MEASUREMENT OF THE INFLUENCE OF FACTORS AFFECTING FOOD CROP MARKETING SYSTEM IN BANGLADESH: AN EMPIRICAL STUDY IN CHAKRAKHALI VILLAGE OF BATIAGHATA UPAZILLA IN KHULNA DISTRICT

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Abstract: *Bangladesh has the potentiality to be a middle income country if it properly develops the agricultural ector through removing major obstacles facing by it. Almighty Allah has bestowed the country with fertile ands and favorable climate, so different types of food crops are produced here in plenty. In this connection, it is crucial to make an efficient marketing system for all types of agricultural crops. In this study, the marketing system of food crops was examined with the help of primary data collected from Chakrakhali pillage of Batiaghata upazilla. This paper investigates that the middlemen acquire the largest margin of rofits. Consequently, the farmers are always deprived of their just shares. Besides this, the farmers face a lot f problems regarding storage of produced crops, credit facility etc. The findings of this study suggest that government intervention in the form of price commission; auction system, cooperative marketing setting, to rage facilities and proper funding are desirable to ensure justice for all the market participants.*

Key words: *Food crop marketing, Regression analysis, Priority Index*

1. Introduction

Agriculture plays a vital role in the economy of Bangladesh. Agriculture is the single largest producing ector of the economy since it comprises about 18.6% of the country's GDP. (MoA, 2010)

Different kinds of crops grow in Bangladesh. Although rice and jute are the primary rops, wheat is assuming greater importance. Approximately 80 percent of the country's total population is directly or indirectly dependent on agriculture for their livelihood. Now rice is cultivated about 75 percent of the cultivated land in Bangladesh. (MoA, 2010)

Area coverage by other crops is pulses 4.64 %, wheat 3.92 %, oilseed 3.77 %, jute 3.71 %, sugarcane 1.23 %, potato 1.11 %, fruits 0.84 % and vegetables 1.39 %. (MoA, 2010)

Generally, agricultural marketing covers the services involved in moving an agricultural product from farmers to the consumers. Numerous interconnected activities are involved regarding this manner such as planning of production, growing and harvesting, grading, packing, transporting, storage, food processing, distribution, advertising, sale and so on.

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In Bangladesh, agricultural marketing or food crop marketing comprises of the same phases.

A considerable part of the total agricultural production is generally sold by the farmers to the village traders and moneylenders. Often the money lenders act as a commission agent of the wholesale traders. Again, farmers often sell their products in village hats which are often held once or twice a week. The area covered by a "hat" usually varies from 5 to 10 miles. Most of "hats" are very poorly equipped, are uncovered and lack storage, drainage, and other facilities.

The farmers also sell their product to *farias*, *aratdars* and *beparies* or other middlemen. Because of these middlemen, the most of the profit goes to their pocket and the farmers gain a low margin of the profit. For this reasons to improve the efficiency of the agricultural marketing and to save farmers from the exploitation of the middlemen, emphasis has been laid on the development of co-operative marketing societies. Such societies are formed by farmers to take advantage of collective bargaining.

Many common problems create barriers to proper functioning of the agricultural marketing system. In Bangladesh for these problems, producers suffer much. Some of those problems are storage problem, lack of fund, existence of middlemen, problem of correct price determination, problem of transportation, long duration of production, lack of bargaining power of the producer, long process of marketing and lack of good infrastructure etc.

Government of Bangladesh now tries to encourage private and public enterprises for making good marketing system. Already some initiatives have been taken for the development of food crop marketing system.

In the following they are described. (MoA, 2010)

i. By setting up village market and improving distribution to main markets, the Government will facilitate smooth flow of agricultural produces from the production point to the consumption point.

ii. Operating public sector Food Distribution System (PFDS) to maintain the food grain within the reach of the common man.

iii. The Government will encourage private sector investment in establishing warehouses and cold storage facilities for agricultural produces.

iv. Adopting appropriate tariff and fiscal measures to ensure markets for the local crops and promote export of surplus crops.

v. Efforts will be made to develop effective value chain between producers and consumers.

vi. The Government will create Agricultural Price Commission to provide guidelines to strengthen agricultural marketing, to ensure fair prices for farmers and affordable price for consumers.

vii. The Government will take steps to diversify products and to explore new and potential markets abroad.

viii. Improving bargaining power of the producers through provision of credit and warehousing, promotion of cooperatives, provision of market information etc.

ix.   Both the private and the public sectors will be encouraged in the initiatives in market improvement of agricultural products.

x.   The Government will encourage collection and dissemination of market information of agricultural produces and inputs to farmers, traders, entrepreneurs, and consumers.

xi.   The Government will promote the services required by farmers and entrepreneurs for value addition to agricultural produces.

xii. The Government will promote food safety issues during production and postproduction activities.

2. Review of the Literature

Aujla et al. (2007) conducted a research work in Pakistan named "Marketing System of Fruits and Vegetables, Margins and Export Potential in Pakistan". This study was specifically designed to examine the trends in fruit and vegetable production, consumption and trade; describe existing marketing system. It tried to identify constraints in marketing systems and promoting exports. From the study, it is found that advance sales are a root cause of financial constraints amongst farmers. Scarcity in storage and transportation infrastructure resulted in 25 to 40 percent post harvest losses that shrinks supply and put pressure on prices. Farmers just receive one-fourth of consumers' price, whereas lion's share goes to other market traders. In order to lower the shares of middlemen it is needed to access to credit information, control over output losses, improvements in market infrastructure and cheaper availability of transport. Optimal use of various critical inputs like fertilizer, plant protection measures is utmost important to achieve higher productivity and the farmers need institutional credit. It is also needed to establish export zones where all necessary infrastructures like cold storages, refrigerated transport facilities, financial institutions, marketing information analysis department etc are available.

Tasnoova and Iwamoto (2005) conducted a study named "Kataribhog Rice Marketing System in Dinajpur District, Banglasesh". In this study, the marketing system of Kataribhog rice was examined with the help of primary data collected purposively from 24 farmers and 65 intermediaries from *sadar* thana of Dinajpur district. Primary data were collected during the months of January and March 2000. The objectives of this study were to analyze the marketing system of Kataribhog rice in the selected area, to estimate the cost and margin of different intermediaries, to investigate the problems of the Kataribhog rice marketing system and to suggest remedial measures to solve the existing problems. From the study, it is shown that 78.83% of farmers are compelled to sell their rice at lower price because the intermediaries are organized but the farmers are scattered. 88% of farmers don't take institutional loans, 75% are sufferer because of poor communication system, and 50% are faced storage problem. The researcher has suggested about co-operative marketing society, providing institutional credit for farmers and making a good storage system.

Saha and Mukhopadhyay (2003) conducted the research paper titled "Inter-temporal Variation in the Price and Marketing Margin of Potato in West Bengal" which is based on time series data on harvest and wholesale prices. Wholesale price data are of Kolkata

market. Wholesale price, harvest price and marketing margin have undirectional inter-year fluctuation. The fluctuation in marketing margin is more associated with that in the wholesale price. Such an association implies the greater control of the wholesalers in the determination of marketing margin which seems to be consistent with the advantageous assumed by the wholesalers both at buying and at selling ends. The existence of imperfectly competitive condition in the potato market in West Bengal, thus observed restricts one to expect remunerative price for the potato growers. It also such an allocation of farm resources specially land towards potato cultivation which would take place in an alternative condition that is in perfectly competitive condition. So there emerges the necessity to implement such market reformatory policies which will enhance the extent of competition and thereby develop fair as well as efficient pricing process or market mechanism.

Hai (2002) conducted a study titled "The Organization of the Liberalized Rice Market in Vietnam". This study examines the current rice marketing system and the channels of rice distribution in Vietnam. It focuses on the domestic market structure as well as the relationships between the different actors in the rice market and attempts to assess the effectiveness and efficiency of the market services supplied. Some major objectives of the study are to examine the domestic market structure, conduct and performance of rice marketing in the Mekong River Delta; to describe and analyze the organization of rice distribution channels from rice farmers to final consumers; to estimate the marketing costs, profits, and price margins of various intermediaries. In total 18 rice assemblers, 49 rice wholesalers, 53 rice millers/polishers, and 30 rice retailers were interviewed. First of all we recognize that rice millers get the highest gross marketing margin (Value added): 1,008,000 VND/ton, while rice assemblers get the lowest (88,000 VND/ton). However, it can be observed that although the rice millers get the highest marketing margin, they also incur the highest marketing cost (951,000 VND/ton) in terms of payment for drying, storing, manufacturing, and other service costs. Among these rice traders, assemblers and retailers have the lowest marketing costs, 46,500 VND/ton and 63,500 VND/ton, respectively. The study also indicates that among different rice traders, rice wholesalers obtain a relatively large profit as a percentage of the cost price (3.19 percent). The lowest one is obtained by rice retailers (2 percent). The functioning of the rice markets is constrained by various problems and obstacles: imperfect market information for buying and selling rice; lack of cash and credit availability to finance short-run inventories and processing operations; insufficient facilities for storage and transportation; no uniform system of common grade standards to facilitate trading at a distance; lack of management skills; and unsuitable legal codes to enforce contracts. Three issues are important in this study: arbitrage in time (storage), in space (transport), and in form (processing/rice quality). Storage of paddy/rice will ensure that enough rice will be available during the off-season. Transport is a service to transfer paddy/rice from surplus areas to deficit regions in the country. Finally, processing provides different kinds of finished product (brown or white rice, instant noodle, etc.) to meet the diversified demands of final consumers.

Khan (1992) conducted a farmer's disposal pattern of T. Aman paddy in three selected villages of Karimgonj thana under Kishorgonj district. He studied the farm level disposal pattern of T.

Aman paddy and observed that consumption and sale were the majors heads of disposal of T. Aman paddy. The harvest period sale of T. Aman paddy was more than that of its off season sale. The higher disposal of T. Aman occurred at the farmgate for which a lower price was obtained. Lower disposal occurred at the secondary market and it retained a higher price of paddy. The middlemen got maximum benefit and earned high profit. The producers of T. Aman were highly dependant of the middlemen of those areas. There the storage facilities and communication process were at low level. These were main barriers for T. Aman marketing.

Quasem and Yasmin (2010) conducted a research named "Agricultural Research Priority: Vision- 2030 and Beyond". The study is based mainly on secondary information and the published articles and research reports available with the NARS Institutes, agricultural universities and different other development organizations. It also makes use of the papers prepared on the outcomes of the workshops on Agricultural Priority Setting held on January- February, 2010 in the selected regional centres of Bangladesh. It shows that because of faster growth in urbanization and concentration of higher income households there, the demand for improved marketing services is rising. The costs of such services are higher particularly in case of perishable products like rice, wheat, potato, fruits, vegetables, fish etc. as they need careful packaging and cooling vans for safe transportation. The costs of wholesaling and retailing of these products are thus, higher. Actually, farmers' shares to urban consumers' prices often go below 40%. The shares decline further in the off-seasons due to extra costs of specialized storage and other post harvest services needed. Farmers are therefore, deprived of due shares in their prices. Their shares could however, be raised if the farming community could be directly involved in the distribution of farm products to consumers.

Islam et al. (2006) conducted a study titled "Study on Marketing and Value Chain of Some Commercially Important Agricultural Products of Bangladesh". The data was collected both from primary and secondary sources. The study areas were purposively selected from Satkhira, Bagherhat, Potuakhali and Barisal districts depending upon the production and marketing of commercial agricultural products. The study revealed that marketing margins as well as marketing profits both were relatively higher in consumer markets followed by primary and secondary markets where *beparies* and *aratdars* were involved. In marketing system, intermediaries received higher marketing profit, which on the other hand deprive the farmers because they could have received higher sales revenue if they could sell the products in fair (real) price in the primary markets.

Akbar and Rahman (1991) conducted a study named "Role of intermediaries in paddy /rice marketing in Bangladesh". The survey was conducted between 1982-1984 and the total sample size was 322 through out the country. Here it tried to find out the service, marketing cost, margin and price spread of the intermediaries. The intermediaries had performed an indispensable role and the marketing costs are also high. But they got more benefit than the farmers. They enjoyed most of the profit and the farmers got little profit.

The intermediaries faced some problems such as inadequate transportation and storage facilities. These problems should be removed for their betterment.

Kumar (1994) conducted a research in India named "Marketing Channels, Cost and Margins of Rice: A Case Study." He prepared a case study on marketing channel, costs and margins of rice and compared the efficiency of rice marketing under three marketing channels such as

(i) farmers → village *faria* → wholesaler → retailer

(ii) farmers → miller/small rice processor → wholesaler/commission agent→ retailer →

consumer

(iii) farmers → wholesaler → retailer consumer He found that medium and large farmers sold produce (either raw or processed) directly to millers or wholesalers. Marketing margins were found to be higher for retailer than other market intermediaries.

Murthy et al. (2007) has conducted a research named "Marketing Losses and Their Impact on Marketing Margins: A Case Study in Karnataka". From the study, it can be said that three stages were identified to estimate the post-harvest losses, viz. field level, transit and wholesale marketing level; and retail marketing level. Simple averages and percentages were used for estimation of post-harvest losses at these three stages. The explicit evaluation of the post-harvest losses at different stages of marketing and their impact on farmers' net price, marketing costs, margins and efficiency have been presented. It has been found that the existing methods tend to overstate the farmers' net price and marketing margins of intermediaries. In fact, the margin of the retailers' after taking into account the physical loss during retailing has been found to be negative (loss), which otherwise, was positive (profit) in the conventional estimation. Similarly, the producers' net share and wholesalers' margins also decrease substantially. It has been shown that marketing efficiency is inversely proportional to the marketing losses. The co-operative marketing has been found to be a more efficient system in terms of both operations and price. Marketing cost has been identified as the major constraint in the wholesale marketing channel and bringing down the costs, particularly the commission charges as demonstrated in the cooperative channel, will help in reducing the price-spread and increasing the producers' margin. The need for specialized transport vehicles for perishable commodities has been highlighted.

Matin et al. (2008) conducted a research named "Mango Marketing System in Selected Areas of Bangladesh". This study was carried out to identify the most efficient and suitable marketing channels of mango in some selected areas of Bangladesh by using primary data collected randomly from 90 farmers and 55 traders. Three important mango growing areas, namely Dinajpur, Chapai Nwabgonj and Meherpur districts were selected for the present study. This study identified seven problems for the farmers. Among the problems, inadequate transport facility ranked first followed by higher cost of

transportation and preservation problem. In the case of traders, unstable price was the first ranked problem followed by selling on credit. It is found from the study that if the farmers sell their mango directly to the ultimate consumers then they will get more benefit, but it would not be possible because intermediaries were engaged to transfer mango from the farmers' field to distant consumers.

Therefore, it is reviewed that the researches done previously to understand the factors which affect most the food crop marketing system focused on storage, transportation, middlemen, institutional loans, imperfect competition, lack of management skill and marketing cost. But the researchers of this study have considered only storage capacity, fund availability, middlemen, Govt. and institutional loans and transportation.

3. Objectives of the Study

Broad Objective

Broad objective of this study is to measure the influence of the factors which affect most the marketing system of food crop at Chakrakhali village in Batiaghata Upazilla of Khulna District.

Specific Objectives

(i) To measure the influence of storage capacity on the current food crop marketing system.

(ii) To compute the influence of fund availability on the food current food crop marketing system.

(iii) To determine the influence of middlemen on the current food crop marketing system.

(iv) To measure the influence of Govt. and institutional help on the current food crop marketing system.

(v) To evaluate the influence of transportation on the current food crop marketing system.

3.1 Question and Hypotheses of the Research

To prepare a good research work it is needed to chalk out some research related questions answers to which a researcher wants to find out. The research question of this study is:

Which factors affect most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District?

To test the research question, following null and alternative hypothesis are designed.

Hypothesis 1:

Ho: Storage facility does not affect most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

Ha: Storage facility affects most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

Hypothesis 2:

Ho: Fund availability does not affect most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

Ha: Fund availability affects most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

Hypothesis 3:

Ho: Middlemen do not affect most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

Ha: Middlemen affect most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

Hypothesis 4:

Ho: Govt. and institutional help does not affect most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

Ha: Govt. and institutional help affects most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

Hypothesis 5:

Ho: Transportation does not affect most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

Ha: Transportation affects most the current food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District.

4. Methodology of the Research

The research is descriptive in nature. Data and information required for this study were collected from both primary and secondary sources. Primary source includes structured questionnaire and data were collected from Chakrakhali village in Batiaghata Upazilla of Khulna District. Published documents that have been used for this study are journals, reports, thesis papers and other internet documents on agricultural marketing related issues. Variables covered in the study were selected based on the objectives of the study. The variables covered in the study are storage facility, fund availability, middlemen, Govt. and institutional help and transportation. The population of the study is approximately 300 (farmers). The sample size of the study is 50, who have been randomly selected. The survey was conducted in April, 2012 in Khulna city. Random sampling technique has been used to collect data. A structured questionnaire was developed by using five-step likert scales ranging from strongly disagree to strongly agree. The questionnaire consists of 10 statements those are able to explore the response of the farmers to measure the influence of the factors which affect the marketing system of food crop at Chakrakhali village in Batiaghata Upazilla of Khulna District. Regression and Priority Index (PI) were used to assess and interpret data. To test the hypotheses,

multiple regression was used as a statistical tool at 0.05 significance level. Data entry was done in SPSS 12.0 data editor.

Priority Index was used to prioritize the factors with five point scale. The formula of P.I is given below:

P.I = ΣSifi / n

(0 ≤ P.I ≤1)

Where P.I= Priority index

Si= Scale value of ith priority

Fi= Frequency of ith priority

n= Total number of observations

Table: Priority Index

Priority by type Scale value of Priority	1st priority S=1.0
2nd priority S=0.75	3rd priority S=0.50
4th priority S=0.25	5th priority S=0.00
Priority by type Scale value of Priority	1st priority S=1.0
2nd priority S=0.75	3rd priority S=0.50
4th priority S=0.25	5th priority S=0.00

5. Analysis

5.1 Analysis with regression:

Table 1: Relationship between Storage Capacity and Food Crop Marketing System:

Model Summary

Mode 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.833(a)	.693	.687	.513

A Predictors: (Constant), Storage capacity

From the table it can be seen that there is slight difference between R-Square and Adjusted R- Square. It indicates that the addition of new independent variable as well as new sample would hardly affect the regression effect. The adjusted value of R^2 0.687 describes that 68.7% variation in the dependent variable can be accounted for by the variation in the independent variable. It shows there is high significance of the variables, as the value of R is closer to 1; representing high dependence among the variables.

Table 2: Coefficients of dependent and independent variable:

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Sat. Error	Beat		

| 1 | (Constant) | .773 | .287 | | 2.698 | .010 |
| | Storage_c apacity | .820 | .079 | .833 | 10.414 | .000 |

A Dependent Variable: Marketing system

Even the coefficient of the independent variable is significant to reject the null hypotheses. Thus, it can be said that storage capacity has significant impact on food crop marketing system marketing system.

Table 3: Relationship between Fund Availability and Food Crop Marketing System:

Model Summary

Mode 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.769(a)	.591	.582	.593

a Predictors: (Constant), Fund availability

From the table it can be seen that there is slight difference between R^2 and Adjusted R^2. It indicates that the addition of new independent variable as well as new sample would hardly affect the regression effect. The adjusted value of R-Square 0.582 describes that 58.2% variation in the dependent variable can be accounted for by the variation in the independent variable. It shows there is high significance of the variables, as the value of R is closer to 1; representing high dependence among the variables.

Table 4: Coefficients of dependent and independent variable:

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Sat. Error	Beat		
1	(Constant)	1.025	.327		3.131	.003
	Fund_avai lability	.757	.091	.769	8.322	.000

a. Dependent Variable: Marketing system

The coefficient of the independent variable is significant to reject the null hypotheses. Thus, it can be said that availability of fund has significant impact on food crop marketing system.

Table 5: Relationship between Middlemen and Food Crop Marketing System:

Model Summary

Mode 1	R	R Square	Adjusted R Square	Std. Error of the Estimate

180

1	.927(a)	.860	.857	.347

A Predictors: (Constant), Middlemen

From the table it can be seen that there is slight difference between R^2 and Adjusted R^2. It indicates that the addition of new independent variable as well as new samples would hardly affect the regression effect. The adjusted value of R^2 0.857 describes that 85.7% variation in the dependent variable can be accounted for by the variation in the independent variable. It shows there is high significance of the variables, as the value of R is closer to 1; representing high dependence among the variables.

Table 6: Coefficients of dependent and independent variable:

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Sat. Error	Beat		
1	(Constant)	.546	.188		2.904	.006
	Middle men	.875	.051	.927	17.166	.000

A Dependent Variable: Marketing system

The coefficient of the independent variable is significant to reject the null hypotheses. Thus, it can be said that middlemen has significant impact on food crop marketing system.

Table 7: Relationship between Government and institutional help and food crop marketing system:

Model Summary

Mode 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.707(a)	.500	.490	.655

a Predictors: (Constant), Govt. and institutional help

From the above table it can be seen that there is slight difference between R^2 and Adjusted R^2. The adjusted value of R^2 .490 describes that 49.0% variation in the dependent variable can be accounted for by the variation in the independent variable. It shows there is high significance of the variables, as the value of R is closer to 1; representing high dependence among the variables.

Table 8: Coefficients of dependent and independent variable:

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.

		B	Sat. Error	Beat		
1	(Constant)	1.383	.341		4.055	.000
	Govt_help	.670	.097	.707	6.932	.000

A Dependent Variable: Marketing system

The coefficient of the independent variable is significant to reject the null hypotheses. Thus, it can be said that Govt. and institutional help has significant impact on food crop marketing system.

Table 9: Relationship between Transportation System and Food Crop Marketing System:

Model Summary

Mode 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.675(a)	.456	.444	.684

A Predictors: (Constant), Transportation system

From the above table it can be seen that there is slight difference between R^2 and Adjusted R^2. The adjusted value of R^2 .444 describes that 44.4% variation in the dependent variable can be accounted for by the variation in the independent variable. It shows there is high significance of the variables, as the value of R is closer to 1; representing high dependence among the variables.

Table 10: Coefficients of dependent and independent variable:

Coefficients (a)

Mode 1		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Sat. Error	Beat		
1	(Constant)	1.554	.346		4.489	.000
	Transportation	.631	.099	.675	6.338	.000

a Dependent Variable: Marketing system

The coefficient of the independent variable is significant to reject the null hypotheses. Thus, it can be said that transportation system has significant impact on food crop marketing system.

5.2. Analysis with Priority Index
Priority Index is used to measure the most crucial problems. This is prepared with the concern of the farmers.
The formula of P.I is $P.I = \sum S_i f_i / n$
$(0 \leq P.I \leq 1)$

Where P.I= Priority index

S_i= Scale value of ith priority

F_i= Frequency of ith priority

n= Total number of observations

So, among the five problems which problem has the highest P. I, it is ranked as 1. This process will continue to rank 5 which have the lower P.I.

From the following table it is evident that the existence of middlemen is ranked as the most acute problem. Next one is lack of storage facility which is ranked 2. Lack of fund and lack of government and institutional help are two other major problems which are identified by the farmers. These two problems are ranked 3 and 4 respectively. The respondents have little complain about transportation. Therefore, lack of proper transportation is ranked as 5.

Identified Problems	1st Priority (S=1.0)	2nd Priority (S=0.75)	3rd Priority (S=0.50)	4th Priority (S=0.25)	5th Priority (S=0.00)	$\sum f_i$	P.I	Rank
	f_2	f_3	f_4	f_2				
Lack of Storage	of	15	18	13	2	2	50	0.71
Lack of Fund	10	9	15	10	6	50	0.535	3
Existence of Middlemen	21	19	3	2	5	50	0.74	1
Lack of Government and Institutional Help	4	4	13	15	14	50	0.345	4
Lack of proper Transportation	0	0	6	21	23	50	0.165	5

Source: Researcher's compilation based on field survey (April, 2012)

Findings

According to the regression analysis, all (05) the null hypotheses are rejected. Therefore, all the factors (storage facility, fund availability, middlemen, Government and institutional help and transportation) affect food crop marketing system at Chakrakhali village in Batiaghata Upazilla of Khulna District. But among these five factors, middlemen affect most as the adjusted value of R^2 is 0.857. As the value of R is closer to 1, it represents high dependence among the variables. Then the second most important factor is storage capacity with adjusted R^2 value 0.687. It describes that 68.7% variation in the dependent variable can be accounted for by the variation in the independent variable. The third factor which affects food crop marketing system is fund availability with adjusted R^2 value 0.582. The adjusted value of R^2 0.582 describes that 58.2% variation in the dependent variable can be accounted for by the variation in the independent variable. The fourth one is Govt. and institutional help and the last one is transportation system with adjusted R^2 value, 0.490 and 0.444 respectively. That means 49.0% and 44.4% variation in the dependent variable can be accounted for by the

variation in the independent variable.

According to the priority index, existence of middlemen is ranked as 1 which means it is the most acute problem. The P.I of existence of middlemen is 0.74. Lack of storage facility is ranked as 2 with P.I. value 0.71 which is lower than the P.I of middlemen. Lack of fund and lack of government and institutional help are ranked as 3 (P.I 0.535) and 4 (P.I. 0.345) respectively. The last one is lack of proper transportation is ranked as 5 with the lowest P.I. value which is 0.165. The respondents have little complain about transportation.

Conclusion

The farmers are so hapless because though their contribution accelerates the velocity of the economy, but they don't get necessary facilities at the time of production and marketing. Though all the factors have significant impact on the food crop marketing system of Chakrakhali village in Batiaghata Upazilla of Khulna District, existence of middlemen is the most decisive factor. The existence of middlemen is curse for the marginal farmers. But there is no alternative marketing system. So, government should establish agricultural price commission, auction system and cooperative marketing. In this way the farmers will enhance their bargaining power. Again in Batiaghata upazilla there is no cold storage facility. So for the betterment of the farmers government should establish a cold storage. Funding is another problem. Government should provide credit to the farmers with easy terms and conditions through Krishi Bank or other governmental institution.

As food crop is one of the main segment of agriculture and agriculture is the heart of the economy of Bangladesh, both government and non-government agencies should try to develop the existing condition of the agriculture marketing. More specifically a good marketing system should be formed for the betterment of the farmers and consumers.

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