

Value Chain and Marketing Channels of Shrimp/Prawn Sector of Gher Farming System in Bangladesh

Basanta K. Barmon¹, Muntasir Chaudhury² and Saiyeeda S. Munim³

Shrimp/prawn industry plays an important role in value chain in Bangladesh. Shrimp/prawn is the second largest exporting industry followed by garment industry in Bangladesh. The present study aims to explore the detail summary of the value chain, and marketing channels and systems in shrimp/prawn industry of Bangladesh. A numbers of case study and farm level data were used in this study. Various agents are involved in the shrimp/prawn industry from production to final consumption stage as well as the exporting of international markets. The information of the every stage of marketing channels from production level to international was collected through comprehensive questionnaires. The findings of the study shows that a large numbers value chain activity involves in shrimp/prawn industry from production stage of shrimp/prawn to final exporting stage to abroad. All segments of mud snail trading channel, fry trading channel, shrimp/prawn exporting channel as well as agro-based industry that established using shell of mud snails and legs of shrimp/prawn add a significant value chain. Male and female labors, as well as children are engaged in various activities in the trading channels in shrimp/prawn industry. Even though the farmers bear the all production risks, they did not get the profit like other agents of the marketing channels of shrimp/prawn industry. All agents of marketing channels gain more financial benefits than the producers of shrimp/prawn of Bangladesh.

1. Introduction

Rice-prawn gher farming system is an indigenous technology solely developed by local farmers since mid 1980s in the southwestern Bangladesh. After the green revolution, the introduction of rice-prawn gher (RPG) farming system is locally known as “*Gher Revolution*” and shrimp/prawn as “*White Gold*” in Bangladesh (Kendrick 1994). The southwestern part of Bangladesh is also locally known as “*Kuwait of Bangladesh*” because Kuwait is famous for petroleum oil and it is the main exportable item and the southwestern Bangladesh is famous for shrimp/prawn production and it is the second largest exportable item (Barmon et al 2004a). Almost 1.2 million people are directly and another 10.8 million peoples are indirectly employed by this sector, and about 10 percent of the national labor forces are employed. The fisheries sector contributes over 5 percent of gross domestic product (GDP) and about 5 percent to foreign exchange earnings through export (BBS 2004).

After the introduction of “*gher revolution*”, the socio-economic, institutional, ecological and environmental conditions have been changed. The small and marginal farmers

¹ Assistant Professor, Department of Economics, East West University, Bangladesh

Email:bkbarmon@yahoo.com

² Senior Lecturer, Department of Economics, East West University, Bangladesh

³ Senior Lecturer, Department of Economics, East West University, Bangladesh

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have gained more agricultural and household income from rice-prawn gher (RPG) farming system compared to any agricultural farming (Barmon et al 2004a; 2004b), the RPG farming system has created more labor demand than year-round MV (YRMV) paddy farming as well as other agricultural crops (Barmon et al 2004c). The institutional change occurred in terms of land tenure system in the southwestern Bangladesh. The land tenure system has been changed from traditional system to fixed rent system. The agricultural land has redistributed among the small and marginal farmers and landless and day labors farmers and titled as landowners. Now the small and landless farmers are practicing RPG farming system to borrow land from landlords on fixed cash rent basis (Barmon 2004; Barmon et al. 2005a; 2005b). The rice-shrimp gher farming has negative impacts on environments and ecology in the coastal region in Bangladesh (Asaduzamman et al 1998; Nijera Kori 1996; and Sobhan 1997; Bhattacharya et al 1999; Datta 2001; Ahmed and Garnett 2010).

A number of studies have been conducted on the RPG farming system in Bangladesh, including a history of rice-prawn farming (Barmon et al 2005b, Ahmed et al 2000a), prawn farming in gher system (Ahmed et al 2008b, 2010, Barmon et al 2008), analysis of daily livelihood and associated groups (Ahmed 2008c, Ahmed et al 2010), economic returns to prawn and shrimp farming (Islam et al 2005, 2008), economic transformation and agrarian change (Ito 2002, 2004), the impact on rice-shrimp farming on soil quality and ecology (Ali 2004; 2006) and diversification economies and efficiencies of prawn-fish-rice farming (Rahman et al 2010; Rashid and Chen 2002). On the other hand, rice-prawn gher farming system has enhanced the soil quality and reduced input costs mainly chemical fertilizer and irrigation costs for modern variety (MV) paddy production compared to year-round MV paddy farming (Barmon et al 2008). However, the value chain of shrimp/prawn industry as well as marketing channels and systems of shrimp/prawn to international markets have been taken less important. Moreover, a large number of peoples are involved from farm level to final export of international markets. Therefore, the present study will explore detail summary of the value chain, and marketing channels and systems in shrimp/prawn industry of Bangladesh.

This paper explains the value chain and marketing channels of shrimp/prawn sector of Bangladesh. Following the introduction and review of literatures, the paper briefly discusses methodology in section two. The results and discussions are briefly discussed in section three that includes the labor market in processing segments of shrimp/prawn, marketing margins and the gain and loss of farmers and intermediaries. Finally conclusions are drawn based on the results and discussions.

2. Data Collection and Methodology

Primary data were used to analyze the value chain of shrimp/prawn industry of Bangladesh. Various agents are involved in the shrimp/prawn industry from production to final consumption stage as well as the exporting of international markets. Farmers are involved for producing shrimp/prawn in the farm levels. Mainly the production of prawn depends on quality and types of supplied feeds and the number of intermediaries and channels are involved in various feed industries. Moreover, a large numbers of

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channel are linked from farm level to exports of international markets where a large number of workers (both male and female) are employed. The primary information of case studies at every stage of marketing channels from farm level to final exporting level were used in this study.

3. Results and Discussions

3.1 Value Chain Analysis

The value chain analysis focuses on the institutional arrangements that link producers, processors, marketers, distributors and consumers. The shrimp/prawn production cycle link with backward and forward segments and participate a number of labors who are working at different points of the production process of shrimp/prawn industry. The analysis will also explore the potential and actual benefits of the actors for their participation of the marketing channel. Moreover, this study will explore the monopoly and monopsony power to set market price, the bargaining power of the buyers and sellers, and the inter-linkage mechanism of loan between the two contact parties at the different points of the production stages and marketing channels of shrimp/prawn industry.

3.2 Labor Markets of Processing Segment

3.2.1 Icing of shrimp/prawn

Icing is a part of cleaning and de-heading of shrimp/prawn for selling to commission agents and final processors or exporters. Usually aratdar buy shrimp/prawn from farmers and faria with head but without legs. The shrimp/prawn keep in ice for 4-5 hours in plastic containers or big aluminum pots for easy and sophisticated de-heading. Aratdar finish buying process at the end of day, and keep the shrimp/prawn into icing containers or pots at the evening time. This icing process occurs in every day in the peak time of shrimp/prawn harvesting. After icing, de-heading starts from 9-10pm and finish at the end of night (morning). In morning, aratdar send de-heading shrimp/prawn to commission agents for selling to final processors or exporters using light vehicles or van pullers.

3.2.2 De-heading of shrimp/prawn

De-heading is the part of cleaning process for exporting. After buying, de-heading is required for selling to commission agents or to final processing plants. Mainly local female labors are engaged in de-heading of shrimp/prawn. The de-heading process is done in night time. Usually 4-5 female labors work together for de-heading process. They all together receive taka 3 as a labor cost of de-heading for per kg shrimp/prawn. Usually they clean and de-head 200-400 kg shrimp/prawn in a night. On an average, each of them earns taka 100-150 in one night as a labor wage (Field survey 2008).

3.2.3 Warehousing

Warehousing house is mainly used for shrimp/prawn packaging for exporting. Generally, two layer warehousing facilities are adopted in the factory. The first layer preserves

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semi or unprocessed shrimp/prawn in 5-10 kg packs and it keep at -5° centigrade. The second layer is used for fully processed shrimp/prawn that will be shipped to buyers after verification and this layer is kept at a temperature of between -12° to -20° centigrade.

3.2.4 Packaging of shrimp/prawn

Processors and exporters use manufactured carton, plastic packets and trays with customized labels for packaging. The quality and packaging style varies according to the requirements of the buyers and the price negotiated by the buyers. Exclusive and simple plastic packs or blocks are frequently used for shrimp/prawn packaging for exporting. Exclusive packaging is used for higher prices and simple plastic packs or blocks are used for lower international market prices of shrimp/prawn. Usually developed countries prefer simple packaging because disposal is expensive.

3.3 Marketing Channels of Shrimp/Prawn Fingerlings to Gher Farmers

3.3.1 Fry Catching: Natural sources (sea and rivers)

Generally, men and women collect shrimp/prawn fry from natural sources (sea and rivers) from the mid April to the end of June in the South-east region (Chittagong division) of Bangladesh. Usually, children frequently help the fry collectors for sorting the fries from other fish species that caught together with shrimp/prawn fries. During the peak season, women and girls involve more visible in fry collecting. As most of the shrimp/prawn gher farming are located in south-west region (Greater Khulna region), the fries are transported to the south-west region using air and track/lorry vehicles. The gher farmers and fry collectors reported that a small amount of fries also enter into Bangladeshi value chain from India.

3.3.2 Hatcheries

Along with natural sources of shrimp/prawn fry, hatcheries also produce fry from mother shrimp/prawn. Most of the hatcheries are located in the southeast regions and the fries are transported to the southwest regions. The farmers reported based on their experiences that the mortality rate of hatchery fries are higher than that of the natural sources. As a result, the market price of wild fry is higher than the artificial fry. But the high demand of shrimp/prawn fries, the artificial fries of hatcheries have play important roles in the value chain along with natural fries for gher farming.

3.3.3 Fry Faria

Faria buy fry from both collectors and hatcheries throughout the year. But the peak season is five months that starts from April and ends in August. During this time, the faria conduct their business everyday. But the lean period, they conduct their business based on the availability of fry and the farmers' demand. Most of the fry faria reported that they prefer wild fry than the artificial fry because of less mortality rate and high market demand.

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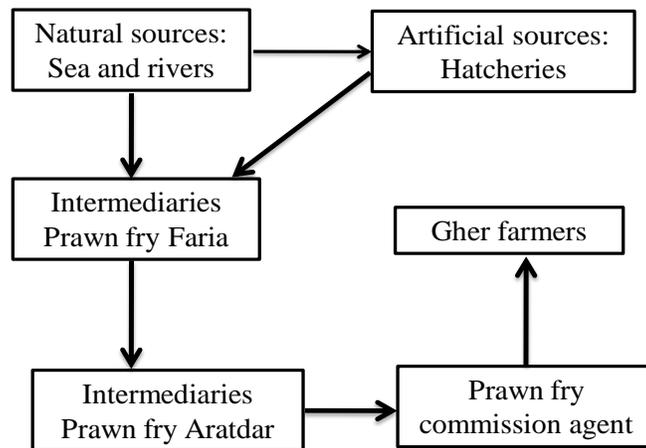


Figure 1: Marketing channel of prawn fry/fingerlings

3.3.4 Fry Aratdar

Fry aratdar also purchases fry from both natural sources and hatcheries. Aratdar also buy directly from fry faria who collects a large volume of fry. They trade twice a day and sell the fry quickly. The market price depends on the availability of fry and local market demand. It is reported from field survey (2008) that the local market price of prawn fry has been decreased from taka 4,600 per thousand to only taka 1,300 within a month because of excessive supply than local demand. In general, market price of prawn fry is higher than shrimp fry.

3.3.5 Fry commission agent

Generally fry commission agents are medium to large-scale-entrepreneurs. The commission agents receive fry in the morning at their own business places in the local market and sell them to the farmers within the same daytime. Large plastic containers and big aluminum pots are used to carry and serve the fry. After receiving the fries, the commission agents replace the water of plastic containers and aluminum pots by the water of local natural rivers which are similar to the original fry collector sources to remove the shell residuals of the fry. The fries are sorted and counted by male workers before trading. The counters get taka 15 for 1,000 fry counting. As trading is take place in morning, the local college and school students are engaged in the counting activities of fry as a part-time job and they use this money for academic purposes. The commission agents receive taka 80 as commission for per thousand fry selling. This commission fee includes the counting fee of fry, fee of river water for the survival of fry for short time (maximum 12 hours), housing cost, hospitality cost and remaining fee is used for own labor cost or profit. The distribution of commission fee is presented in table 1.

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Table 1. Distribution of commission fee for per thousand fry selling received by fry commission agents

Items	Commission fees (Taka)
Fry counting (1,000 fry)	15
Water	5
Housing cost	10
Hospitality cost	5
Own labor cost	45
Total commission fee	80

Source: Field survey, 2008.

Note: 1\$US is equal to 68.50 taka, June, 2008.

The commission agents sell wild fry (natural fry of sea and rivers) at high market price than that the fries of hatchery because of high survival rate of natural fry. It is noted from field survey (2008) that on an average, the survival rate of wild fry lies between 60-70% whereas, this range for the artificial fry (hatchery fry) is 30 to 50%. The mortality rate also depends on the quality of net used in catching fry and the type of management during transportation.

3.3.6 Farmer

After buying the fry from commission agents, farmers release fry into the pond of gher plots where the fries adopt with the production environment. The farmers provide various types of feeds for prawn fingerlings. After few days/weeks, these fries move into the whole gher plots when the gher plots full with rain water.

3.4 Marketing Channels of Shrimp/Prawn to International Markets

3.4.1 Farmer

Farmer is the main agent of shrimp/prawn production. Prawn production mainly depends on the farmers' experience and proper management. The farmer starts to release prawn fingerlings into the gher plots from April to July and prawn harvesting starts from September to December. Farmers directly sell shrimp/prawn either to faria or aratdar. Usually faria themselves directly go to the gher farming area for buying shrimp/prawn. On the other hand, farmer directly goes to the aratdar for selling their product. In this situation, farmer bears the transportation cost.

3.4.2 Shrimp/prawn-Faria

Faria conduct the business throughout the year, however, the peak seasons continues only for five months (September to January). Faria buy shrimp/prawn directly from gher farmers at farm-gate either predetermined price or current market price. They sell all purchased shrimp/prawn to aratdar within the same day. As a result, faria do not need to store. However, some faria use primitive refrigeration methods for preservation a long time.

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Table 2. Drading system and farmgate market price of prawn

Grading system	No. of prawn / kg	farm-gate price / kg
Grade-1	5	750
Grade-2	10	640
Grade-3	20	450
Grade-4	30	350
Grade-5	50	250

Source: Field survey, 2008.

Note: 1\$US is equal to 68.50 taka, June, 2008.

In general, poor and marginal farmers take conditional loan (which is locally known as “*dadon*”) from *faria* for shrimp/prawn production. According to the terms and conditions of the conditional loan, farmers have to sell their product to *faria* at a price that they determined. The price is fixed based on the grades of shrimp/prawn. The grade is fixed based on the number of shrimp/prawn per unit of weight (table 2). Usually, *faria* fix the selling price. Few accurate measuring devices are used to assess size and weight for grading. It is just a “subjective grading process”. Usually, *faria* impose their power for grading. Some financially solvent *faria* impose their monopsony power on the farmers whose need money for prawn production. If the farmers violet the conditions or sometimes sell their product to other *faria* or *aratdar* because of higher market price, then the *faria* verbally or physically assault the farmers.

3.4.3 Shrimp/prawn-Aratdar

Aratdar have financially more purchasing power than *faria*. *Aratdar* buy shrimp/prawn both from *faria* and farmers in his trading place called “*depot*”. The *faria* and farmers bring the shrimp/prawn in ice in a tub, basket or plastic containers for trading. In general, farmers and *faria* sell their products at a current local market price to any *aratdar*. However, some farmers have to sell their products to the particular depots based on the contact of conditional loan like *faria*. Under the contact of conditional loan “*dadon*”, the farmers do not sell shrimp/prawn to other *aratdar* even though the existing market price is high. If the farmers violet the contact, the *aratdar* verbally or physically assault the farmers like *faria*. The *aratdar* also impose monopsony power on the farmers regarding the grading system and fixed price like *faria*.

3.4.4 Commission Agent

Commission agents make the link between *aratdar* and exporters. The commission agents contact the exporters in favor of *aratdar*. They receive a commission fees for per unit of shrimp/prawn selling to the exporters. Some commission agents also buy directly shrimp/prawn from *aratdar* and sell to the exporters. These types of commission agents do not receive any commission fees from *aratdar*. As commission agents typically medium to large sized entrepreneurs, they have access to and provide conditional loans to *aratdar*. In fact, *aratdar* receive conditional loans from commission agents in terms of selling shrimp/prawn to him or sometimes *aratdar* have to give selling power to the

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commission agents. The commission agents always try to maximize their profits suppressing the price at which they sell and depressing the price at which they buy. Some commission agents also take bribes from aratdar to sell their product to famous exporters. Consequently, they enjoy more economic benefits.

3.4.5 Processors and Processors/Exporter and international markets

After buying from aratdar through commission agents, the processors / exporters export shrimp /prawn using their own brand name and they also pack and use the brand name of buyers and importers.

European Union (EU), USA and Japan are the main international markets for Bangladesh shrimp/prawn industry. The international markets for shrimp/prawn industry of Bangladesh are presented in figure 2.

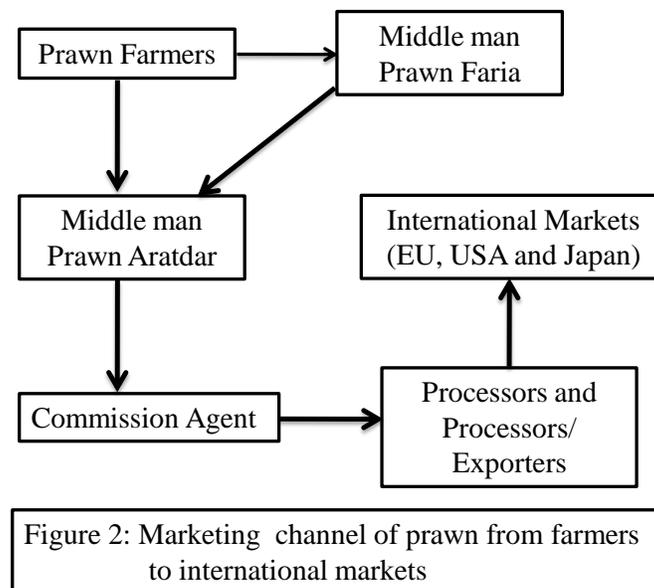


Figure 2: Marketing channel of prawn from farmers to international markets

3.5 Agro-Based Industries for Shrimp/Prawn Industries

3.5.1 Feed-processing plant for prawn production

Shrimp/prawn industry has plays an important role in value chain. A numbers of agro-based industries have been established for making an artificial feeds for shrimp/prawn production. The raw materials of shrimp/prawn feeds are a part of natural feeds. For example, shells of mud snail and legs of shrimp/prawn are used as main raw materials for feed meals of shrimp/prawn production. It is reported from field survey (2008) that a numbers of female and male labors engage in this agro-based feed processing plant for shrimp/prawn production.

3.5.2 Feed-processing plant for poultry industry

Shells of mud snail and legs of shrimp/prawn are also used as main raw materials along with other raw materials for poultry feeds. Usually, farmers gather the shells of mud snails and legs of shrimp/prawn inside the roads and river/canal sides. At the end of

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shrimp/prawn production, the feed processing plant industry takes these shells and legs using small vehicles. A numbers of male and female labors are also engaged in this feed-processing plant.

Transportation

Transportation plays an important role in the shrimp/prawn value chain because most of the segments are interlinked through transportation in the shrimp/prawn industry in Bangladesh. Every segment requires substantial transportation expenditures. But fry aratdar, shrimp/prawn aratdar, processors and exporters bear the most of the substantial transportation costs from shrimp/prawn production to exports in international markets. Survival rate of shrimp/prawn depends on the quality of transportation and management during transportation. The exporting products shrimp/prawn also depends on the quality of transportation of management and it plays an important role in value chain. The transportation involves in the following routes:

- (i) Fry is transported from Cox's Bazaar, Chittagong to Shrimp/prawn areas of greater Khulna district, Barisal, Patuakhali and Noakhali district by air or road. As the shrimp/prawn producing areas are far from fry harvest/producing areas, the transportation cost is very high.
- (ii) The unprocessed or semi-processed shrimp/prawn is transported from aratdar to commission agents by road using light vehicles.
- (iii) Shrimp/prawn is transported from commission agents to processors and exporters by road using light vehicles.
- (iv) The processed shrimp/prawn is transported from processors and exporters to foreign buyers through air freight and ship.

3.6 Marketing Channels of Mud Snails From Natural Sources to Gher Farm

At the early stage of RPG farming, only meat of mud snail is the main feed for prawn production. At that time, the farmers collect mud snails from canals, swampland and rivers from their own areas. As the gher farming area has been expanded rapidly over the time; therefore, the demand of mud snails has also increased. Now the mud snail is exporting from neighboring districts and India through number of channels. As a number of channels are involved in mud snail trading, the market price is also differs from original sources to final gher farming areas. The marketing channels of mud snail are presented in figure 3. Mainly the local women, girls and children are engaged to collect mud snail from the canals, swamplands and rivers in neighboring districts.

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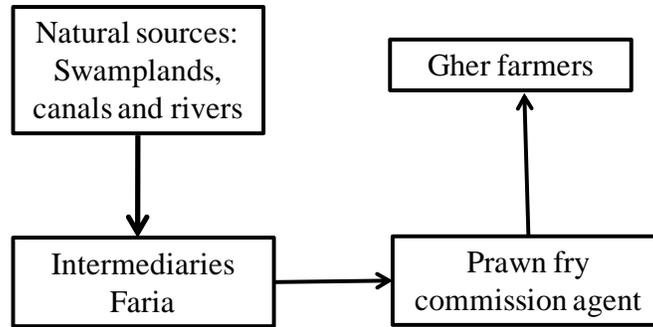


Figure 3: Marketing channel of mud snails

Local faria buy snail from local markets and export it to the local markets of gher farming areas. Many commission agents are engaged in this trading process. The commission agents receive taka 10 as commission fee for per bags (each bag contain 25 kg of mud snail) selling. This commission fee covers labor cost as loading from vehicles, rent cost as market, cleaning cost as selling place and housing cost. The commission fee of per mud snail selling is presented in table 3.

Table 3. Distribution of commission fee for per bag mud snail selling received by snail commission agents

Items	Commission fees (Taka)
Cleaning cost	1.0
Housing cost	1.0
Rent	1.5
Labor cost	1.5
Commission for own	5.0
Total commission fee	10

Source: Field survey, 2008.

Note: 1\$US is equal to 68.50 taka, June, 2008.

Some commission agents have pre-contact with the faria and some time take loan from commission agents. According to the pre-contact, faria have to sell the mud snails through commission agents. In peak season (August to November), every day the commission agents, on an average, sell about 300 to 350 bags of mud snails. The faria uses track as transportation mode from original sources to gher farming area. The faria bring mud snail to local markets in early morning for selling. Usually, the commission agents sell snails in the morning and collect money in the afternoon or evening of the same day.

In general, poor female labors and girls are used to crushing the mud snails. They receive taka 25 for per mud snail crushing as a wage. On an average, every person

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crushes 3 bags per day in peak season. Therefore, the wage rate is equivalent to taka 75 per day per person and this wage mainly use for their daily life.

3.7 Marketing Margins of different Channels

The fry of shrimp/prawn go to the farmers through a number of channels. Each segment of the fry marketing channel gains a substantial profit. In other words, the existing market price differs significant from original fry collectors and hatcheries. The profit margin of the segment of the fry channel is present in the table 4. It is appeared from the table that the middlemen who buy wild from fry collectors and artificial fry from hatcheries receive more benefit from the marketing channels and the profit margin is all most double of the fry collectors and hatcheries. As fry commission agents get only taka 80 for 1,000 fry selling to the farmers. They receive net profit taka 50 for per 1,000 fry selling as commission fee. Even though middlemen receive double profit of fry collectors and hatcheries, they bear a number of risks mainly for transportation from original sources to local market of gher farming areas. Sometimes, a major portion of fry die due to lack of oxygen deficiency, bad weather that hinders the smooth transportation and trouble of the vehicles on the way to local markets. As high risks involve for fry transportation, therefore they receive large profit margin from this marketing channels.

Table 4. Market price margin at different marketing channels of prawn fry/fingerlings

Source	Market price (Taka/1,000)	Price margin
Fry collectors	2,000	0
Hatchery	1,600	0
Middlemen	3,920	1,920
Fry commission agents	3,920	80
Farmers	4,000	0

Source: Field survey, 2008.

The main product of gher farming system shrimp/prawn is the second largest exporting item in Bangladesh and goes the international markets through a number of channels. Every channel receive a substantial profits, therefore, per unit market price of shrimp/prawn is increased in every channels. In other words, every segment of the channel have significant profit margin. The profit margin of each segment of the shrimp/prawn marketing channels is presented in table 5. It is shown in table that the commission agents receive only commission fee taka 20 for per shrimp/prawn selling to processors and exporters. Therefore, no financial risk involve in this segment in the marketing channel. Faria play very interesting role in the marketing channel, because sometimes, they buy per kg shrimp/prawn from farmers at local market price. However, they earn profit. What is its mechanism? They buy shrimp/prawn from farmers without

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grading or underweight or dry weight of shrimp/prawn at gher farming areas. After buying, they grade according to size of grading system, and keep shrimp/prawn into water of plastic containers or big aluminum pot for 1-2 hours. After gain the water, the weight of shrimp/prawn has increased compared to gher farming areas. Therefore, even though they buy shrimp/prawn from farmers at same existing market price, they earn substantial profit from their trading.

Processors and processors/exporters are the final segment of marketing channel. As they invest a large amount of money in this trading system and a large number of financial risks involve, they earn maximum profit from this marketing channel. Usually, the exporters/processors export the shrimp/prawn in the markets of EU, USA and Japan through air freight and ship. Sometimes, the international company send back to the exporters because of proper packing, proper HACCP criteria etc. As a result, they face huge financial loss from this trading.

Table 5. Market price margin at different marketing channels from farmers to international markets

Sources	Market price (kg/taka)	Price margin
Farmers	550	0
Faria	560	10
Aratdar	560-580	10-30
Commission agents	600	20
Processors/ Exporters	630-650	30-50

Source: Field survey, 2008.

Note: After de-deading of 1 kg shrimp/prawn, its weight beacomes 550-600 gm. The market price and profit margin of the segment of aratdar is calculated based on the 1 kg of shrimp/prawn with head. In other words, the market price of 550-600 gm is taka 560-580.

3.8 Who Gains/Benefits from the Shrimp/prawn Industry of Bangladesh?

3.8.1 Monopoly and monopsony power to set market price

As mentioned earlier that both the backward and forward agents/actors are linked in the shrimp/prawn industry. The backward agents/actors play roles at the different points from fry collection of natural sources or hatcheries to selling farmers and the forward agents/actors play role from the different points from production to selling international markets. The field survey reports that the agents/actors of the backward segments do not have any monopoly or monopsony power to set market price. The market price mainly depends on the availability of wild fry from natural sources as well as hatcheries. However, the agents/actors of the forward segments have monopoly and monopsony power to set market price. The middlemen of the forward segments named aratdar and faria set the market price to discuss with the other faria and aratdar in the same local market.

3.8.2 Inter-linkage mechanism of loan of informal institution

The inter-linkage mechanism of loan of informal institution is existed in shrimp/prawn farming system. As mentioned earlier that farmers take loan from financially solvent aratdar and faria based on the pre-contact agreements. According to the contact, the aratdar and faria impose their monopsony power to set the market price depend on the grade of shrimp/prawn. Under the inter-linkage mechanism, the farmers sell their product to the depots of particular aratdar and faria even though the existing market price is high. In other words, the farmers have no bargaining power to set the market price.

In general, every businessman wants to maximize the profit from their business. As large number of segments involve in the process of marketing channels, every segment wants to earn maximum profit from their business. Farmers are the main agents for producing of shrimp/prawn and a large numbers risk involve in the production process such as natural calamities of insufficient rain, flood and diseases. As a result, they always worried about the optimal production from the gher farming system. Moreover, the price of inputs such as various feeds and fry has been increased over the years; however, the price of output shrimp/prawn did not increase in the same direction. Therefore, the farmers are not being received profit like other segments of the marketing channel of shrimp/prawn exporting to international markets. The other segments of the marketing channels have no financial and other risks like the farmers. Thus it can be concluded that all segments of the marketing channel gain more financial benefits than the farmers.

4. Conclusions

Shrimp/prawn industry plays an important role in value chain in Bangladesh. A large numbers value chain activity involve in shrimp/prawn industry from production stage to final exporting stage. All segments of mud snail trading channel, fry trading channel, shrimp/prawn exporting channel as well as agro-based industry that established using shell of mud snails and legs of shrimp/prawn add a significant value in Bangladesh. Male and female labors, as well as children are engaged in various activities in the trading channels in shrimp/prawn industry of Bangladesh. Even though the farmers bear the all production risks, they did not get the profit like other agents of the marketing channels of shrimp/prawn industry of Bangladesh. All agents of marketing channels gain more financial benefits than the producers of shrimp/prawn.

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