information mainly by visiting market places. The rest of the farmers were informed by personal observation

and by fellow farmers and relatives. For all categories of farmers 28 percent and 15 percent collected market information by personal observation and fellow farmers and relatives respectively. Although there are several government agencies like Agricultural Information system (AIS), Directorate of Agricultural Marketing (DAM) and Department of Agricultural Extension (DAE) etc. were engaged to supply regularly the agriculture related information to the farmers. But unfortunately most of the farmers in the study area did not get market information from these sources regularly. So the farmer could not know the supply and demand for their product and could not be benefited from these sources.

Table 9. Sources of market information for farmers (Percent of farmer).

Farm size	Sources of market information		
	Visit to market Place	Personal Observation	Fellow farmers and relatives
Small	60	30	10
Medium	50	30	20
Large	60	20	20
All	56.67	28.33	15.00

Marketing functions performed by the intermediaries

The most common and important components of marketing functions of different intermediaries were transportation, processing, grading, standardization, financing, pricing, market information, risk bearing etc.

Transportation: Transportation is mainly concerned with making goods available at the proper place and proper time. The transportation system in the study area was not so develop. Intermediaries in the study area mostly used the traditional system of transportation. The Faria transported 10, 35, 30, 20 and 5 per cent of their paddy by head/shoulder load, rickshaw and rickshaw van, man pulled cart, trolley push cart and bi-cycle, respectively. The Bepari transported 42, 33, 22 and 3 percent of their product by rickshaw and rickshaw van, man pulled cart, trolley push cart and bi-cycle respectively. Paiker transported 10, 12, 15 and 63 per cent of their paddy by rickshaw and rickshaw van, man pulled cart, trolley push cart and truck respectively (Table 10). Millers used rickshaw and rickshaw van, man pulled cart, trolley push cart, truck for carrying, their product (5, 5, 10 and 80 per cent respectively).

Table 10. Different means of transportation used by intermediaries (Percent of paddy).

Middlemen	Mode of transportation						Total
	Head/ Shoulder Load	Rickshaw & Rickshaw van	Man pulled cart	Trolley push cart	Bi-cycle	Truck	
Faria	10	35	30	20	5	-	100
Bepari	-	42	33	22	3	-	100
Paiker	-	10	12	15	-	63	100
Aratdar-cum-wholesaler	-	5	5	-	-	90	100

The Paiker mostly used truck (90%) for carrying their product. The rest were transported by rickshaw and rickshaw van (5%), Man pulled cart (5%). Retailers mostly used rickshaw and rickshaw van, man pulled

cart, trolley push cart for carrying their product.

Processing: Processing is done mainly for creation of form utility. Processing increases the value of a product by changing its form. In Paddy marketing system, the

millers collected or bought paddy from the Faria, Bepari and Paiker from local markets. Then they parboiled, dried, husked and winnowed or cleaned the processed paddy into milled or clean rice. The processing charge was Tk. 10 -15 per quintal.

Grading: Grading is one of the basic functions of marketing and it is defined as the classification of products according to its some standard or measures. The intermediaries in the study area did not follow any standard grading systems in general. But if there is grading necessary they performed this function by their eye estimation only. Sometimes they graded paddy by variety, colour and size of grain etc.

Financing: Advancing money to carry out a business is called financing. It included various forms of advances from different sources. The paddy traders

needed sufficient funds for operating their business. To run the business smoothly financing at different levels of intermediaries were necessary. It helped the businessmen concerned to perform marketing functions. The sources of finance of different intermediaries are shown in Table 11. It may be observed from the table that most of the intermediaries were self- financed. Eighty-five percent of the working capital of Faria came from own source and the rest of 10% from friends and relatives and 5 per cent from village money lenders and Mohazons. At the Paiker level 75 per cent was own fund, 25 per cent were from non- institutional sources. Seventy-five percent Bepari's capitals were self- financed and the rest 10 and 15 per cent of Bepari's fund were institutional & non institutional respectively. Paiker was financed by own (79%) and Bank fund (21%) only.

Table 11. Sources of financing of intermediaries (percent of fund).

Intermediaries	Sources of financing				
	Owned	Institutional		Non- institutional	Money lender/Mohazon
		Bank	NGO	Friend & relative	
Faria	85	-	-	15	
Bepari	75	-	-	25	
Paiker	75	10	-	15	-
Aratdar-cum-wholesaler	79	21	-	-	

Pricing: Pricing is an important function both in buying and selling. In case of fixing the price of paddy, open bargaining system was followed in the study area. Both demand and supply affected the price which indicated that the market of paddy was more or less competitive. Price of paddy depends on colour, moisture, size of grain, variety and percentage of broken paddy etc. Purchasing and selling system did not follow any standard method in the study area. All the intermediaries involved in the study area fixed prices of their product by open bargaining system. It means that price of paddy was determined by the number of buyers attending the market and the

volumes of product offered for sell. Intermediaries offered or quoted price on the basis of eye estimation of the lot.

Market information: Market information is a facilitative function required for efficient operation of the marketing system. Because it influences the intermediaries in making their decisions regarding the volume of purchase, sales and the price of product. It is one of the key functions of marketing. Market information function is the job of collecting, interpreting and disseminating the large variety of data which are necessary for smooth operation of the marketing process. Market information was very

important for the middlemen who were engaged in paddy marketing system. It revealed from Table 12 that seventy- four percent *faria* collected market information by their own observation and the rest 26 per cent from fellow traders. Paiker & *bepari* mainly received market information by their own market observation. Major portion (50%) of the *paiker* collected market information by telephone while only 10 per cent of the retailer got market information by telephone.

Table 12. Sources of market information of the intermediaries.

Intermediaries	Sources of information		
	Personal Observation	Fellow Traders	Other (telephone)
Faria	74	26	
Bepari	87	13	50
Paiker	73	27	
Aratdar-cum-wholesaler	40	10	

Risk bearing: There are various types of risk in a business. The function through which the possibility of loss is accepted in the marketing of a product is known as risk bearing. In paddy marketing two types of risk were found to occur in the study area. One of them was physical risk, which occurred by accident, damage, loss, theft etc. The other was market risks which occurred due to falloff market prices. Both of the physical and marketing risks were borne by the intermediaries themselves in the study area. They did not insure their business with any insurance company.

Conclusion

Marketing plays an important role in every economy, by not only in getting the product at right time and at right places but also in accelerating the production system. Bangladesh is an agro-based country. The contribution of Boro paddy is increasing day by day compared to other varieties. In respect of economic background of the paddy farmers, average farm size of small, medium and large farmers were 0.99, 1.91 and

3.25 hectares respectively. Per hectare paddy production were 58.28, 59.00 and 59.50 quintals for small, medium and large farms, respectively which were positively related to farm size. The farmers in the study area were found to sell 46 percent of their paddy at the farm-gate and the rest 54 percent in the nearest markets either primary or secondary. None of the sampled farmers was found to sell to the procurement centers. Maximum amount of paddy (about 72 percent) are sold by the farmers so paddy market has an important role for the economic development of the farmers.

The most common marketing functions performed at farm level were transportation, storage, grading, financing, pricing and information etc. Farmers transported their paddy to the markets by the most traditional method. The modes of transportation used by the farmers were head/shoulder load, rickshaw, rickshaw van, trolley pushcart and bi-cycle. Most of the small farmer (47%) transported their product by head/shoulder load followed by medium farmer (30%). Large farmers (40%) mainly used rickshaw van for carrying their paddy to the market. On an average 33 per cent of farmers used head/shoulder load for carrying their paddy to the market followed by rickshaw *van* (30%). Most of the intermediaries collected market information through personal observation. Some of them got information from fellow traders. Small farmers borrowed money from the mohazon/money lender in the study area and normally cost of borrowed money from this source is larger than any other sources so the formal financing institutions should come forward to provide loan to the small farmers on easy terms and conditions.

References

- BBS (Bangladesh Bureau of Statistics) (2004). Statistical Yearbook of Bangladesh, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh.
- BBS (Bangladesh Bureau of Statistics) (2008-09). Statistical Yearbook of Bangladesh, Ministry of

- Planning, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh.
- BBS (Bangladesh Bureau of Statistics) (2012). Statistical Yearbook of Bangladesh, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh.
- Carman JM, Kenneth PU (1973). Phillips and Duncan's: Marketing Principles and Methods (7th edition). Richard, D. Irwin, INC, Homewood, Illinois 60430.
- Kohls RL, Downey WD (1972). Marketing of Agricultural Products (4th edition). Macmillan Publishing Co. Inc., New York.
- Kohls RL, Uhl JN (1980). Marketing of Agricultural Products (5th Ed.), Macmillan Publishing Co. Inc., New York.
- Netrakona District, Retrieved on October 24, 2013, from Banglapedia: National Encyclopedia of Bangladesh: http://www.banglapedia.org/httpdocs/HT/D_0232.HTM
- Encyclopedia (2013). Purbadhala Upazila, Retrieved on October 24, 2013, from Banglapedia: National Encyclopedia of Bangladesh.
- World Bank (2020). Retrieved from Bangladesh Country Overview, 2010: <http://go.worldbank.org/XD8JGS2Z90>.