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Akanda, M. Aminul Islam

Graduate School of Bioresource and Bioenvironmental Sciences, Kyushu University

Isoda, Hiroshi

Faculty of Agriculture, Kyushu University

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Expansion of Distant Marketing of Vegetables in Bangladesh –A case study on Losmanpur village in Sherpur district–

M. Aminul Islam AKANDA¹ * and Hiroshi ISODA

Laboratory of Agricultural Policy, Division of International Agricultural Resource Economics
and Business Administration, Department of Agricultural and Resource Economics,
Faculty of Agriculture, Kyushu University, Fukuoka 812–8581, Japan
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The distant marketing of vegetables has been developed in many places of the country because of the price differences among the regions. This research aims to explore the expansion process of the distant marketing developed at a village in Bangladesh. The historical data collected through a field survey at Losmanpur village in Sherpur district is used for this study. The expansion of distant marketing is divided into 3 stages: the launching of distant marketing stage during 1983 and 1985, the adaptive distant marketing stage during 1986 and 1993 and the extensive distant marketing stage since 1994 thereafter. The market at the initial stage was limited to only one season in one market of Dhaka city that has been expanded for whole the year to many other markets of other cities, too.

This research has identified the factors influencing for the expansion of the distant marketing. The vegetable business requires less capital because the traders collect vegetables mostly on credit from the farms. The success factor of the credit–sale is the trust between the farmers and traders. The development of rice millings in Sherpur district has an indirect effect on the expansion of vegetable marketing because the vegetable has been carried as the extra load of rice trucks. The price information was available from the traders or truck drivers coming back to the locality. The expansion of telephone since the early 1990's and the mobile phone since the late 1990's has facilitated for receiving the update market price. The relation among the traders was friendly at the early stage of marketing and subsequently become collusive and competitive for increasing the number of traders. The farmers of the study village have expanded vegetable farming from 66 ha to 194 ha during 1996 and 2004 because of the gradual increase of demand.

INTRODUCTION

The notion of distant vegetable marketing

The vegetable farming in the peasant mode of production within the rice dominated crop agriculture of Bangladesh has been expanded over time for its higher profitability (Hossain and Bose, 2000). The demand for vegetables has also increased as per capita consumption has increased from 112 gram /day to 140.5 gram/day during 1995 and 2000 (BBS, 2003). The production has increased from 8.90 to 16.04 million MT during 1983 and 2003 for an area increase of 0.12 million ha (MOA, 2004).

The vegetable is perishable and marketing is a big problem for the producers, because the seasonal mass production is not usually disposed within the rural and near urban markets. There was and still exists the variability in production, demand and prices of the vegetables among different regions of the country. The regional prices of some selected vegetables at the most available month of their respective season is presented in Table 1 (locations are indicated in figure 1 at the subsequent section).

It is observed that the vegetable prices are almost higher in Dhaka and Sylhet markets because Dhaka is the mass consumption area and Sylhet is the lowland

Table 1. Vegetable prices of some selected regional markets at the most available month in 2005

Name of vegetables	Most available month	Wholesale price (Tk./100 kg) of selected markets with location					
		Dhaka (Center)	Sherpur (North of Dhaka)	Sylhet (North–east)	Rajshahi (North–west)	Khulna (South–west)	Chittagong (South–east)
Eggplant	January	538	388	996	525	518	575
Tomato	March	763	450	550	620	345	630
Green papaya	March	806	450	670	335	325	690
Bitter gourd	June	1,033	780	1,050	1,188	970	920
Okra	July	1,300	900	1,000	666	1,050	925
Sweet gourd	September	550	450	908	613	419	650

Source: Personal collection from Department of Agricultural Marketing, 2005

¹ Laboratory of Agricultural Policy, Division of International Agricultural Resource Economics and Business Administration, Department of Agricultural and Resource Economics, Graduate School of Bioresource and Bioenvironmental Sciences, Kyushu University

* Corresponding author (E–mail: akanda_ai@hotmail.com)

area unsuitable for vegetable production. The vegetable prices have also differed from the big city like Dhaka market to the smaller district like Sherpur market. Moreover, the price of rural market is lower than that of the near urban markets. Therefore, there has the flow of vegetables from rural to city markets for the price difference. The distant marketing is the supplying of vegetables to the distant city markets that has developed in many places of the country.

Justification and objectives of the study

The distant marketing facilitates the rural vegetable producers to sell their mass production and the producers take the advantage from the higher price of the city markets. Miah and Badiuzzaman (1995) in their research have found the distant vegetable marketing from a sub-district to the distant cities. They have mentioned that the limited scale distant marketing of vegetables carried out by a few traders has positive influence on the production in the study area because the producers have not faced any problem for selling their vegetables.

Elias and Hussain (2000) in a review type research have compiled the findings of several previous studies on vegetable marketing in Bangladesh. They have found some longer channels for supplying vegetables to the distant markets. The vegetable producers under those longer channels have received smaller shares to the consumers' price, but the producers' prices have not varied between the longer and shorter channels. However, the research has not highlighted the positive impact of the distant marketing, because the larger number of intermediaries of the longer channels has earned higher profits.

Weinberger and Genova (2005) in their research have mentioned the importance of the distant vegetable marketing. They have found that the vegetable farmers mostly depend the traders who transport those to the distant city market. The small-scale traders and wholesalers are the major players in vegetable trade, occupying 96% of the market. The vegetable selling to distant market traders is identified as a key factor for the expansion of commercial vegetable farming.

However, there has no research been found on the process and institutions of the development of distant marketing of vegetables. This study is undertaken to explore the distant marketing with the following objectives:

- (1) To find out the process of expansion of distant vegetable marketing,
- (2) To identify the factors influencing the process of expansion, and
- (3) To evaluate the changes in the costs and risks of the distant marketing.

Methods and Location of the study area

This research aims to investigate the expansion of distant marketing of vegetables developed at a village in Bangladesh. The expansion process would be explored based on the stage concept used by Zhang, *et*

al. (2004). They have identified that the development of Chinese vegetable sectors over the past three decades has been evolved along three types of supply chain: the controlled supply chain, the disjointed supply chain and the co-operation supply chain. The chains have been divided on the basis of changes in government policies, institutional environment, marketing functions of the actors, market outlets, etc. at national level. This research attempts to find out the development process of vegetable marketing in a specific village dividing the process into several stages, too. The stage analysis would be effective to distinguish the level of development with the changes of market outlets, marketing functions, etc.

The study is conducted on Losmanpur village located at 2 km south of Sherpur town in Sherpur district. A few vegetable traders of the village have initiated the distant marketing in 1983 that has been expanded over time. The historical data on the vegetable marketing has been collected through the group discussions by a field survey in October 2004. Moreover, a total of 10 distant market traders have been interviewed. The study has also used the data from the statistical books, and the data collected personally from the Department of Agricultural Marketing (DAM) and the web site of DAM.

CHARACTERISTICS OF STUDY AREA AND THE VEGETABLE TRADERS

The study village has two schools, an agricultural bank, a local family planning hospital, office of the Union council, activities of NGOs and a quite big local market. The location map of the study area is presented in Figure 1. The village is well communicated to capital city Dhaka through the old road of Sherpur–Modhupur–Dhaka highway and through the new road of Sherpur–Mymensing–Dhaka highway opened in 1994.

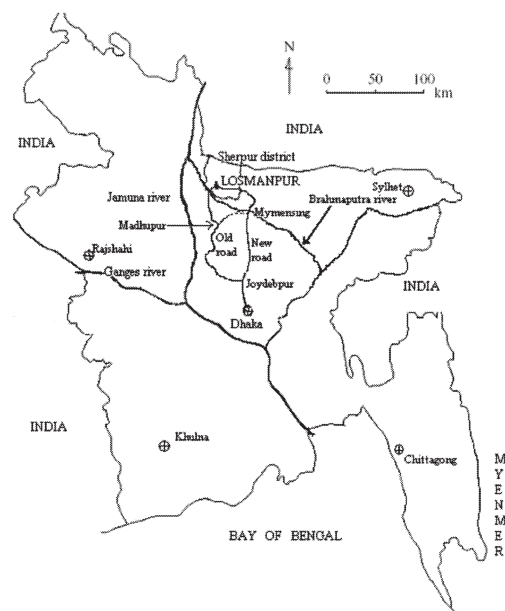


Figure 1. Location map of study area in Bangladesh map.

Table 2. Average capital and own land of the sample traders in Losmanpur village

Business start year	No of sample	Starting year position		2004 position	
		Capital (Tk)	Own land (ha)	Capital & near cash (Tk)	Own land (ha)
1983–1985	2	4,000	0.11	40,000	0.36
1986–1990	6	7,700	0.31	33,300	0.48
1991–1995	1	10,000	0.02	25,000	0.10
1996–2000	1	2,000	0.00	10,000	0.04
	10	6,600	0.21	31,500	0.37

Source: Field survey, 2004

The distant marketing network of the village has encouraged the farmers to expand the commercial vegetable production on the suitable loamy and sandy loamy soils.

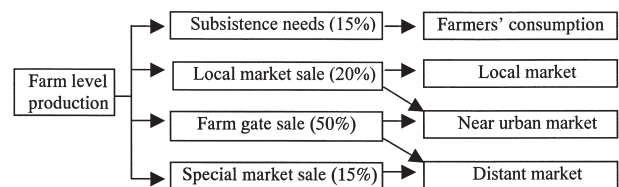
The village has produced a surplus of 1,815 MT vegetables in 2003–4. The surplus is the excess of production over the consumption requirement. The production is 2,630 MT calculated for 194 ha vegetable area @ 13.60 MT yield per ha (field survey, 2004). The requirement is 815 MT calculated for 10,000 population of the village considering the per capita FAO estimated requirement of 200 g per day and adding 11.58% excess for seed /feeds /wastage etc. The farmers of the village have enormous surpluses accounting to 223% of requirement, those they sell mostly to the distant market traders.

The distant markets traders of the village are engaged in supplying vegetables to Dhaka, Sylhet and Chittagong cities all over the year. The sample traders earn 67% of their household income from vegetables trading. The landless or small landholders (own less than 1.00 ha) have started the business because it could be continued with less capital. The capital and land ownership of the sample trader along with the respective starting year position is presented in Table 2.

It is found that the average starting capital of the traders was Tk 6,600 and the capital including near-cash (i.e., loan given to others) has increased to Tk. 31,500 in 2004. There is also an increase of land assets from 0.21 ha to 0.37 ha. The traders with past business experience have entered into distant marketing at its earlier stage. Subsequently, the small landowners even without any business experience have entered into the vegetable business.

VEGETABLE DISPOSAL SYSTEM OF THE STUDY VILLAGE

The farmers of the village consume about 15% of their vegetable production and sell the other 85% at local market, farm gate and the special vegetable market near the roadside of the local market. The vegetable disposal system of the study village is furnished in Figure 2. It is observed that the local people have access to the vegetables from local market. A few traders are engaged in supplying vegetables to nearby Sherpur town market collecting from the farm gate and local market. There are many traders to supply vegeta-



Source: Field survey, 2004

Figure 2. Vegetable disposal system of Losmanpur village in 2004.

bles to the distant markets collecting from the farm gate and the special market. Nearly 60% of the vegetable produced in the village is supplied to the distant city markets. It has been observed that the study village has two types of channels for vegetable marketing, i. e. (1) channel for local and near urban markets, and (2) channel for distant markets.

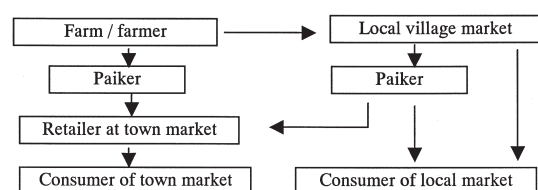
Marketing channel and the intermediaries for local and near urban markets

Paiker (collector for local and near-urban market)

The Paikers are petty traders for supplying vegetables to the retailers at Sherpur town market. They do not have permanent shops and they collect vegetables from the farms and the local market (figure 3). Sometimes they sell directly to the consumers at the local market sitting on open or temporary business place. The number of Paikers of the study village has decreased over time and the Paikers from other villages come here.

Retailer at near urban market

The retailers have permanent shops in Sherpur town market. They purchase vegetables from the Paikers and sell them to the town market consumers. They require a



Source: Field survey, 2004

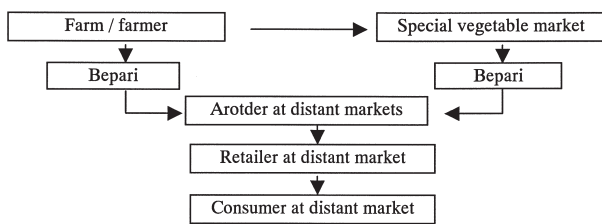
Figure 3. Vegetable marketing channel for local and near urban markets.

handsome amount of capital because they have to deposit the security money to take the position of a shop in the town market.

Marketing channel and intermediaries for the distant markets

Bepari (collector for the distant city market)

The Beparies usually deal with a relatively larger amount of vegetables than the Paikers. They carry the vegetables to the distant city markets. They are not available in the local and near urban marketing channels. They buy vegetables directly from the growers from farms and the special market (figure 4). They don't have any shop and they work only for supplying vegetables to the Arotders. Sometimes, the Beparies employ a few other people on daily wage basis for helping in the collection and packing of vegetables



Source: Field survey, 2004

Figure 4. Vegetable marketing channel for the distant market.

Arotder (wholesaler at city market)

The Arotders have permanent business place with staff in the distant city markets. They take the title of the vegetables carried by the Beparies and sell those to the retailers (figure 4). They add a fixed rate of margin when they sell to the retailers. The Arotders provide shelters and even meals to the Beparies so that they fell interest to carry vegetables to the respective shop at the subsequent times.

Retailer of distant market

The retailers of the distant market buy vegetables from the Arotders and sell them to the consumers at

their own permanent small shop at city markets.

EVOLUTION OF VEGETABLE MARKETING IN THE STUDY VILLAGE

The vegetable marketing of the study village was limited to the local and near urban market until 1982. The marketing has been expanded to the distant markets thereafter. The changes in vegetable marketing system of the study village is discussed below and presented in Table 3.

Closed vegetable marketing (Until 1982)

The farmers used to grow vegetables for their consumption needs and wished to sell a smaller part to meet up some daily expenses. They used to sell vegetables directly to the consumers or the Paikers at local market. Sometimes, they made farm gate sales to the Paikers. The Paikers used to carry the vegetables to nearby town markets for selling at a slightly higher price. However, the farmers even carried vegetables to the nearby town market to sell them to the retailers. The market until 1982 was thus limited only to the local and near urban markets.

Launching of distant vegetable marketing (1983–1985)

Beside the closed marketing system, a market was launched for the distant city Dhaka. A few local vegetable traders carried the most available vegetable eggplant to one of the Dhaka markets (Karwanbazar) collecting from the farm gate and the local market. The distant marketing was limited only for the winter season with a few other available vegetables. The Beparies used to make mostly the farm gate collection on credit with partial cash payment or not. They carried the vegetables using the private transportation as extra load of trucks or on the roof of trains. The Beparies worked with mutual help and maintained the business secrecy. The entry of new Beparies was limited because of the lack of market information.

Table 3. Stages of expansion of vegetable marketing in Losmanpur village

Stages of marketing	Durations	No. of Bepari		Relation of Beparies	Place of vegetable collection	Place of vegetable flow
		Start	End			
Closed marketing	Until 1982	–	None	No Bepari (only paiker)	Farm gate + Local market	Local + near–urban market
Launching of distant marketing	1983–85	3	8	Friendly	Farm gate + Local market	+ Dhaka city (Karwanbazar)
Adaptive distant marketing	1986–93	8	40	Collusive	Farm gate + Special vegetable market	+ Other Dhaka markets
Extensive distant marketing	1994 –	40	120	Competitive	Farm gate + Special market	+ Some other distant cities

Source: Field survey, 2004

Adaptive distant marketing of vegetables (1986–1993)

The Beparies started to supply vegetables to some other markets of Dhaka city and the business was expanded to other vegetables seasons. They established a special vegetable market at 1986 for easier collection than of the farm gate. There came to exist some Brokers for supplying trucks to the Beparies. Subsequently, a few small traders of other commodities having good relation with the Beparies also entered into distant market vegetable trading. The relation among the Beparies was collusive because they maintained a linkage for collecting vegetables at relatively a lower price. They used to buy vegetables based on the price received at the last trip or the price information received from other Beparies or truck drivers who came back from the distant markets. They even collected the information over rental telephone since the early 1990's. Some people who worked under the Beparies appeared as individual Bepari.

Extensive distant marketing of vegetables (1994–till)

The transportation became easier and faster after opening the Dhaka–Sherpur highway in 1994. The Beparies have collected the update price information over telephone and over the most available mobile phone since the late 1990's. The people even having no business experience have entered into the vegetable business. The competitiveness of the Beparies has increased and they have gradually moved towards the farm gate collection for faster access to the production. The vegetable collection from the special market has become limited and the Beparies even pay advances to the farmers for farm gate collection.

FACTORS INFLUENCING THE EXPANSION OF DISTANT MARKETING

The level of expansion of marketing has not varied among the Beparies who are land-poor and don't have much difference in initial capital and level of education. This is because; the trade volume of the Beparies has not varied with the availability of capital as they have collected the vegetables mostly on credit at farm gate. The expansion of distant marketing is influenced by some factors as follows.

Access to market information

The pioneer Bepari received the information about the higher price and selling procedures in Dhaka markets through a discussion with a person of another village at Sherpur sub-district, who was working at an Arotder's shop in Dhaka city. He then discussed the matter with 2 friendly related Paikers. They decided to carry vegetables to Dhaka market. The pioneer Bepari launched the distant marketing by carrying 250 kg eggplant as the extra load on a rice-loaded truck from Sherpur town. The truck driver helped to know the market place. A few Beparies at the launching stage were friendly and cooperative with each other. They exchanged price information just after coming back from Dhaka.

The vegetable was carried as extra loading on the loaded trucks going to Dhaka. The price information was even carried by the truck drivers coming back to Sherpur. The rental telephone was accessible to a limited extend since the early 1990's and the Beparies even collected the information over telephone at the later half of the adaptive marketing. Subsequently, the information about the market entry was disclosed by the personals of transportation and the Beparies have obtained access to the update price information over telephone and mobile phone at the extensive marketing stage.

Lower local price and the availability of vegetables

The distant marketing was launched with the most available vegetable eggplant. There was a huge difference of eggplant price between Dhaka and Sherpur markets as shown in Table 4. It is found that the wholesale price of Sherpur market was 52% of Dhaka price in 1985. Moreover, the Beparies could collect from the farm gate at 20% lower price than the Sherpur price. They were in a safe position to buy vegetables even at the existing local price.

The price gap has increased with the rise of prices at both markets until the initial stage of extensive marketing. The market has become competitive, as many new Beparies have appeared since the mid 1990's. The eggplant price difference has started to decrease since the late 1990's. It is noted that the Beparies have not dealt only with eggplant but with many other available vegetables of larger price gap since the late 1980's. The demand for vegetables has increased much at the exten-

Table 4. Prices difference (Tk/100 kg) of eggplant for Sherpur and Dhaka market during 1985 and 2005

Months of the season	Year 1985		Year 1995		Year 2005	
	Dhaka	Sherpur	Dhaka	Sherpur	Dhaka	Sherpur
January	260	137	631	435	538	388
February	190	80	775	429	448	312
March	169	109	575	283	675	510
Average	206	108	660	382	554	403
Price difference		98		278		151
Dhaka: Sherpur price		0.52		0.58		0.72

Source: Personally collected from Department of Agricultural Marketing, 2005

sive marketing stage and the farmers of the study village have expanded vegetable farming from 66 ha to 194 ha during 1996 and 2004.

Requirement of less capital

The Beparies have collected vegetables mostly on credit and paid the farmers after selling those at the distant markets. They need a very small amount of capital because they even need not have cash for paying the transportation costs. They can pay the truck fares taking money from the Arottders subject to agree on selling to the respective Arottder. At the launching of distant marketing, only the local traders of vegetables and other commodities have entered into the business and they used the capital of their previous business. However, the Beparies who bought vegetables on cash from the special market at the adaptive marketing stage needed relatively more amount of capital but not so much for the lower vegetable price. Subsequently, some of the marginal farmers entered into the business collecting the capital from farm product sales and borrowing money from other people. At the extensive marketing stage, the landless people have started the business using even the NGO loan. Recently, the Beparies need relatively more capital because they have to pay at a cash share and even advance for farm gate collection to survive in the competitive business.

Availability of distant transport and road development

The Dhaka before 1994 was accessible only through 230 km long Sherpur– Modhupur– Dhaka road, which was linked with ferry on the Brahmaputra River and took nearly 12 hours or more by truck. The trucks were available because of their movement for carrying rice to Dhaka from the rice mills at Sherpur. The Beparies had to do the hard job of managing transport by themselves at the launching of distant marketing stage. Subsequently, a few local people who were acquainted with the truck drivers became the brokers for supplying the trucks taking a commission from the Beparies. The truck handling became easier since the establishment of the office of transport association in 1988. However, the number of Bepari did not increase much at the adaptive marketing stage for the time-consuming transportation. The Dhaka – Sherpur highway was opened in 1994 and

the carrying time became shorter for wider road, 25 km less distance and the bridge over the Brahmaputra River at Mymensing. Many new Beparies entered into the business for the time saving well transportation at the extensive marketing stage and the market was also extended to Sylhet and other distant cities for better road linkage.

Increase of competition among Beparies

The relation among a few Beparies was friendly and cooperative at the launching stage. The Beparies were collusive at the adaptive marketing stage, because they tried to collect vegetables at a relatively lower price from the special market. However, the farmers did not increase production because there was limited scale marketing only to Dhaka city until the mid 1990's. The number of Beparies has increased for easy transportation and availability of market information at the extensive marketing stage. The increasing number of Beparies has become competitive to each other. The vegetable traders of Losmanpur and the adjacent villages formed a society in 1997 for voluntary savings and mutual benefits. However, the society was abolished in 1999 for financial corruption by the personals of management committee. The scattered Beparies have become so much competitive that they sometime pay advance for the farm gate collection that has encouraged the vegetable farmers to expand the commercial production.

CHANGES IN COSTS AND THE RISKS OF DISTANT MARKETING

The Beparies carry vegetables on the bags made of chot (jute mat), each of which contains usually 320–360 kg vegetables. The Beparies at the launching of distant marketing stage carried a very smaller amount of vegetables. The average load of a trip (usually once a week) was about 700 kg (2 bags) in the mid 1980's that has increased to 2,000 kg (6 bags) in 2004. Recently, 2 or 3 Beparies together carry even a full truck amounting to 6 MT or more. A Bepari bears the marketing cost for how many bags of vegetables he carries, his personal cost for meals and transportation costs for coming back from the distant market. The changes in the marketing cost and profit of the Beparies for Dhaka market since 1985 are presented in Table 5.

Table 5. Changes in vegetable marketing cost for a usual trip to Dhaka market during 1985 and 2004

No.	Characters /years	Cost (amount in Tk.)				
		1985	1990	1995	2000	2004
A.	Usual vegetables deal per trip (kg)	700 kg	1,000 kg	1,400 kg	2,000 kg	2,000 kg
B.	No. of bags @ 320–360 kg /bag	2 bags	3 bags	4 bags	6 bags	6 bags
C.	Marketing cost for the bags	320	621	1,008	1,860	2,220
D.	Personal transport and meal cost	50	80	120	160	240
E.	Gross cost for the trip (C + D)	370	701	1,128	2,020	2,460
	Marketing cost per 100 kg	53	70	81	101	123
	Profit /100 kg	40–45	70–75	100–110	100–110	100–120
	(Reported by the Beparies)					

Source: Field Survey, 2004

It is observed that the marketing cost per 100 kg of vegetables has gradually increased from Tk. 53 to Tk. 123 during 1985 and 2004. It is noted that the major marketing cost is incurred for distant transportation that accounts for 70%. The cost amount has gradually increased due to the increase of fuel price. However, it has not affected the marketing because the Beparies were concerned not with the cost but with the smooth carrying of collected vegetables. The Beparies have reported that they have earned higher profit until the adaptive marketing stage, but the profit has not increased in the extensive marketing stage compare with the increase of vegetable price. This is because of the increase of marketing costs and the hike of local vegetable price for increasing the competition among the Beparies at the locality.

The Beparies until the adaptive marketing stage depended on themselves and the truck drivers coming back from the distant markets for the price information. They did not use the market price disseminated by the Department of Agricultural Marketing because it circulates the information of previous week. Moreover, they had not easy access to newspaper, radio and televisions in the 1980's. The Beparies have collected the update market price over telephone and mobile phone at the extensive marketing stage. However, they face the problem of more price fluctuation than the past. This is because of the excess supply from the northern part of the country for the well road connection after opening of the 5 km long Jamuna Bridge in 1998. The fluctuation of weekly eggplant price at Dhaka market in 2006 is presented in Figure 5. The Beparies have reported that they could recover the incurred loss for the price fall from the price hike at subsequent trips. However, they try to collect vegetables keeping the safe margin from the update price; i.e., keeping a price gap of Tk. 3 /kg for Dhaka markets.

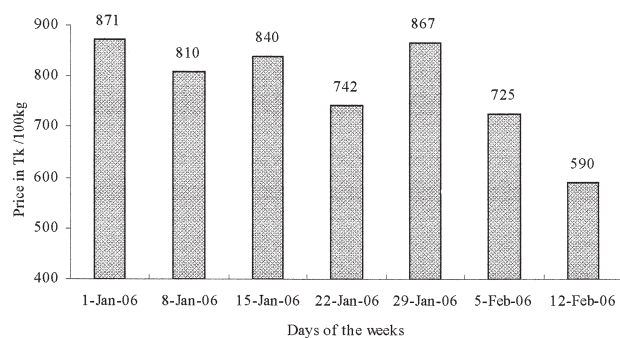


Figure 5. Weekly wholesale price of eggplant in Dhaka markets
Source: DAM website <http://www.dam.gov.bd/jsp>.

There is a damage risk of carrying vegetables, which occurs due to the unavailability of modern packaging system in the study area and even other parts of the country. The carriage loss is nearly 2% of the carried amount. However, the traders minimize the loss by taking some extra over the original weight from the growers, which is possible as giving and taking a fewer

more weight for vegetables are traditionally practiced in rural areas. The suppliers face another damage risk from stopping the transportation during the sudden strike by the political party. The traders have no way to overcome the problem because of having no cold storage at the locality.

CONCLUSIONS

The development of distant marketing has encouraged the farmers to expand their vegetable farming in the study village. The farmers are much integrated to the markets for selling their enormous vegetable production to the suppliers of the distant markets. A few local vegetable traders initiated the distant marketing in 1983 that has been expanded over time. The expansion process of distant marketing is divided into 3 stages, i. e. the launching of distant marketing stage during 1983 and 1985, the adaptive marketing stage during 1986 and 1993 and the extensive marketing stage since 1994 thereafter. The market was very limited with a few Beparies (distant market suppliers) at the launching stage but the number has not increased much until the adaptive marketing stage because of the lack of market information and the time-consuming transportation. The number of Beparies has increased much at the extensive marketing stage for easy access to market and price information, and the faster transportation. The marketing has been expanded to many distant cities all year round at the extensive marketing stage.

The development of rice millings is an indirect but a very important agent for expansion of distant vegetable marketing. The vegetable used to be carried as the extra load of rice truck and there was the availability of transport due to having the movement of rice-loaded trucks from Sherpur to Dhaka. The transportation has become easily accessible for the development of transport brokers at the locality. The Beparies until the adaptive marketing stage have earned higher profit because of the huge price gap between local and distant markets. The price gap started to reduce since the late 1990's but there are price fluctuations within a week or even a day for sudden excess supply from any other places. The access to cheap mobile phone in the study village as like the whole country has facilitated the Beparies to update market price just even before the collection. The supplementary access to transports used for other industries and the improved road linkage could complement for the expansion distant vegetable marketing in some other areas of the country.

The development of the distant marketing has become possible by the capital-poor vegetable traders because of the credit based collection system. The success factor of credit transactions was the trust generated by the Beparies through the fulfillment of verbal price agreements. It is noted that the marketing channel of this study is shorter than the distant channels of Elias and Hussain (2000). They have reported that adding of one intermediary have caused 12% reduction in the farmers share to the consumers' price. Therefore,

the existing short distant marketing channel with only one intermediary (Bepari) from farmers to distant markets is found efficient.

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