

A Review of Bangladesh's Development 2007-08



# Recent Inflation in Bangladesh

Trends, Determinants and  
Impact on Poverty

Mustafizur Rahman  
Debapriya Bhattacharya  
Wasel Bin Shadat  
Uttam Deb



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Price hike of essential commodities has been a major concern in Bangladesh, both for the policymakers and the public at large. As a matter of fact, price hike of essential commodities can be singled out as the most critical challenge faced by the Bangladesh economy in recent time. Considering the importance of the issue the Centre for Policy Dialogue (CPD) has carried out two important studies on prices and inflation under the Independent Review of Bangladesh's Development (IRBD) programme. In 2007 (March-June), CPD carried out a study titled *Price of Essential Commodities: A Diagnostic Study of Recent Trends* to investigate the underlying factors contributing to inflation in Bangladesh which was gradually gaining momentum at the time. Inflation in Bangladesh gained further momentum in 2008 with consequent adverse implications on purchasing power and poverty levels in Bangladesh. To examine these more recent developments, CPD conducted another study, as a follow-up of the aforesaid diagnostic study, which was titled *Trends in Prices and Inflation: Impact on Real Income and Poverty in Bangladesh*.

The present volume titled *Recent Inflation in Bangladesh: Trends, Determinants and Impact on Poverty* captures the findings of the aforesaid two studies on prices and inflation in Bangladesh. The volume is divided into two parts, Part A and Part B, which together include eight chapters. Part A of the volume reports results of the 'Impact Study,' while Part B presents the findings of the 'Diagnostic Study.' Chapter 1 provides an introduction and overview of the book. Part A of the volume (Chapters 2 to 4) provides an analysis of the nature and dynamics of inflation in a comparative setting and examines the impacts and policy interventions in view of this. Part B (Chapters 5 to 8) traces the value chain of selected essential items, examines relative power of market intermediaries and puts forward suggestions, from both short and long term perspectives, to address the attendant challenges in this regard.

As mentioned, the study titled *Price of Daily Essentials: Diagnostic Study of Recent Trends* was undertaken during March-June 2007, in view of the rise in prices of essential commodities in Bangladesh, which was gathering momentum during the second quarter of 2007. This was a time when the general stability in prices of food items experienced by Bangladesh over the preceding years was beginning to be undermined by inflationary tendencies manifested in rapid hike in prices of most of the items belonging to the daily consumption basket including rice, wheat flour, vegetables, edible oil and other essential items. Indeed, the 'diagnostic study' was undertaken following a request from the Ministry of Commerce, Government of Bangladesh, when the prices started to rise in the early part of 2007. As would be expected, the inflationary pressure had adverse impact and implications for all major



stakeholder groups. The upward trend in prices of the essential items, for obvious reasons, gave rise to serious concerns among policymakers, and the citizens of Bangladesh in general, both as consumers and producers. Consumers' and particularly those from low income groups, suffered tangible real income erosion as a consequence of the rising prices. Both fixed and flexible income earners have suffered as a consequence. Since the consumption basket became costly, producers started to face increasing pressure from workers and employees for raising wages and salaries. The government had to take a number of initiatives including opening of subsidised Bangladesh Rifles (BDR) shops, open market sale (OMS) of rice, broadening of safety net programmes and reduction of import duties (to zero) to combat the inflationary pressure and mitigate its impact.

However, a thorough examination of relevant factors is required in order to identify appropriate policy measures in view of the spiralling inflation. Inflation is a multifaceted problem. Diagnosis of the problem, understanding of the causal links and identification of concrete doables would require an effort that goes beyond speculative assumptions as to causal links driving the price hike, impact of inflation on purchasing power and welfare, policy response and implications of steps taken. In view of the absence of any systematic diagnostic investigation, the CPD study has made an attempt to provide answer to some of the key attendant questions and bridge the research gap in this respect.

This part of the volume also presents the findings from the field survey conducted as part of this study and also insights from the analysis of secondary information. The objective of CPD's diagnostic study was to trace and track the movements in price levels of a set of identified items through out the product cycle, from producers to retailers, identify factors contributing to the rise in prices, examine the behaviour of the various agents in the value chain of products, and come up with a number of policy suggestions to address the attendant concerns by taking corrective measures.

In all, nine essential items were selected for the purpose of the CPD study in view of their critical importance in the consumption basket of average citizens. These were rice, wheat flour, lentil, potato, edible oil, onion, milk powder, vegetables and egg. Whilst a detailed analysis of the relevant secondary data and information was made, it was felt that for this type of diagnostic study it was necessary to undertake a limited field level survey. A number of locations, both in and outside of Dhaka city, was chosen to generate the required field level insights. The survey was conducted during March-April, 2007. Both import and domestic production component of selected items were studied in this connection. The study explored the economics of the functioning of the market intermediaries who play a crucial role in the value chain of essential items and have an important influence on the level of the final retail price. The purpose of the survey was to identify the key nodal points in the value chain of each of the selected items, ascertain the level of prices at each such nodal point, estimate the share in the margin between the farm-gate/import level price and the retail level price, and examine whether any collusive pattern of behaviour was discernible involving the various agents operating in a particular

value chain. The nature of the relationship and interface among the various agents were found to be complex, with varying degrees of market power. A separate Annex has been included in the book which presents the details of this part of the analysis.

The study was conducted when global prices of many of the selected items were on the rise. Because the share of imports in the total domestic demand varied across selected items, the impact of global prices on domestic prices also varied across the range of items. An in-depth analysis of the import data was also undertaken to identify major players in the import scenario and their market share in order to elicit a notion about their respective control over market. It was difficult to ascertain whether there was presence of any syndication in the market through this limited survey. However, with respect to some items the presence of a limited number of importers could have created a potential opportunity for oligopolistic behaviour for those particular items.

The diagnostic survey came out with a range of interesting findings which throw important insights into the role played by, and influence of, various intermediate agents, such as millers in case of rice and importers in case of edible oil.

The study has come up with a number of recommendations with regard to policy interventions at a time of rising prices. Some of these recommendations are general, some product specific. Whilst fiscal measures were found to be necessary, it was also found that these did not necessarily get transmitted into consumers' gains in the form of reduced prices.

The diagnostic study suggested a number of measures to raise market efficiency including the need for enhanced capacity of the government to monitor the price of essentials. The study draws attention to the need for public sector institutions to have enhanced capacities to monitor global price trends, make reliable demand-supply projections and undertake market intermediation in a coordinated and concerted manner. The study underpins the need for providing incentives to small scale entrepreneurs to stimulate their more active involvement in the import market, calls for establishment of more seasonal wholesale markets for essential items, and suggests establishment of more extensive storage facilities to lessen volatility in the supply chain. The study recommended support for promotion of producers' marketing associations, more broad-based OMS initiative, making display of retail prices mandatory, designing of national storage policy and establishment of an advanced agri-portal. The study also views strengthening of public sector institutions such as Trading Corporation of Bangladesh (TCB) and Bangladesh Agriculture Development Corporation (BADC) to be important for raising agriculture sector productivity and for having more effective intervention capacity of the government to reduce volatility in prices. The study called for better monitoring of the supply-demand situation and for prompt forward-looking import decisions, both under private and public sector initiatives. In view of this, the study also recommended establishment of a Department of Market Surveillance (DMS) to ensure an ongoing monitoring of the price situation of essential items with a capacity to articulate appropriate response.



The price scenario has continued to deteriorate since the time when the CPD survey was carried out in March 2007. Prices of essential items experienced further rise following the two consecutive floods in the months of June and August and the Cyclone 'Sidr' in November 2007. Global commodity prices, including those of oil, rice, wheat and edible oil have raised between 40 to 100 per cent compared to what these were a year or so before, with concomitant effect on domestic prices. It was felt that there was a need to capture the recent trends with regard to price dynamics and its consequent implications on real income and poverty level of the general people. CPD carried out a follow-up study titled *Trends in Prices and Inflation: Impact on Real Income and Poverty in Bangladesh*. This study traced more recent trends in aggregate inflation levels and also price rise of a number of major items of consumption. The study looked at Bangladesh's inflation from a regional comparative perspective, made an attempt to estimate the impact of inflation on poverty levels and reviewed various government interventions to address both causes and consequences of inflation.

The CPD studies on prices and inflation are shaped by a thinking that an in-depth analysis of the price scenario could help Bangladesh's policymakers in their pursuit of designing appropriate policy responses and prescriptions. It is thus hoped that the book will be of interest to those who have professional and policy interest in addressing the inflationary situation in Bangladesh. In parallel, the general readership will hopefully stand to gain from a better appreciation of the workings of the value chain of essential items and from a better understanding about some of the key underlying factors contributing to the rise in prices of these items. It is hoped that measures suggested in this study in the areas of fiscal initiatives, market intermediation and institutional strengthening will, in a modest way, help in the design of appropriate policy responses at a time when difficult policy choices have to be made in the context of the rising prices of essentials in Bangladesh.

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A dedicated team of a large number of CPD researchers and colleagues from other divisions was involved in the survey for the diagnostic study titled *Price of Daily Essential Commodities: A Diagnostic Study of Recent Trends* and the preparation of the present volume. I would like to register my sincere appreciation to each member of this highly competent collective. The CPD Diagnostic Study team was led and guided by *Dr Debapriya Bhattacharya*, immediate past Executive Director of CPD. *Dr Bhattacharya* and I, in my role as Deputy Team Leader, were most ably assisted by Coordinator of this study *Wasel Bin Shadat*, Senior Research Associate, CPD who was in overall charge of the field survey, data analysis and preparation of the first draft of the report. *Wasel's* exceptional dedication, leadership, commitment and high quality of work demonstrated in the course of this study were crucial to the successful conduct of the survey and completion of the diagnostic study. His leadership and contribution are deeply appreciated.

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*Dr Uttam Deb*, Head of Research, CPD volunteered to conduct a follow-up study titled *Trends in Prices and Inflation: Impact on Real Income and Poverty in Bangladesh*. This study traced more recent trends in aggregate inflation levels and analysed movements in price levels of a number of essential items of consumption. This study has also estimated impact of inflation on poverty levels based on latest households income and expenditure data, and reviewed various government interventions to address both causes and consequences of inflation. I would like to gratefully acknowledge this important contribution which will enable the readership to better understand the current state of price dynamics in Bangladesh. In this endeavour Dr Deb was most ably assisted by a number of colleagues. *Ashiq Iqbal*, Senior Research Associate, CPD has provided excellent research support in estimating the impact of the recent inflation on real income of various groups of households in Bangladesh. In connection with this, he also estimated the proportion of new poors who fell below the poverty line as a consequence of inflation. *Subir Kanti Bairagi*, Research Associate, CPD has extended excellent analytical support and also provided research backup to Dr Deb. *Muhammad Alamin*, Research Associate, CPD has made valuable contribution by collecting and processing the data and information necessary for the study. *Suparna Hasan*, Senior Research Associate, CPD has provided valuable research assistance by helping to generate field level information and by tracking government actions undertaken to control the price of essential items. Dr Deb, along with *Dr Fahmida Khatun*, Additional Director, Research and *Dr Khondaker Golam Moazzem*, Senior Research Fellow, contributed to the design of the study and provided valuable advice and guidance to the field survey teams. *Kazi Mahmudur Rahman*, Senior Research Associate, *Hasanuzzaman*, Research Associate and *Zebulun Kreiter*, Intern, CPD contributed importantly to the work of the research team.

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about its progress. Major findings of the diagnostic study were presented by *Dr Debapriya Bhattacharya* and other senior CPD colleagues at a briefing session with the Hon'ble Chief Advisor *Dr Fakhruddin Ahmed* held on June 12, 2007. Among others the session was attended by Hon'ble Advisor *Dr A B Mirza Azizul Islam, Feroz Ahmed*, Secretary, Ministry of Commerce and *Major General Shakil Ahmed, ndc, psc*, Director General, BDR. We gratefully acknowledge the feedbacks received from the participants of this briefing session. I would like to take this opportunity to express our sincere gratitude to the Hon'ble Chief Advisor for his interest in this study.

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*Mustafizur Rahman*  
Executive Director  
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## ACRONYMS

AAFC	Agriculture and Agri-Food Canada
ABARE	Australian Bureau of Agricultural and Resource Economics
ACC	Anti-corruption Commission
ACCPE	Agricultural Commission for Costs and Price Estimation
ADB	Asian Development Bank
ADO	Asian Development Outlook
ADP	Annual Development Programme
AGMARKNET	Marketing Research and Information Network
AGMC	Agro Growth Marketing Centre
AIS	Agriculture Information Service
AIT	Advance Income tax
BAINC	Bangladesh Agriculture Information Service Centre
BAU	Bangladesh Agricultural University
BBS	Bangladesh Bureau of Statistics
BDR	Bangladesh Rifles
BDT	Bangladesh Taka
BIDS	Bangladesh Institute of Development Studies
BoP	Balance of Payment
CACP	Commission for Agricultural Costs and Prices
CBOT	Chicago Board of Trade
CC	Cash Credit
CD	Customs Duty
CDSBO	Crude Degummed Soybean Oil
CIF	Cost, Insurance and Freight
CNG	Compressed Natural Gas
CPD	Centre for Policy Dialogue
CPI	Consumer Price Index
CTG	Caretaker Government
DAC	Department of Agriculture and Cooperation
DAE	Department of Agricultural Extension
DAM	Department of Agricultural Marketing
DAP	Diammonium Phosphate
DC	Deputy Commissioner
DC	Dominant Chain
DLS	Department of Livestock Service
DMI	Directorate of Marketing and Inspection
DMS	Department of Market Surveillance
DPMI	Department of Prices and Market Intelligence
ED	Executive Director
FADINAP	Fertilizer Advisory Development and Information Network for Asia and Pacific
FAO	Food and Agricultural Organization

FFW	Food for Work
FGD	Focus Group Discussion
FM	Flour Mill
FOB	Free on Board
FPC	Fair Price Campaign
FPMU	Food Planning and Monitoring Unit
FY	Fiscal Year
GDP	Gross Domestic Product
GIS	Global Information System
GMM	Gross Marketing Margin
GNI	Gross national Income
GoB	Government of Bangladesh
GoI	Government of India
GR	Gratuitous Relief
GRWC	Gross Returns over Working Capital
ha	Hectares
HES	Household Expenditure Survey
HCI	Headcount Index
HCR	Head Count Ratio
HES	Household Expenditure Survey
HIES	Household Income and Expenditure Survey
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
IMF	International Monetary Fund
IMPS	Integrated Multipurpose Sample
INR	Indian Rupee
IRBD	Independent Review of Bangladesh's Development
IT	Information Technology
JFF	Jamuna Fertilizer Factory
LC	Longest Chain
LDC	Least Developed Country
LE	Large Employee
LIFDC	Low Income Food Deficit Country
LIM	Loan against Imported Merchandise
LTR	Loan against Trust Receipts
L/C	Letter of Credit
MAF	Ministry of Agriculture and Forestry
MDO	Marketing, Distribution and Operating
MEP	Minimum Export Price
MFDM	Ministry of Food and Disaster Management
MFN	Most Favoured Nation
MIS	Management Information System

MIS	Market Intervention Scheme
MIS	Marketing Intelligence Service
MKWh	Mega Kilo Watt hour
MoA	Ministry of Agriculture
MoC	Ministry of Commerce
MoF	Ministry of Finance
MoP	Muriate of Potash
MPS	Monetary Policy Statement
MRP	Maximum Retail Price
MSP	Minimum Support Price
MT	Metric Ton
NAFED	National Agricultural Cooperative Marketing Federation
NAP	National Agriculture Policy
NBR	National Board of Revenue
NEC	National Economic Council
NGO	Non-government Organisation
NMM	Net Marketing Margin
NNC	National Nutrition Council
NRWC	Net Returns over Working Capital
OMS	Open Market Sales
OPPP	Outline Participatory Perspective Plan
PFDS	Public Food Distribution System
PMC	Price Monitoring Cell
PMU	Price Monitoring Unit
PSS	Price Support Scheme
PSU	Primary Sampling Unit
RAB	Rapid Action Battalion
RBI	Reserve Bank of India
SD	Supplementary Duty
SPARRSO	Space Research and Remote Sensing Organization
SRO	Statutory Regulatory Order
TCB	Trading Corporation of Bangladesh
TCMC	Trade and Commerce Monitoring Cell
TNO	Thana Nirbahi Officer
TR	Test Relief
TSP	Triple Super Phosphate
USD	United States Dollar
USDA	United States Department of Agriculture
VAT	Value Added Tax
VGd	Vulnerable Group Development
VGf	Vulnerable Group Feeding
WFP	World Food Programme





## CONTENTS

<i>Preface</i>	VII
<i>Acknowledgement</i>	X
<i>Acronyms</i>	XIII
<b>Chapter 1: Introduction</b>	
1.1 Background	1
1.2 An Overview of the Major Research Findings	2
1.3 Organisation of the Book	5
<b>PART A: TRENDS IN PRICES AND INFLATION: IMPACT ON REAL INCOME AND POVERTY</b>	
<b>Chapter 2: Trends in Prices of Essential Commodities and Inflation</b>	
2.1 Trends in Domestic Price	7
2.2 Trends in International Price	15
2.3 Trends in the Consumer Price Index (CPI) and Inflation	23
2.4 Causes and Determinants of Inflation: A Survey of Recent Studies	30
<b>Chapter 3: Impact of Recent Inflation on Real Income and Poverty</b>	
3.1 Trends in Poverty Situation in Bangladesh	33
3.2 Impacts of Inflation on Real Income and Poverty	40
3.3 Findings of Recent Studies on Impact of Inflation on the Poverty Situation	43
<b>Chapter 4: Government Action to Mitigate Inflation and Ensure Food Security</b>	
4.1 Measures Announced by the Government	47
4.2 Implementation Status of the Measures Announced	53
4.3 Actions Taken by Different Countries to Curb Inflation	68
4.4 Projected Inflation Level in 2008 and Beyond	73
4.5 Implications for Policy	75
<b>PART B: PRICE OF ESSENTIAL COMMODITIES: A DIAGNOSTIC STUDY OF RECENT TRENDS</b>	
<b>Chapter 5: Background and Methodology of the Diagnostic Study</b>	
5.1 Background and Objectives of the Study	77
5.2 Analytical Framework of the Study	80

**Chapter 6: An Analysis of the Supply Chain of Selected Essential Items and Distribution of the Margins**

6.1 Rice	87
6.2 Wheat Flour	92
6.3 Lentil	95
6.4 Potato	97
6.5 Edible Oil	100
6.6 Onion	103
6.7 Full Cream Milk Powder	104
6.8 Vegetables	104
6.9 Egg	110
6.10 Summary of Results	113

**Chapter 7: Global Production and Price Scenario: Supply Situation of Selected Essential Commodities**

7.1 Lack of Information and Weaknesses of the Institutional System	115
7.2 Estimated National Demand for Essential Commodities for 2007	118
7.3 Domestic Supply Situation for 2006-07	120
7.4 Trends in the Wholesale Price for Rice	129
7.5 Recent Government and Private Sectors Programmes / Initiatives	129
7.6 Product-wise Global Supply Scenario	132
7.7 Comparative Picture of Daily Retail Prices of Essentials in Bangladesh and New Delhi Markets	134
7.8 Reasons behind Price Hike: Summary of Diagnosis	137
7.9 Other Supply Side Factors	140

**Chapter 8: Conclusions and Recommendations**

8.1 Nature and Diagnosis of Recent Price Hike	141
8.2 Outlook for 2007	142
8.3 Possible Strategies to Cope with the Inflation	143
8.4 Overarching Policy Measures	144
8.5 Product-specific Issues	159

**References** 167**Annexes**

Annex 4.1	Chronology of Initiatives by the Government and Proposals Published in the Newspapers	175
Annex 4.2	BDR's Interventions to Bring Down Prices of Essential Commodities	183
Annex 4.3	Projected Inflation in Asian Countries: 2008 and 2009	186
Annex 5.1	Location of the Pilot Survey in Dhaka City	188
Annex 5.2	The Checklist Prepared for the Full Scale Survey	189
Annex 5.3	The Maps of the Locations of the Full Scale Survey	193
Annex 5.4	Definitions of the Intermediaries	194
Annex 6:	Product Specific Value Chain: An Analysis of CPD Field Survey	
Annex 6.1	Rice	197

Annex 6.2	Wheat	201
Annex 6.3	Lentil	205
Annex 6.4	Potato	207
Annex 6.5	Edible Oil	211
Annex 6.6	Onion	215
Annex 6.7	Full Cream Milk Powder	217
Annex 6.8	Brinjal	219
Annex 6.9	Green Chilli	223
Annex 6.10	Egg	227
Annex 7.1	Extent and Distribution of Chita Affected Land and Farmers in Boro Production	234
Annex 7.2	BDR's Dal-Bhat Programme and Open Market Initiative	235
Annex 7.3	OMS under Trading Corporation of Bangladesh (TCB)	236
Annex 7.4	Product Specific Global Productions and Price Scenario	238
Annex 8.1	Proposal for the Establishment of Agro Growth and Marketing Centre (AGMC)	248
Annex 8.2	Indian Initiatives to Ensure Stable and Fair Price for Producers and Consumers	257

#### List of Tables

Table 3.1	Incidence of Poverty (HCR by Cost of Basic Needs (CBN) Method) in Bangladesh: 1991 to 2005	35
Table 3.2	Incidence of Poverty (HCR by Cost of Basic Needs (CBN) Method) by Division: 1995-96 to 2005	36
Table 3.3	Poverty Gap and Squared Poverty Gap by Cost of Basic Needs (CBN) Method	36
Table 3.4	Poverty Incidence (HCR) in Different Regions (Old Districts) in Bangladesh: 1995 to 2005	38
Table 3.5	Estimates of Poverty Line Expenditure: 1987-88 to 2003-04	39
Table 3.6	Changes in the Incidence of Income Poverty in Rural Bangladesh: 1987-88 to 2003-04	40
Table 3.7	Distribution of Households in Different Expenditure Groups and Share of Rice in Total Expenditure within the Respective Groups: 2005	41
Table 4.1	Budgetary Measures to Fight Inflation: Intervention Types and Expected Outcomes	50
Table 4.2	Food Import in FY2007-08	55
Table 4.3	Channel-wise Distribution of Foodgrains under PFDS in Bangladesh: FY2006-07 and FY2007-08	56
Table 4.4	Tariff Schedule of Essential Imported Commodities: 2001-02 and 2007-08	59
Table 4.5	Demand-Supply Situation in Bangladesh: FY2007-08	62
Table 4.6	Allocation of Funds for Social safety Net Programmes	63
Table 4.7	Utilisation of Funds Allocated for Social Safety Net Programmes	65
Table 4.8	Policy Responses Taken by Developing Countries of Asia to Face Inflation	70
Table 4.9	Government Policy Responses to the Food Crisis and the Symptoms of Political Actions Triggered by the Crisis in Different Countries: 2006 to August 2008	71
Table 6.1	Major Share Receiving Agents for Different Groups of Essential Commodities	114
Table 7.1	CPD Estimates on Demand of Essential Commodities	119
Table 7.2	Production and Import of Daily Essential Commodities of Bangladesh	121

Table 7.3	Comparison of Food Import Situation: FY2007 versus FY2006	122
Table 7.4	Import Concentration of Essential Products: 2005-06	126
Table 7.5	Import Concentration of Essential Products: 2006-07 (Up to March)	126
Table 7.6	L/C Opening Figures for Selected Essential Commodities and Annual Changes Thereof	127

#### List of Figures

Figure 2.1	Monthly Wholesale and Retail Prices of Rice (Coarse): July 2000 - July 2008	7
Figure 2.2	Monthly Wholesale and Retail Prices of Wheat Flour: July 2000 - July 2008	9
Figure 2.3	Monthly Wholesale and Retail Prices of Soybean Oil: July 2000 - July 2008	10
Figure 2.4	Monthly Wholesale and Retail Prices of Lentil: July 2000 - July 2008	11
Figure 2.5	Monthly Wholesale and Retail Prices of Potato: July 2000 - July 2008	12
Figure 2.6	Monthly Wholesale and Retail Prices of Brinjal: July 2000 - July 2008	13
Figure 2.7	Monthly Wholesale and Retail Prices of Onion: July 2000 - July 2008	14
Figure 2.8	Monthly Retail Prices of Full Cream Milk Powder: July 2000 - July 2008	15
Figure 2.9	Retail and Wholesale Prices of Coarse Rice: January 2007 - May 2008	16
Figure 2.10	Trends in International and Domestic Prices of Rice: July 1999 - July 2008	17
Figure 2.11	Rice Prices and Quantity of Private Rice Imports in Bangladesh: July 2000 - July 2008	17
Figure 2.12	Comparison of International and Domestic Prices of Wheat: July 2000 - July 2008	18
Figure 2.13	Comparison of International and Domestic Prices of Soybean Oil: July 2003 - July 2008	19
Figure 2.14	Comparison of Wholesale Prices of Potato in Bangladesh and Delhi: December 2004 - July 2008	21
Figure 2.15	Comparison of Wholesale Prices of Onion in Bangladesh and Delhi: January 2005 - July 2008	21
Figure 2.16	Comparison of International and Domestic Prices of Full Cream Milk Powder: July 2000 - July 2008	22
Figure 2.17	National Consumer Price Index (CPI) in Bangladesh: July 2003 - July 2008	26
Figure 2.18	All Rural Consumer Price Index (CPI) in Bangladesh: July 2003 - July 2008	26
Figure 2.19	All Urban Consumer Price Index (CPI) in Bangladesh: July 2003 - July 2008	27
Figure 2.20	Trends in Inflation (Moving Average): July 2001 - July 2008	28
Figure 2.21	Rural versus Urban Inflationary Trend: July 2005 - July 2008	29
Figure 2.22	Inflationary Trends in the Neighbouring Countries of Bangladesh	29
Figure 4.1	International Price of Fertiliser: July 2005 - April 2008	61
Figure 4.2	Projected Inflation in South Asia: 2008 and 2009	74
Figure 5.1	Distribution of Samples among Various Market Agents	83
Figure 6.1	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Domestically Produced Rice	89
Figure 6.2	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Imported Rice	90
Figure 6.3	Comparison of Import Parity Price versus Bangladesh Wholesale Price	90
Figure 6.4	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Locally Produced Wheat	94
Figure 6.5	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Imported Wheat	94

Figure 6.6	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Lentil	96
Figure 6.7	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Potato (Dominant Chain)	98
Figure 6.8	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Potato (Longest Chain)	98
Figure 6.9	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Imported Packed Soybean Oil	101
Figure 6.10	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Imported Loose Soybean Oil	101
Figure 6.11	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Onion	104
Figure 6.12	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Brinjal (Dominant Chain)	108
Figure 6.13	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Brinjal (Longest Chain)	108
Figure 6.14	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Green Chilli (Dominant Chain)	109
Figure 6.15	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Green Chilli (Longest Chain)	109
Figure 6.16	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Egg (Before Bird Flu)	111
Figure 6.17	Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Egg (At Present)	111
Figure 7.1	Monthly Trends in Imports of Selected Essential Commodities: July - March FY2007	123
Figure 7.2(A)	Foodgrains Import Situation during First Three Quarters of FY2006 and FY2007: Rice	124
Figure 7.2(B)	Foodgrains Import Situation during First Three Quarters of FY2006 and FY2007: Wheat	124
Figure 7.3	Monthly L/C Opening Figure for Rice: 2005-06 and 2006-07	128
Figure 7.4	Monthly L/C Opening Figure for Wheat: 2005-06 and 2006-07	128
Figure 7.5	Trends in Wholesale Price of Rice	129
Figure 7.6(A)	Departures in the Retail Prices of Essentials in Bangladesh and New Delhi Markets: Rice	135
Figure 7.6(B)	Departures in the Retail Prices of Essentials in Bangladesh and New Delhi Markets: Wheat Flour	135
Figure 7.6(C)	Departures in the Retail Prices of Essentials in Bangladesh and New Delhi Markets: Onion	136
Figure 7.6(D)	Departures in the Retail Prices of Essentials in Bangladesh and New Delhi Markets: Potato	136
Figure 7.7	Rise of Fuel Price in Bangladesh	140

#### List of Flow Charts

Flow Chart 6.1	Value Chain for Rice with Distribution of Consumers' Expenditure among the Agents	88
Flow Chart 6.2	Value Chain for Wheat with Distribution of Consumers' Expenditure among the Agents	93
Flow Chart 6.3	Value Chain for Lentil with Distribution of Consumers' Expenditure among the Agents	95



Flow Chart 6.4	Value Chain for Potato with Distribution of Consumers' Expenditure among the Agents	97
Flow Chart 6.5	Value Chain for Edible Oil (Soybean) with Distribution of Consumers' Expenditure among the Agents	100
Flow Chart 6.6	Value Chain for Onion with Distribution of Consumers' Expenditure among the Agents	103
Flow Chart 6.7	Value Chain for Brinjal with Distribution of Consumers' Expenditure among the Agents	105
Flow Chart 6.8	Value Chain for Green Chilli with Distribution of Consumers' Expenditure among the Agents	106
Flow Chart 6.9	Value Chain for Egg (Before Bird Flu) with Distribution of Consumers' Expenditure among the Agents	110

#### List of Boxes

Box 2.1	Construction of Consumer Price Index (CPI) by the Bangladesh Bureau of Statistics	23
Box 4.1	Chronology of Initiatives Taken by the Caretaker Government	48
Box 6.1	Rice Miller in Naogaon and the Market Intelligence	91
Box 6.2	Jamuna Bridge and Wheat Transportation from North Bengal	94
Box 6.3	Miller in Lentil Supply Chain: Price Determiner?	96
Box 6.4	Modernisation of Cold Storage and Review of the Pricing Policy	99
Box 6.5	Edible Oil: The International Price Scenario Determines the Domestic Price	102
Box 6.6	Is It Possible to Form and Sustain Syndicate in Free Market Economy at Local Level?: The Case of Vegetable Market	107
Box 6.7	Bird Flu and the Poultry Industry	112
Box 6.8	Egg Market Price: Setting or Fixing?	113
Box 7.1	Effect of Chita in Paddy in the Upcoming Boro Season: FY2006-07	122

#### List of Box-Tables

Box-Table 2.1	Number of Items Included in the CPI 'Index Basket'	24
Box-Table 2.2	Weight of the Groups	25
Box-Table 2.3	Weight of the Individual Item	25

#### List of Annex Tables

Annex Table 4.1	Summary of BDR Activities	183
Annex Table 4.2	Comparison of Price between the BDR Markets and Other Retail Markets	184
Annex Table 6.1	Distribution of Consumers' Expenditure among Agents	199
Annex Table 6.2	Distribution of Net Margin and Cost among Market Intermediaries: Domestically Produced Rice	200
Annex Table 6.3	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC)	200
Annex Table 6.4	Distribution of Consumers' Expenditure among Agents: Imported	202
Annex Table 6.5	Distribution of Consumers' Expenditure among Agents: Domestic Production	203
Annex Table 6.6	Distribution of Gross and Net Margin among	203

	Market Intermediaries: Imported Wheat	
Annex Table 6.7	Distribution of Gross and Net Margin among Market Intermediaries: Domestically Produced Wheat	204
Annex Table 6.8	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Imported Wheat	204
Annex Table 6.9	Distribution of Consumers' Expenditure among Agents	206
Annex Table 6.10	Distribution of Gross and Net Margin among Market Intermediaries	206
Annex Table 6.11	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC)	207
Annex Table 6.12	Distribution of Consumers' Expenditure among Agents: Dominant Chain	209
Annex Table 6.13	Distribution of Consumers' Expenditure among Agents: Longest Chain	209
Annex Table 6.14	Distribution of Gross and Net Margin among Market Intermediaries: Dominant Chain	210
Annex Table 6.15	Distribution of Gross and Net Margin among Market Intermediaries: Longest Chain	210
Annex Table 6.16	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Dominant Chain	211
Annex Table 6.17	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Longest Chain	211
Annex Table 6.18	Distribution of Consumers' Expenditure among Agents: Packed Soybean Oil	212
Annex Table 6.19	Distribution of Consumers' Expenditure among Agents: Loose Soybean Oil	213
Annex Table 6.20	Distribution of Gross and Net Margin among Market Intermediaries: Packed Soybean Oil	213
Annex Table 6.21	Distribution of Gross and Net Margin among Market Intermediaries: Loose Soybean Oil	214
Annex Table 6.22	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC)	214
Annex Table 6.23	Distribution of Consumers' Expenditure among Agents	216
Annex Table 6.24	Distribution of Gross and Net Margin among Market Intermediaries	217
Annex Table 6.25	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC)	217
Annex Table 6.26	Distribution of Consumers' Expenditure among Agents: Dominant Chain	221
Annex Table 6.27	Distribution of Consumers' Expenditure among Agents: Longest Chain	221
Annex Table 6.28	Distribution of Gross and Net Margin among Market Intermediaries: Dominant Chain	222
Annex Table 6.29	Distribution of Gross and Net Margin among Market Intermediaries: Longest Chain	222
Annex Table 6.30	Distribution of Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Dominant Chain	223
Annex Table 6.31	Distribution of Consumers' Expenditure among Agents: Dominant Chain	224
Annex Table 6.32	Distribution of Consumers' Expenditure among Agents: Longest Chain	225
Annex Table 6.33	Distribution of Gross and Net Margin among Market Intermediaries: Dominant Chain	226

Annex Table 6.34	Distribution of Gross and Net Margin among Market Intermediaries: Longest Chain	226
Annex Table 6.35	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Dominant Chain	227
Annex Table 6.36	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Longest Chain	227
Annex Table 6.37	Costs and Pricing: Poultry Farmers	228
Annex Table 6.38	Distribution of Consumers' Expenditure among Agents	229
Annex Table 6.39	Distribution of Gross and Net Margins among Market Intermediaries: Red Egg (Before Bird Flu)	230
Annex Table 6.40	Distribution of Gross and Net Margins among Market Intermediaries: White Egg (Before Bird Flu)	230
Annex Table 6.41	Distribution of Gross and Net Margins among Market Intermediaries: Red Egg (At Present)	231
Annex Table 6.42	Distribution of Gross and Net Margins among Market Intermediaries: White Egg (At Present)	232
Annex Table 6.43	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Red Egg	232
Annex Table 6.44	Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): White Egg	233
Annex Table 7.1	Area-wise Distribution of Chita Affected Land and Farmers	234
Annex Table 7.2	The Comparative Prices of the BDR Markets and other Retail Markets	236
Annex Table 7.3	Price Distribution for OMS of Rice	237
Annex Table 7.4	World Rice Market at a Glance	239
Annex Table 7.5	Quantity of Rice Import by Selected Countries	239
Annex Table 7.6	World Wheat Market at a Glance	241
Annex Table 7.7	Quantity of Wheat Exported by Selected Countries	241
Annex Table 7.8	World Production of Soybean and Palm Kernels	242
Annex Table 7.9	Prices of Soybean Oil: 2006 and 2007	243
Annex Table 7.10	World Lentil Supply and Disposition	243
Annex Table 7.11	Non-fat Dry Milk and Full Cream Milk Powder Production and Total Exports: Summary for Australia and New Zealand	245

#### **List of Annex Figures**

Annex Figure 6.1	International Export Price of Dairy Products in the Oceania	218
Annex Figure 6.2	Marketing Chain for the Full Cream Milk Powder	218
Annex Figure 7.1	International Prices for Rice	240
Annex Figure 7.2	International Export Price of Dairy Products in the Oceania	246
Annex Figure 8.1	Proposed Model for AGMC	256

#### **List of Annex Boxes**

Annex Box 8.1	Establishing an Agricultural Commission for Costs and Price Estimation (ACCPE)	251
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### 1.1 Background

Price hike of essential commodities has been one of the key challenges facing the caretaker government (CTG) of Bangladesh that assumed power on 12 January 2007. Indeed, the problem emerged as a major concern some time before the change of power had actually taken place. Creeping rise in price levels was a disquieting development that nagged the previous four-party alliance government as well, particularly during the last nine months of its tenure, which ended in October 2006. The economy was experiencing creeping inflation much before the issue had become a source of increasing anxiety for all stakeholders. As is evident from market surveillance and relevant data, the upward trend in the consumer prices index (CPI) in general, and the prices of daily essentials in particular, accelerated significantly in 2007 and early 2008. Though the pace of rise has somewhat slowed in very recent times, price levels have continued to remain at heightened levels. General inflation at the national level, both point-to-point and the 12-month average, had been 7.43 per cent and 6.94 per cent respectively in March 2007, when the Centre for Policy Dialogue (CPD) diagnostic study on inflation was undertaken. By July 2008, these figures had climbed to 10.82 and 10.00 per cent respectively. One important distinctive feature of this rise is that rural inflation was higher than that of urban areas.

In the context of mounting public concern and interest in the attendant issues, and particularly in view of the adverse impact of rising prices of essentials on the livelihood of common people, urgent policy responses were required of the CTG immediately after it assumed power. There was an urgent need to identify the underlying causes and search for appropriate policy responses, which could then be implemented on the ground. For obvious reasons, the Ministry of Commerce (MoC) of the Government of Bangladesh (GoB) was at the centre of all the debate and discussion around the price rise. At this point, the MoC requested that CPD undertake a diagnostic study to identify the underlying causes of price rise and put forward some recommendations to address the situation. The CPD study that was undertaken was titled "*Price of Essential Commodities: A Diagnostic Study of Recent Trends.*" This diagnostic study, inter alia, sought to trace the

supply chains of a number of essential commodities, identify major nodal points and their behaviour, track the distribution of profits along the value chain, and in view of the possible future supply situation (domestic production and import), made an attempt to articulate a set of public policies and institutional measures to address the attendant concerns. The study, which was conducted with support of CPD's own resources, provided useful insights into the nature of the inflation and policies that could be pursued to address the associated issues. The present volume is primarily based on the findings of that study.

It is matter of record that inflation gained further strength in the subsequent period. Since the time of the CPD investigation carried out in March and April 2007, inflation in Bangladesh had gained further momentum. It was felt that there was a need to capture the recent trends with regard to price dynamics and their consequent implications on the real income and poverty level of the general people. CPD, on its own, carried out a follow-up study titled "*Trends in Prices and Inflation: Impact on Real Income and Poverty in Bangladesh.*" This study traced more recent trends in aggregate inflation levels and also price rises of a number of major items of consumption. The study looked at Bangladesh's inflation from a regional comparative perspective, made an attempt to estimate the impact of inflation on poverty levels and reviewed various government interventions to address both causes and consequences of inflation.

This volume, titled "*Recent Inflation in Bangladesh: Trends, Determinants and Impact on Poverty,*" presents the findings emerging from both of the studies mentioned above.

## **1.2 An Overview of the Major Research Findings**

According to the CPD diagnostic study, internal factors contributing to the price rise included: increased production costs of commodities produced in Bangladesh; market concentration/collusion of market agents (both at importers and bepari levels); information gaps between different stakeholders; a large number of market intermediaries; dislocation in market structure due to the anti-corruption drive; increased transportation costs; relatively higher cost of doing business; high interest rates and bank charges; lack of an institutional monitoring mechanism; and finally, an inflationary expectation originating from the existing inflationary trends. External factors mentioned in the diagnostic study included: global supply shocks due to adverse climatic conditions in major exporting countries; increased use of crops for producing bio-fuels; leading to shortages in the

global supply of essential food items, such as wheat and rice; global price hike of oil and petroleum products; and frequent supply snags. The study argued that inflation mainly originated from a change in relative prices, indicating a cost-push type of inflation which was more of the nature of supply side driven and product specific one, rather than one related to weaknesses in the macroeconomic fundamentals. The diagnostic study projected that national inflation was unlikely to come down below 7 per cent in the near future until Aman in December 2007, while food inflation was expected to hover around 9 per cent during the first half of FY2007-08.

As regards stabilisation of prices and mitigation of the impact of inflation on real income and food security of low income households, the study suggested a number of measures. The diagnostic study recommended that the government take a price stabilisation approach aimed at bringing down price volatility in the short term, and renewed efforts to increase production and raise productivity in the medium term, as the best strategy to address the issue of inflation. The study also argued that the Central Bank should monitor the performance of the monetary sector cautiously and prudently. It was felt essential that the government should come up with reliable estimates with regard to the national balance sheet of the availability and demand for essential commodities. Based on this, relevant government agencies should then draw an annual plan to maintain the country's food security, and take necessary measures to stabilise the prices of essential commodities. Other short term measures suggested in the CPD diagnostic study included: taking necessary measures to reduce the production costs through the increased availability of electricity to the agricultural sector by restructuring load management; increased agricultural credit facilities to farmers; increased and timely availability of subsidised agricultural inputs (such as fertilisers, distributing quality seeds, etc.); enactment of the "*Supply and Regulation of Essential Commodities Ordinance (2007)*" with a powerful agency to oversee its implementation; widening of the initiative of open market sales (OMS) by the Bangladesh Rifles (BDR), the Trading Corporation of Bangladesh (TCB), the Directorate-General of Food and private entrepreneurs; restoration of business confidence in the market; mandatory display of Maximum Retail Price (MRP); reduction of financial charges; reduction of the buying-selling difference of the United States Dollar (USD) and Bangladesh Taka (BDT); and initiatives to reduce transportation costs. The diagnostic study called for careful preparations in view of any likely flood in the months of July and August, and also to take prospective measures to stabilise prices during the then upcoming Ramadan period (September-October 2007). Medium term recommendations included: promoting producers' marketing associations; strengthening of



the TCB as a modern and efficient corporate organisation; establishment of terminal markets with "hub and spoke" format, especially for perishable goods; and establishment of an Advanced Agri-Portal.

The CPD study also mentioned the adverse impact of natural disasters (floods and Sidr), increased cost of production of agricultural commodities, increase in world prices of foodgrains, edible oil, petroleum products and other essential items, export restrictions imposed by major exporting countries and the unfavourable exchange rate, particularly against the Indian Rupee (INR). CPD estimates indicated that as a consequence of high inflation, between January 2005 and March 2008, an additional 8.5 per cent of the total population, or 2.5 million new households (1.21 crore people) had fallen below the poverty line.

In view of the need to contain the rising inflation, the government announced a number of measures both in the National Budget for FY2007-08, and also through other initiatives. These included both short term and medium term policy measures. A number of recommendations articulated in the aforesaid CPD diagnostic report to mitigate the inflationary pressure were also implemented. These measures related to fiscal as well as monetary policies, and could be divided into three broad groups, based on the intervention level: market-based intervention, non-market measures and institutional reforms.

The CPD study on the impact of inflation made an attempt to trace the implementation status of measures that the government had announced to curb inflation and to mitigate the negative impact of the price hike on low-income and poor households. This tracking exercise suggests that whilst some measures were implemented fully, implementation of a number of other measures, particularly those that would have direct impact on prices, were implemented only partially. For example, the government failed to import enough foodgrain from the international market even though a much larger quantity was required because of severe losses in domestic production, suffered as a consequence of floods and Sidr. As a result, operations under Public Food Distribution System (PFDS) were conducted on a much lower scale than was aimed for in the first instance. It may be argued that weak implementation of measures announced by the government, high and rising international prices, export restrictions on several essential commodities by major exporting countries and huge losses in domestic production caused by natural calamities, were the principal factors that were responsible for high inflation in FY2007-08.

### 1.3 Organisation of the Book

The present volume is divided into two parts, Part A and Part B, which together include eight chapters. After this introductory chapter, which provides an overview of the book, the rest of the volume is organised in the following manner. Part A of the volume (Chapters 2 to 4) examines and analyses recent inflationary trends and their impact on the economy, and reviews the policies pursued by the CTG to contain and address inflationary pressure. Chapter 2 discusses the trends in prices of essential commodities and inflation during the last eight years (July 2000 to July 2008). Chapter 3 analyses the impact of recent inflation on real income and poverty levels. Chapter 4 documents different actions taken by the government to mitigate inflation and ensure food security.

Part B of this volume (Chapters 5 to 8) presents a diagnosis of the price trends analysed in Part A of the volume. Part B draws on CPD's diagnostic study that was mentioned earlier. Thus, this part of the volume is based on CPD's in-depth examination of the rising prices of some selected essential items that was undertaken in March and April of 2007, which tracked the value chain of each of these items and offered policy suggestions in this regard. In Chapter 5, the background of the diagnostic study along with methodological issues and the analytical framework are discussed. In Chapter 6, based on the primary data generated from a CPD field survey, detailed analyses of product specific value chains are carried out by focusing on the relative role of various agents in specific markets. This is supplemented by a number of boxes presenting interesting findings from the field survey. Chapter 7 presents analyses based on secondary sources of information. This section deals with estimates of national demand for various essential commodities based on Bangladesh Bureau of Statistics (BBS) data, and import and letter of credit (L/C) data. Projections are made with regard to production and price, both national and global. An analysis of National Board of Revenue (NBR) import database is undertaken to examine the extent of import concentration in few hands. A comparison between Bangladesh and Indian (Delhi) retail prices is made to understand the nature and extent of price differences of essential items. CTG's various initiatives to tackle inflation are also discussed here. The last chapter of this book (Chapter 8) highlights major findings of the diagnostic study and articulates a set of policy responses put forward to address the emergent situation.

In addition to several Annexes that present detailed analyses of product specific value chains, the volume also contains a number of other Annexes

that focus on a number of interesting themes. These include a chronology of CTG's initiatives (which is updated until July 2008), location of the pilot survey and also the full scale survey carried out by CPD in different districts, a list of uniform definitions for various market agents, and a model for the proposed agricultural growth and marketing centre in Bangladesh.

## TRENDS IN PRICES AND INFLATION

IMPACT ON REAL INCOME AND POVERTY

## CHAPTER 2

## TRENDS IN PRICES

## OF ESSENTIAL COMMODITIES AND

## INFLATION

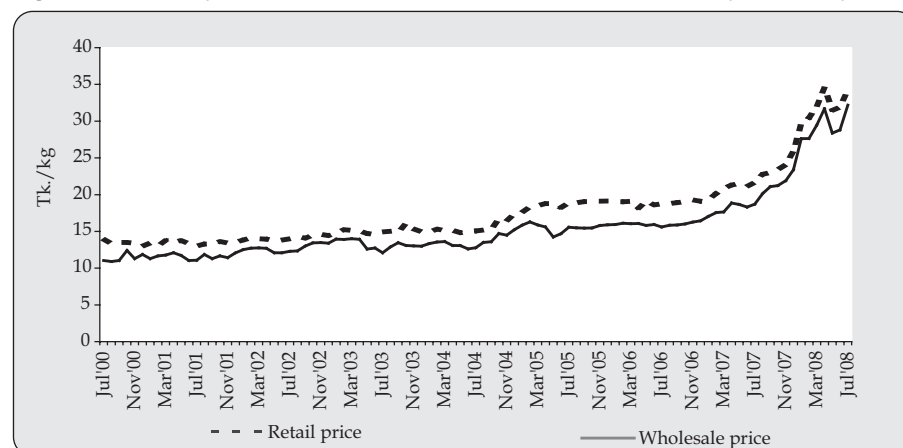
## 2.1 Trends in Domestic Prices

This section presents a trend analysis of 10 essential commodities selected on the basis of their importance in the consumption basket. These are: rice, edible oil, wheat flour, lentil, full cream milk powder, vegetables (potato and brinjal), spices (onion and green chilli), and egg. Price analysis for these items has been carried out for the period from July 2000 to July 2008.

## 2.1.1 Rice

Trends in monthly wholesale and retail prices of coarse rice are shown in Figure 2.1. It is evident from Figure 2.1 that rice prices experienced three different paces of increase: (i) low, (ii) high, and (iii) rapid and very high, during the last eight years (July 2000 to July 2008). From July 2000 to January 2003, the pace of increase in rice price was low; indeed, retail prices of rice were lower than Tk. 15 per kg during this time.

**Figure 2.1: Monthly Wholesale and Retail Prices of Rice (Coarse): July 2000–July 2008**



**Source:** Monthly Statistical Bulletin, Food Planning and Monitoring Unit (FPMU) and Department of Agricultural Marketing (DAM).

Between February 2003 and January 2007, rice prices increased at a faster pace—the retail price of coarse rice rose to about Tk. 20 per kg. In February 2008, rice prices started to increase at a rapid pace (exponentially); the retail price of coarse rice reached a record high level of Tk. 34.57 per kg in April 2008. Following the beginning of the Boro rice harvest on the third week of April 2008, the price started to come down somewhat, but then started to rise again in June 2008.

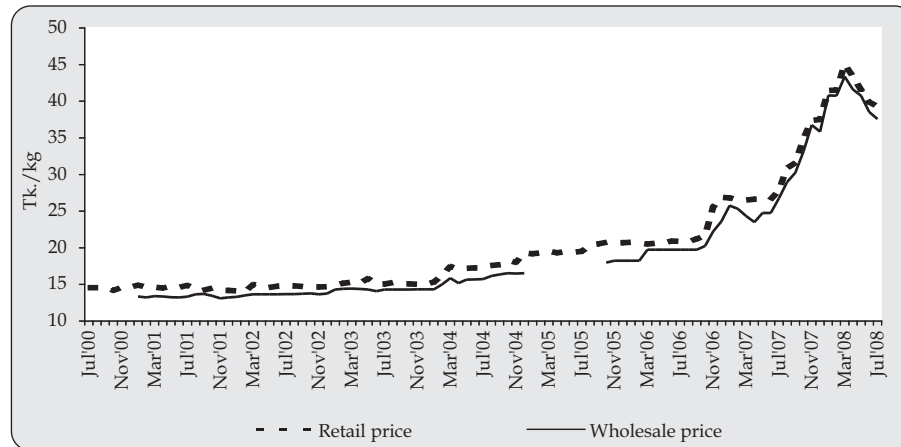
A comparison of the wholesale and the retail prices of coarse rice reveals that there was a general correspondence between the two; both the retail and wholesale prices generally moved in the same direction (upward or downward). However, the difference between the wholesale and retail prices has varied at various points of time. Between July 2000 and July 2008, on average, the retail price was 12.9 per cent higher than the wholesale price. The greatest difference was in May 2005, when the retail price was 24.3 per cent higher than the wholesale price. On the other hand, the smallest price difference was observed in January 2003, when the retail price was 5.2 per cent higher than the wholesale price. During the period from July 2000 to January 2003, on average, the retail price was 12.1 per cent higher than the wholesale price. From February 2003 to January 2007, on average, the retail price was 14.3 per cent higher than the wholesale price. Between February 2007 and July 2008, on average, the retail price was 10.3 per cent higher than the wholesale price. When the rise in prices was steep, the difference between the wholesale and the retail prices tended to be relatively low. On the other hand, the difference was usually relatively high when the rice price was on the decline. This indicates that consumers tended to pay a higher price immediately when there was any increase in the rice price in the wholesale market, but they did not get the benefit to the same extent when there was a decline in the rice price in the wholesale market.

### **2.1.2 Wheat Flour**

Trends in monthly wholesale and retail prices of wheat flour (atta) are shown in Figure 2.2. It is evident from Figure 2.2 that the price of wheat flour experienced three different paces of increase: (i) slow, (ii) high, and (iii) rapid and very high, during the last eight years (July 2000 to July 2008). Between July 2000 and January 2004, the increase in the price of wheat flour was slow; retail prices of wheat flour varied between Tk. 14.04 and Tk. 15.81 per kg. Between February 2004 and October 2006, prices of wheat flour increased at an accelerated pace. The retail price of wheat flour increased from Tk. 16.21 per kg in February 2004 to Tk. 21.65 per kg in October 2006.

Since November 2006, prices of wheat flour started to increase at a rapid and very high rate (exponentially), and the retail price of wheat flour reached a record high level of Tk. 45.00 per kg in March 2008. The price of wheat flour started to decline from April 2008; the retail price decreased to Tk. 39.31 per kg in July 2008.

**Figure 2.2: Monthly Wholesale and Retail Prices of Wheat Flour (Atta): July 2000–July 2008**



Source: Monthly Statistical Bulletin and Department of Agricultural Marketing (DAM).

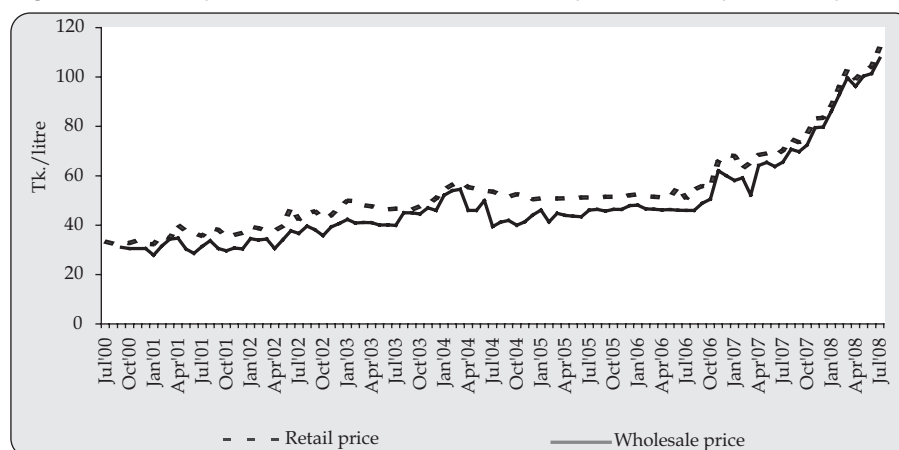
Comparison of wholesale and retail prices of wheat flour reveals that differences between wholesale and retail prices have come down significantly since April 2007. From July 2000 to July 2008, on average, the retail price of wheat flour was 6.8 per cent higher than the wholesale price. The largest difference was in December 2004, when the retail price was 14.3 per cent higher than the wholesale price. On the other hand, the lowest price difference was observed in January 2008, when the retail price was 1.7 per cent higher than the wholesale price. From July 2000 to January 2004, on average, the retail price was 7.0 per cent higher than the wholesale price. From February 2004 to January 2007, on average, the retail price was 8.7 per cent higher than the wholesale price. Between February 2007 and July 2008, on average, the retail price was 4.7 per cent higher than the wholesale price.

### 2.1.3 Soybean Oil

Trends in monthly wholesale and retail prices of soybean oil are shown in Figure 2.3. Prices of soybean oil experienced three different paces of increase: (i) slow, (ii) high, and (iii) rapid and very high, during the last eight years (July 2000 to July 2008). Between July 2000 and November 2003, the pace of increase in the price of soybean oil was slow. The retail price of

soybean oil increased from Tk. 33.32 per liter in July 2000 to Tk. 48.47 per liter in November 2003. From December 2003 to October 2006, retail prices of soybean oil increased at a high rate, from Tk. 50.88 to Tk. 55.23 per liter. In November 2006, prices of soybean oil started to increase at a rapid and very high pace (exponentially); the retail price of soybean oil reached a record high level of Tk. 111.95 per liter in July 2008.

**Figure 2.3: Monthly Wholesale and Retail Prices of Soybean Oil: July 2000–July 2008**



Source: Monthly Statistical Bulletin and Department of Agricultural Marketing (DAM).

Comparison of wholesale and retail prices of soybean oil reveals that the difference between the two decreased substantially since April 2007. It can also be observed that the retail price of soybean oil did not decrease to the extent that the wholesale price did; however, the price increased whenever there was any increase in the wholesale price of soybean oil. During the period July 2000 to July 2008, on average, the retail price of soybean oil was 11.1 per cent higher than the wholesale price. The biggest difference was observed in July 2004, when the retail price was 26.6 per cent higher than the wholesale price. On the other hand, the smallest price difference was observed in March 2001 when the retail price was 0.9 per cent higher than the wholesale price. From July 2000 to November 2003, on average, the retail price was 12.6 per cent higher than the wholesale price. Between December 2003 and January 2007, on average, the retail price was 12.4 per cent higher than the wholesale price. From February 2007 to July 2008, on average, the retail price was 5.4 per cent higher than the wholesale price.

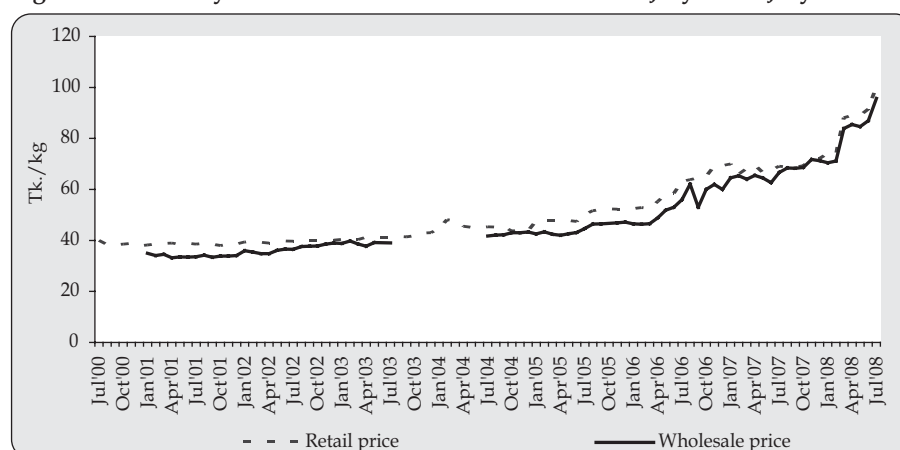
#### 2.1.4 Lentil

Trends in monthly wholesale and retail prices of lentil (masur dal) are shown in Figure 2.4. Prices of lentil also experienced three different paces of



increase: (i) low, (ii) high, and (iii) rapid and very high, over the last eight years (July 2000 to July 2008).

**Figure 2.4: Monthly Wholesale and Retail Prices of Lentil: July 2000–July 2008**



Source: Monthly Statistical Bulletin and Department of Agricultural Marketing (DAM).

During the period from July 2000 to January 2004, lentil prices increased at a slow pace. The retail price of lentil increased from Tk. 40.00 per kg in July 2000 to Tk. 44.55 per kg in January 2004. From February 2004 to June 2006, lentil prices experienced an upward but fluctuating trend—the retail price increased to Tk. 58.42 per kg in June 2006. After June 2006, lentil prices started to increase at a rapid and very high pace (exponentially), with the exception of eight months between February and September 2007, when prices increased at a relatively low rate. The retail price of lentil was highest in July 2008, at Tk. 100.16 per kg. During July 2000–July 2008, on average, the retail price of lentil was 7.8 per cent higher than the wholesale price. The highest difference was observed in September 2006, when the retail price was 17.8 per cent higher than the wholesale price. On the other hand, the lowest price difference was observed in November 2007, when the retail price was 0.4 per cent higher than the wholesale price. Between July 2000 and January 2004, on average, the retail price was 8.7 per cent higher than the wholesale price. From February 2004 to January 2007, on average, the retail price was 9.4 per cent higher than the wholesale price. Between February 2007 and July 2008, on average, the retail price was 3.5 per cent higher than the wholesale price.

### 2.1.5 Potato

Potato is a perishable commodity, and thus Bangladesh's limited cold storage capacity has been a major disadvantage in terms of addressing

market fluctuations in the demand for this item. The main harvesting period of potato is from mid January to March. Seasonal fluctuation in prices is quite discernible for potato. Usually, low prices of potato prevail from January to April, with the lowest prices visible in February and March. On the other hand, high prices are observed between September and December, with the highest prices prevailing in November and December.

**Figure 2.5: Monthly Wholesale and Retail Prices of Potato: July 2000–July 2008**



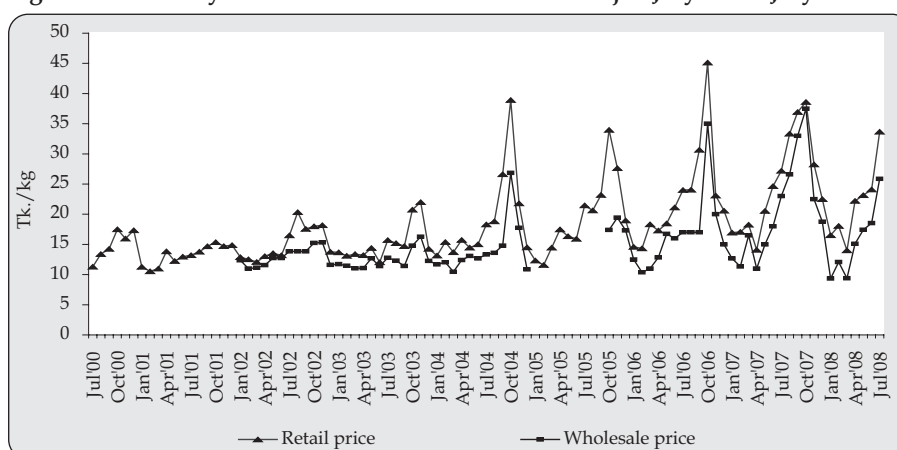
Source: Monthly Statistical Bulletin and Department of Agricultural Marketing (DAM).

During the last eight years, potato prices have tended to increase in general, exceptions being the potato growing seasons of FY2000-01, FY2004-05 and FY2007-08 (Figure 2.5). In these years, the wholesale price of potato declined at a faster pace than in other years. It is pertinent to mention here that this is largely explained by the 'bumper' harvest of potato in these years. The highest retail (Tk. 24.25 per kg) and wholesale (Tk. 22.50 per kg) prices of potato were observed in December 2007. Another peak was in November 2006, when the wholesale price was Tk. 19.10 per kg and the retail price was Tk. 23.36 per kg. During the period July 2000-July 2008, on average, the retail price of potato was 19.5 per cent higher than the wholesale price. The biggest difference was in February 2001, when the retail price was 44.9 per cent higher than the wholesale price. On the other hand, the smallest price difference was observed in September 2006, when the retail price was 1.8 per cent higher than the wholesale price. From July 2000 to December 2004, on average, the retail price was 19.5 per cent higher than the wholesale price. Between January 2005 and January 2007, on average, the retail price was 20.9 per cent higher than the wholesale price. During the period from February 2007 to July 2008, on average, the retail price was 16.4 per cent higher than the wholesale price.

### 2.1.6 Brinjal

Brinjal is a perishable commodity, the price of which is influenced by the lack of cold storage facility in the country. Brinjal is grown in both the Kharif and Rabi seasons and is characterised by high seasonal fluctuations in price. Brinjal prices increase very rapidly during the month of Ramadan. Usually, high prices prevail in September and October, while prices are relatively lower in February and March. During the last eight years, the highest price of brinjal (Tk. 45.13 per kg in the retail market) was in October 2006 during Ramadan (Figure 2.6). During the period from July 2000 to July 2008, on average, the retail price of Brinjal was 21.2 per cent higher than the wholesale price. The highest difference was in October 2005, when the retail price was 48.8 per cent higher than the wholesale price.

**Figure 2.6: Monthly Wholesale and Retail Prices of Brinjal: July 2000–July 2008**



Source: Department of Agricultural Marketing (DAM).

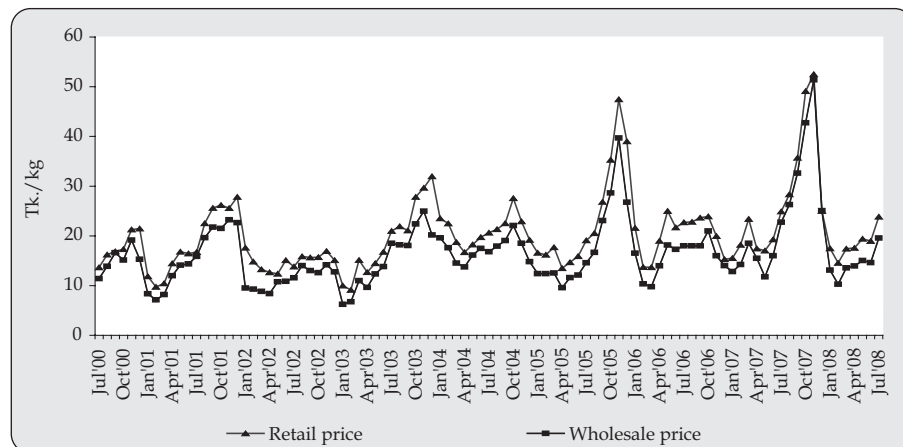
On the other hand, the lowest price difference was observed in October 2007, when the retail price was 2.8 per cent higher than the wholesale price. From July 2000 to June 2006, on average, the retail price was 19.5 per cent higher than the wholesale price. Between July 2006 and January 2007, on average, the retail price was 27.3 per cent higher than the wholesale price. From February 2007 to July 2008, on average, the retail price was 23.2 per cent higher than the wholesale price.

### 2.1.7 Onion

Onion is also a perishable crop whose prices are influenced by lack of cold storage facility. The main harvesting period of onion is from late April to mid June. Seasonal fluctuation in onion prices is quite prevalent. Onion prices increase very rapidly during the month of Ramadan. Usually, high

prices prevail in the October and November period, whilst prices tend to come down during February and March. The highest retail (Tk. 52.50 per kg) and wholesale (Tk. 51.38 per kg) prices of onion were observed in November 2007 (Figure 2.7). Another seasonal peak was in November 2005, when the wholesale price was Tk. 39.68 per kg and the retail price was Tk 47.47 per kg. During the period from July 2000 to July 2008, on average, the retail price of onion was 19.8 per cent higher than the wholesale price. The biggest difference was in January 2002, when the retail price was 46.1 per cent higher than the wholesale price.

**Figure 2.7: Monthly Wholesale and Retail Prices of Onion: July 2000–July 2008**



Source: Monthly Statistical Bulletin and Department of Agricultural Marketing (DAM).

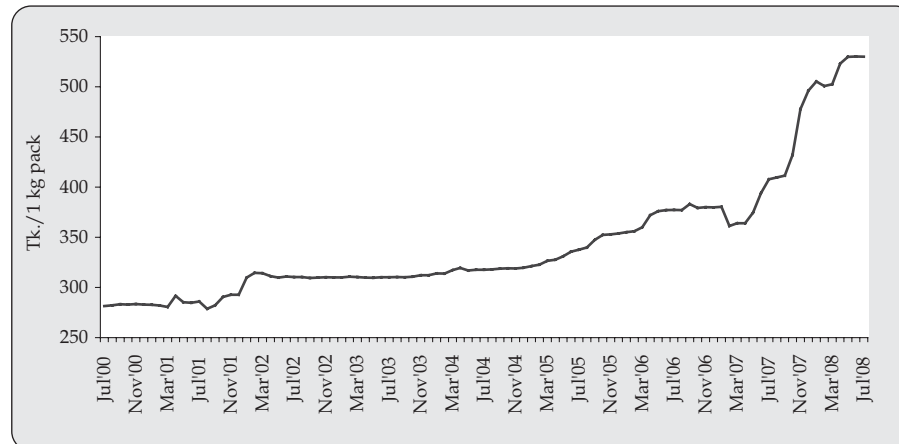
On the other hand, the smallest price difference was observed in September 2000, when the retail price was 1.5 per cent higher than the wholesale price. From July 2000 to June 2004, on average, the retail price was 19.6 per cent higher than the wholesale price. Between July 2004 and January 2007, on average, the retail price was 21.3 per cent higher than the wholesale price. From February 2007 to July 2008, on average, the retail price was 17.8 per cent higher than the wholesale price.

### 2.1.8 Milk Powder

Trends in the monthly retail price of milk powder are shown in Figure 2.8. It is evident that retail prices of milk powder also experienced three different paces of increase: (i) low, (ii) high, and (iii) rapid and very high, during the last eight years (July 2000 to July 2008). The pace of increase in the price of milk powder was low during the period from July 2000 to December 2004, when the retail price of milk powder increased from Tk. 281.52 per kg to Tk. 319.61 per kg. The retail price of milk powder then increased at a high rate between January 2005

and January 2007. The price of milk powder then declined somewhat in February and March 2007. In April 2007, the price of milk powder started to increase at a rapid and very high rate (exponentially); the retail price of milk powder reached a record high level of Tk. 530.12 per kg in June 2008.

**Figure 2.8: Monthly Retail Prices of Full Cream Milk Powder: July 2000–July 2008**



Source: Monthly Statistical Bulletin and Department of Agricultural Marketing (DAM).

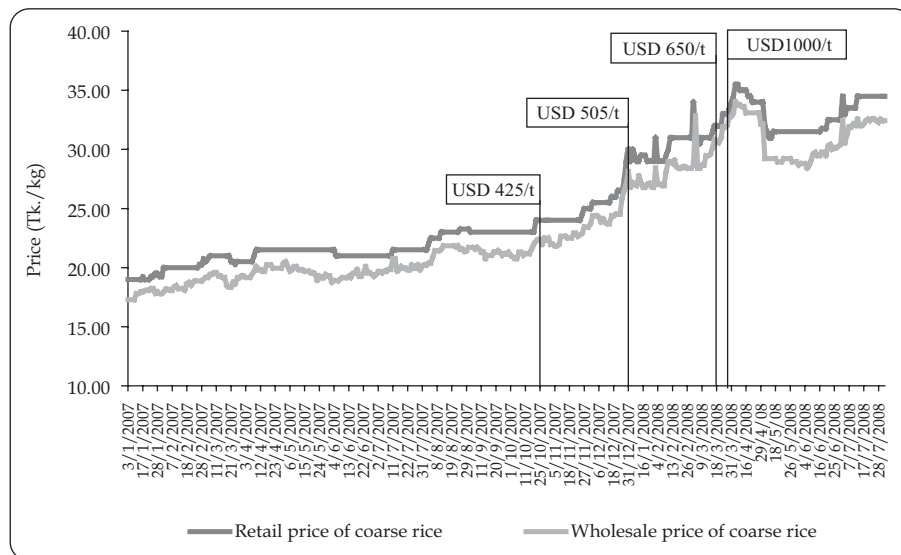
## 2.2 Trends in International Prices

### 2.2.1 Rice

Like many other least developed countries (LDCs) (42 out of 49), Bangladesh is a net rice importing country. During 2005-2007, Bangladesh imported rice mainly from India (97.2 per cent of total rice import), Pakistan (1.9 per cent), China (0.8 per cent) and Thailand (0.2 per cent). As is known, in FY2007-08, Bangladesh faced two consecutive floods and devastating cyclone Sidr which caused significant damage to the production of Aman rice and other crops. As a consequence, the food deficit in this particular year was more than what is generally experienced by the country. It was expected naturally that the import of rice from India would help bridge the deficit in Bangladesh, as was the case after the floods in 1998 and 2004. However, because of its own difficulties, in late 2007 and early 2008, India took restrictive measures to discourage/ban the export of rice and wheat from the country. India banned the export of wheat and imposed minimum export prices (MEP) for non-Basmati and Basmati rice. India initially fixed the MEP of non-Basmati rice at USD 425 per metric ton (MT) on 25 October 2007. Subsequently, India increased MEP to USD 505 per MT on 27 December 2007 and to USD 650 per MT on 19 March 2008. India announced an MEP of USD 1,000 per MT for non-Basmati rice and USD 1,200 per MT

for Basmati rice on 28 March 2008. Finally, India imposed a total ban on the export of rice on 1 April 2008. Policies pursued by India as well as other major producers and exporters of rice not only impacted the international price of rice, but also had an adverse impact on the price of rice in other countries such as Bangladesh. Prices of rice increased in Bangladesh as a consequence. It becomes evident from price analysis that the domestic price of rice in Bangladesh increased sharply with the announcement of MEP by India (Figure 2.9). Policies pursued by India have also, to some extent, influenced the rice price in Thailand (Figure 2.10), as they have influenced prices in other countries such as Vietnam, Cambodia and Egypt, who were persuaded to rethink their export strategies. At various points in time, these countries also imposed temporary bans on the export of rice.

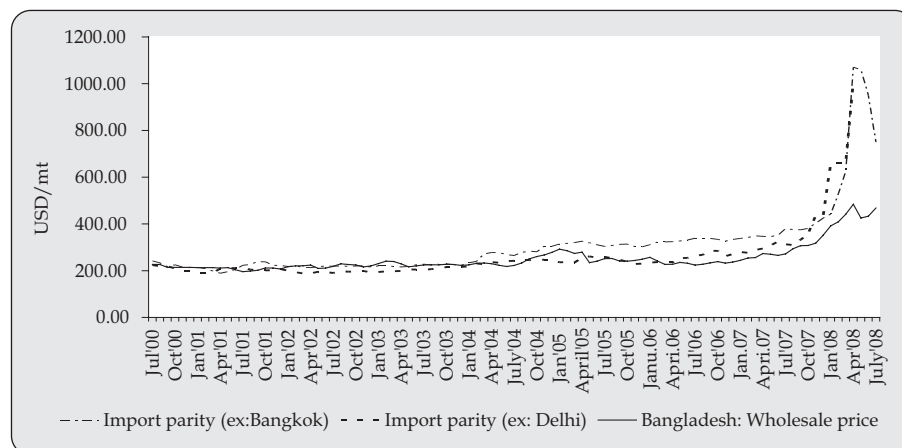
**Figure 2.9: Retail and Wholesale Prices of Coarse Rice (BR 8, BR 11, Swarna): January 2007–May 2008**



Source: Department of Agricultural Marketing (DAM).

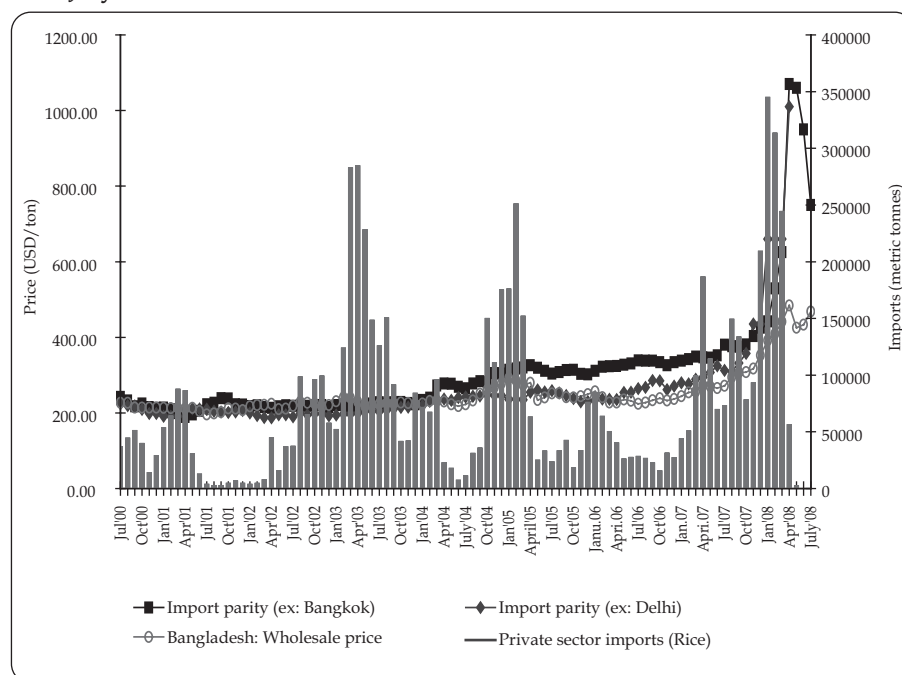
As mentioned earlier, after the floods in 1998 and 2004, Bangladesh was able to import huge quantities of rice and wheat from the international market to offset her production losses. FY2007-08 was a different case. In this year, due to restrictions imposed on rice exports by major exporters, the import of rice emerged as a major problem for Bangladesh. It is to be noted, however, that the private sector of Bangladesh has responded well to the domestic and international prices (Figure 2.11), and to policies aimed at bridging the gap between demand and supply of rice in Bangladesh. Indeed, Bangladesh's private sector imported 16.81 lakh metric tonnes of rice in FY2007-08, which was 81.8 per cent of total rice imported by Bangladesh in FY2007-08.

**Figure 2.10: Trends in International and Domestic Prices of Rice: July 1999–July 2008**



**Source:** Department of Agricultural Marketing (DAM), Bangladesh; United States Department of Agriculture (USDA); and Price Monitoring Cell (PMC), Ministry of Consumer Affairs, Food and Public Distribution, Government of India.

**Figure 2.11: Rice Prices and Quantity of Private Rice Imports in Bangladesh: July 2000–July 2008**



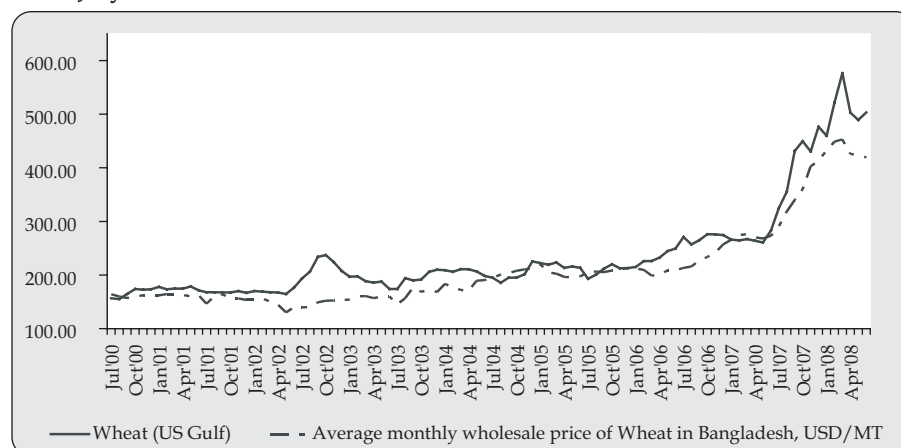
**Source:** Department of Agricultural Marketing (DAM), Food Planning and Monitoring Unit (FPMU), Bangladesh; United States Department of Agriculture (USDA); and Price Monitoring Cell (PMC), Ministry of Consumer Affairs, Food and Public Distribution, Government of India.



### 2.2.2 Wheat

Bangladesh is a net wheat importing country. During the period from FY2000-01 to FY2007-08, annual wheat imports (commercial and food aid) ranged between 9.81 and 20.78 lakh metric tonnes. In this period, the highest import (17.86 lakh metric tonnes) by the private sector was in FY2004-05 and the lowest import (5.34 lakh metric tonnes) was in FY2000-01. There was a general increase in the import of wheat during the last eight years, except in FY2006-07 and FY2007-08, when wheat imports declined relative to the previous year. Changes in the import level of wheat by Bangladesh were associated with domestic production levels and prices of wheat in the domestic and international markets. During the period of 2005-2007, Bangladesh imported wheat mainly from Russia (36.7 per cent of total wheat import), India (14.6 per cent), Canada (13.7 per cent), Ukraine (12.4 per cent), Argentina (8.1 per cent), USA (7.6 per cent), and Australia (1.0 per cent). Since June 2007, the domestic price of wheat in Bangladesh has been lower than the international price (Figure 2.12).

**Figure 2.12: Comparison of International and Domestic Prices of Wheat: July 2000–July 2008**



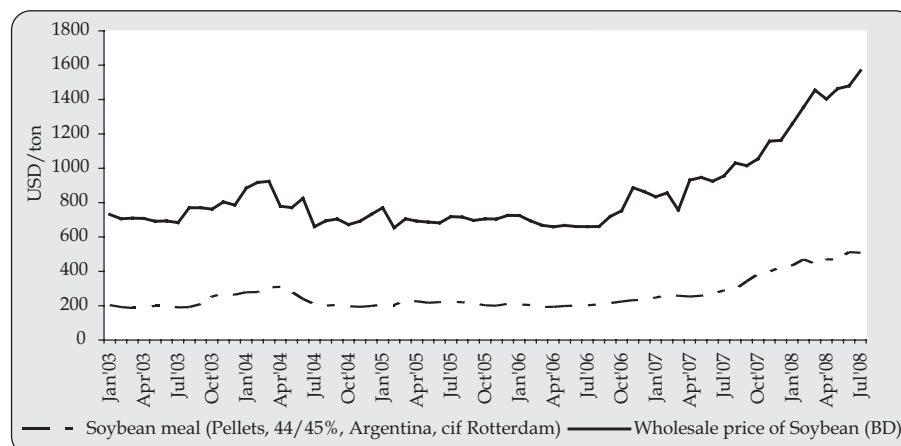
Source: Department of Agricultural Marketing (DAM) and Food and Agriculture Organization (FAO).

### 2.2.3 Soybean Oil

National Board of Revenue (NBR) data indicates that Bangladesh mainly imports three types of soybean oil: (i) Soybean oil crude, degummed and not degummed (HS 150710), (ii) Soybean oil and its fractions, refined but not chemically modified (HS 150790), and (iii) rapped/canned soybean oil (up to 2.5 kg) and soybean, not reported elsewhere (HS 1201.00.20). In 2007,

the value of total imports of soybean oil (HS 150710, HS 150790 and HS 1201.00.20) was USD 11.385 million. The shares of crude (HS 150710), refined (HS 150790) and canned (HS 1201.00.20) soybean oil were 88.9 per cent, 3.0 per cent and 8.1 per cent, respectively. In 2007, crude soybean oil was mainly imported from Brazil (99.63 per cent) and Thailand (0.37 per cent). During the same period, refined soybean oil was mainly imported from USA (99.15 per cent) and Malaysia (0.84 per cent). On the other hand, canned soybean oil was imported entirely from Uruguay (100 per cent). In 2006, crude soybean oil was imported from Argentina (81.11 per cent), Brazil (15.10 per cent) and USA (3.54 per cent); refined soybean oil was imported from USA (97.41 per cent) and Malaysia (2.59 per cent); canned soybean oil was imported from Argentina (99.99 per cent) and India (0.01 per cent). It is pertinent to mention here that Argentina increased the export tax on soybeans substantially in 2007 and 2008. On 11 January 2007, Argentina increased the export tax on soybeans from 24.0 per cent to 27.5 per cent. Argentina further increased it to 34 per cent on 29 October 2007, and then to 44 per cent on 11 March 2008. According to one report, the increase in the export tax in March 2008 alone will increase Argentina's total export tax revenue on soybean by 12 billion dollars (IPS News Agency: <http://ipsnews.net>).

**Figure 2.13: Comparison of International and Domestic Prices of Soybean Oil: January 2003–July 2008**



Source: Food and Agriculture Organization (FAO).

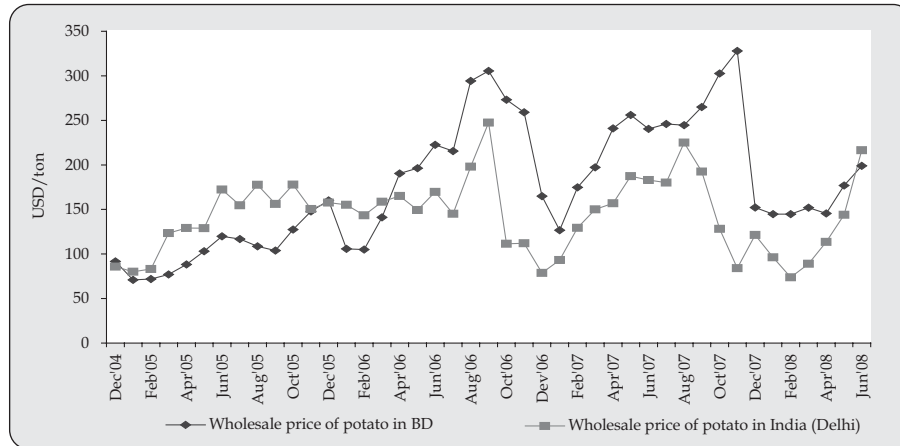
Crude soybean oil is imported by only a limited number of companies which include Bangladesh Edible Oil Ltd., Bay Fishing Co. Ltd., Deepa Food Products Ltd., M M Vegetable Oil Products Ltd., M/S Farzana Oil Refineries Ltd., M/S Super Oil Refinery Ltd., M/S United Edible Oils

Ltd., M/S Shabnam Vegetable Oil Ind. Ltd., Marrine Vegetable Oils Ltd., Mohammad Elias Brothers (Pvt.) Ltd., R.M. Oil Refinery Ltd., Rubya Vegetable Oil Industries Ltd., S A Oil Refinery Ltd., S Alam Vegetable Oil Ltd., Uttom Oil Mills Ltd., and Vott Oil Refineries Ltd. After refining and packaging the crude soybean oil, it is marketed in Bangladesh under various brand names which include Rupchanda, Teer, Mustafa, Muskan, Pusti and Rubya. As is known, the ratio between crude and refined soybean oil is 10:9. A comparison of the domestic and international market prices of refined and crude soybean oil is shown in Figure 2.13. The Figure indicates that the difference between the retail prices of refined oil in Bangladesh and crude oil in Argentina has increased over the past few years. In January 2003, the wholesale price of refined soybean oil in Dhaka was USD 731 per ton while the price of crude soybean oil in Argentina was USD 203 per ton. In other words, the wholesale price of refined soybean oil was USD 528 higher than the crude soybean oil price in Argentina. In July 2008, the wholesale price of refined soybean oil in Dhaka of USD 1,568 per ton was USD 1,060 higher than the crude soybean oil price in Argentina of USD 508 per ton. During the period from July 2003 to July 2008, the difference between the price of refined soybean oil in Dhaka and crude soybean oil in Argentina ranged between USD 450 in February 2005 and USD 1,060 in July 2008. During this period, the cost of transportation and the processing cost of soybean oil could have gone up due to increase in prices of petroleum products and chemicals. Even if this is taken into consideration, it appears that the increase in the wholesale price of soybeans was significantly higher in Bangladesh compared with prices in the international market.

#### **2.2.4 Potato**

Bangladesh mainly imports potato used for food from India and the Netherlands. In 2005, 93.8 per cent of total imported food potato (1,867 MT) by Bangladesh was imported from India and 5.4 per cent was imported from the Netherlands. In 2006, Bangladesh imported all of its imported food potato (4,741 MT) from India. A comparison of wholesale prices of potato in Bangladesh and India (Delhi) is shown in Figure 2.14. During the period from December 2004 to April 2006, the potato price in Bangladesh was lower than that of India, except in January 2006. Since May 2006, potato prices in Bangladesh have been consistently higher than in India, except in July 2008.

**Figure 2.14: Comparison of Wholesale Prices of Potato in Bangladesh and Delhi: December 2004–July 2008**

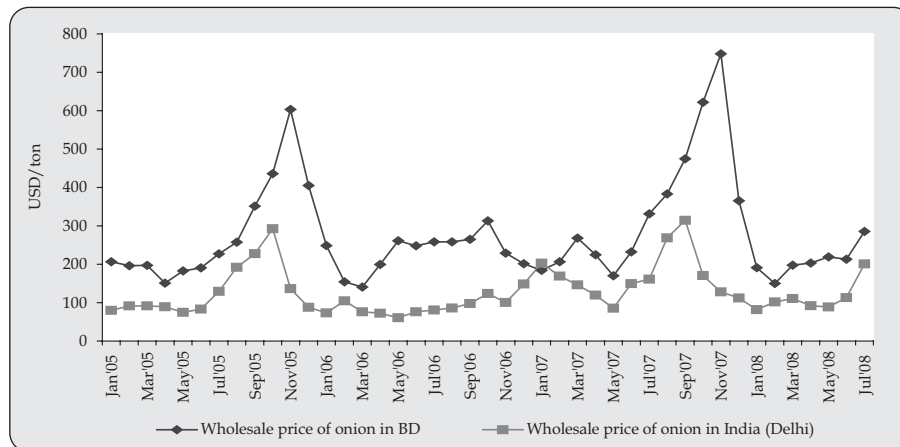


**Source:** Monthly Statistical Bulletin, Bangladesh Bureau of Statistics (BBS); Department of Agricultural Marketing (DAM); and Price Monitoring Cell (PMC), Ministry of Consumer Affairs, Food and Public Distribution, Government of India.

### 2.2.5 Onion

Bangladesh imports onion mainly from India. In 2005, 99.79 per cent of total onion imported (332,551 MT) by Bangladesh was from India. In 2006, this was about 99.99 per cent (403,636 MT), among which only 52 MT of onion was imported from China. Comparison of wholesale prices of onion in

**Figure 2.15: Comparison of Wholesale Prices of Onion in Bangladesh and Delhi: January 2005–July 2008**



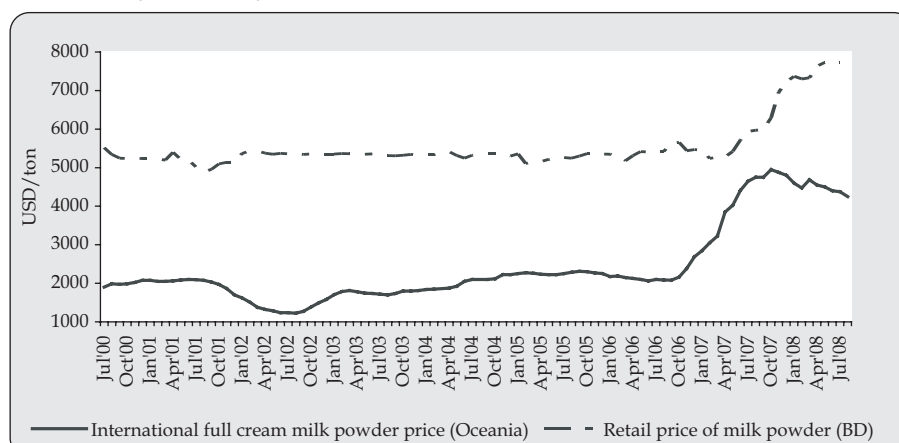
**Source:** Monthly Statistical Bulletin, Bangladesh Bureau of Statistics (BBS); Department of Agricultural Marketing (DAM); and Price Monitoring Cell (PMC), Ministry of Consumer Affairs, Food and Public Distribution, Government of India.

Bangladesh and India (Delhi) is shown in Figure 2.15. During the period from January 2005 to July 2008, the onion price in Bangladesh was higher than that of India, except in January 2007. In January 2007, the onion price in Bangladesh was lower than that of Delhi. There was a lagged response in onion price of Bangladesh with regard to the price of onion in India.

### 2.2.6 Milk Powder

Bangladesh imports two types of milk powder: (i) milk and cream, not concentrated nor sweetened (HS 0401); and (ii) milk and cream, concentrated or sweetened (HS 0402). Data obtained from Trade Map indicates that the share of HS 0402 was more than 99 per cent of total milk imported by Bangladesh during 2005-2007. During this period, imports of HS 0401 were mainly from Australia (29.5 per cent), Singapore (29.1 per cent), Thailand (26.6 per cent) and Denmark (14.8 per cent). On the other hand, imports of HS 0402 were mainly from India (17.7 per cent), Australia (17.1 per cent), Denmark (14.6 per cent), New Zealand (11.5 per cent), Singapore (9.0 per cent) and USA (8.0 per cent). A comparison of trends in domestic and international prices of milk powder (HS 0402) in Bangladesh and in the international market (Oceania) is given in Figure 2.16. In the international market, the price of milk powder was around USD 2,000 per MT during the period from July 2000 to September 2001. The price of milk powder then decreased for about 12 months and decreased to USD 1,275 in September 2002. From October 2002 to October 2006, the increase in the milk price was comparatively low. The international price of milk powder increased from USD 1,388 in October 2002 to USD 2,163 in October

**Figure 2.16: Comparison of International and Domestic Prices of Full Cream Milk Powder: July 2000–July 2008**



**Source:** International Dairy Market News Reports (USDA), Monthly Statistical Bulletin and Department of Agricultural Marketing (DAM).

2006. Following this, the price of milk powder increased at a very high rate in the international market until October 2007. Since November 2007, the price of milk powder in the international market has been on the decline. Contrastingly, the price of milk powder in Bangladesh has experienced a continuing rise at a very high pace, even when the price of the commodity declined in the international market.

### 2.3 Trends in the Consumer Price Index (CPI) and Inflation

Bangladesh Bureau of Statistics (BBS) estimates monthly and annual consumer price indices (CPIs) on a regular basis using the Laspeyres Index. CPIs are estimated for rural and urban areas, as well as on the national level. For the estimation of the CPI, the BBS uses a weightage system which has been developed on the basis of the Household Expenditure Survey (HES) of 1995-96. CPI for both rural and urban areas is computed for food and non-food items. For the estimation of the general CPI in the rural sector, 62.96 per cent weight is given to food prices and 37.04 per cent weight is applied to non-food items. On the other hand, for estimation of general CPI in the urban areas, 48.8 per cent weight is given to food prices and 52.2 per cent weight is given to prices of non-food items. CPI at the national level is estimated through the weighted average of the rural CPI (70.89 per cent weight) and urban CPI (29.11 per cent) (see Box 2.1 for a detailed description of the CPI estimation procedure used by BBS). It is often argued by researchers that the BBS should take into account changes in the composition of the consumption basket of both rural and urban consumers since the mid 1990s. Thus, CPI estimated by the BBS very often fails to reflect the impact of changes in prices of different commodities on the economic well-being of consumers.

#### Box 2.1: Construction of Consumer Price Index (CPI) by the Bangladesh Bureau of Statistics

Bangladesh Bureau of Statistics (BBS) calculates consumer price indices (CPIs) on a monthly basis whereby monthly prices of various items are used for computation of the indices. Annual indices are computed by the BBS by averaging the 12 months' indices. The reference groups for the purpose of estimating the indices are the average urban and rural households of Bangladesh. For calculation of CPIs, the BBS uses the Laspeyres formula, shown in equation 2.1.

(Box 2.1 contd.)

(Box 2.1 contd.)

$$I = \frac{\sum \frac{P_n}{P_o} \times W_i}{\sum W} \times 100 \dots \dots \dots (2.1)$$

Where,  $I$  = Consumer price index;  $P_n$  = Price in the current year;  $P_o$  = Price in the base year;  $W_i$  = Weight of the individual item; and  $W$  = Weight of the groups.

CPIs are estimated at three different levels: national, all urban and all rural. The national CPI is calculated by combining the urban and rural indices using the country-wide urban and rural households' expenditure multiplied by the total number of urban or rural households as available from population census data as weights. For computing the three CPIs, all goods and services included in the index baskets were classified under two commodity groups: (1) Food, beverage and tobacco; and (2) Non-Food. The commodity basket of non-food includes: (i) Clothing and footwear; (ii) Gross rent, fuel and lighting; (iii) Furniture, furnishings, household equipment and operation; (iv) Medical care and health expenses; (v) Transport and communications; (vi) Recreation, entertainment, education and cultural services; and (vii) Miscellaneous goods and services.

*Selection of Items:* Total numbers of items are divided into groups and sub-groups; a representative sample is then selected from each group for inclusion in the CPI. The BBS uses Household Income and Expenditure Survey (HIES) data for this purpose. In the case of prices of the items, price schedules are updated on the basis of the 1995-96 HES. The CPI items for the national index and its regional components have been classified into 8 major groups listed above. The national market consists of the urban market and the rural market. The urban market is specific for urban areas and the rural market is specific for rural areas. Number of items included in CPI of rural and urban areas are 215 and 302, respectively (Box-Table 2.1)

**Box-Table 2.1: Number of Items Included in the 'CPI Index Basket' (Base: 1995-96=100)**

Name of Index	Number of Items
CPI National	-
CPI Rural	215
CPI Urban	302

Source: Statistical Yearbook of Bangladesh, 2006.

(Box 2.1 contd.)



*(Box 2.1 contd.)*

*Selection of Base Year:* The year 1995-96 has been selected as the base year for the computation of CPI.

*Weighting Pattern of CPI:* Weights given to particular items are devised to reflect significant changes that have occurred in consumption patterns. Consumption patterns are determined on the basis of results of the 1995-96 HES based on a sample of 7,420 households, of which 5,040 were in rural areas and 2,380 in urban areas. The weighting patterns of national CPI (Base: 1995-96 = 100) are presented in Box-Tables 2.2 and 2.3.

**Box-Table 2.2: Weight of the Groups**

Locality	Average Monthly Household Expenditure (Tk.)	No. of Households (Million)	Total Monthly Expenditure (Million Tk.)	Weight (%)
1	2	3	4 = (2 × 3)	5
Bangladesh	4095	22.13	90,630	100.00
Urban	7274	3.63	26,383	29.11
Rural	3473	18.50	64,247	70.89

Source: Statistical Yearbook of Bangladesh, 2006.

**Box-Table 2.3: Weight of the Individual Items**

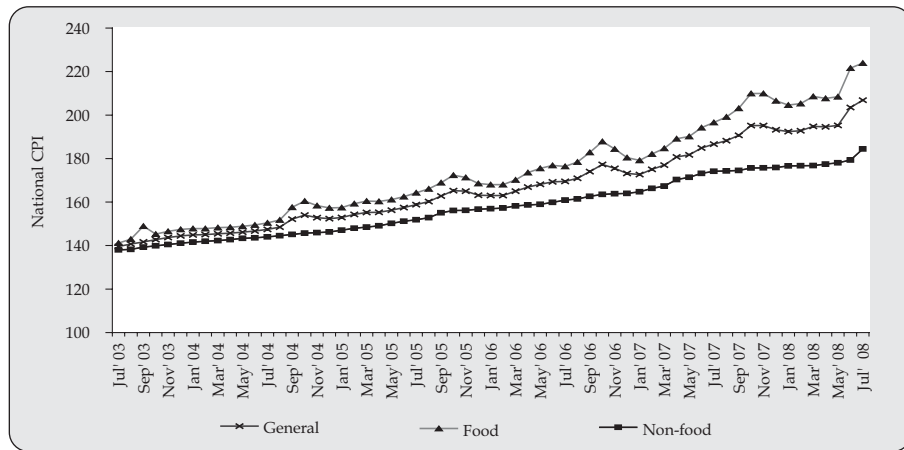
Group	Rural	Urban
General	100.00	100.00
1. Food, beverage and tobacco	62.96	48.80
Non-Food	37.04	51.20
2. Clothing and footwear	6.88	6.79
3. Gross rent, fuel and lighting	14.69	22.17
4. Furniture, furnishings, household equipment and operation	2.70	2.58
5. Medical care and health expenses	2.79	2.97
6. Transport and communications	2.98	7.07
7. Recreation, entertainment, education and cultural services	3.20	6.40
8. Miscellaneous goods and services	3.80	3.22

Source: Statistical Yearbook of Bangladesh, 2006.

Trends in the CPI at the national, rural and urban level are shown in Figures 2.17 to 2.19. From July 2003 to July 2008, the increase in CPI for food items was higher than that of non-food items at the rural, urban and national levels. During the same period, CPI (general and non-food) in rural areas

was higher than that of urban areas, but CPI (food) in rural areas was lower than that of urban areas.

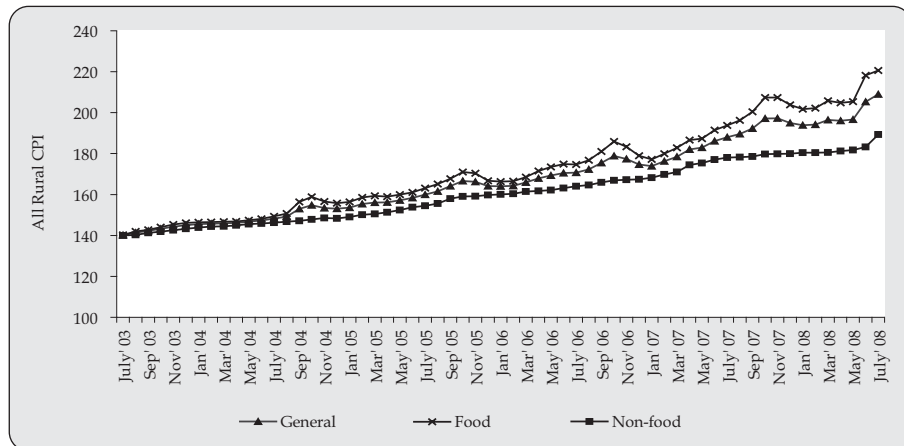
**Figure 2.17: National Consumer Price Index (CPI) in Bangladesh: July 2003–July 2008**



Source: Bangladesh Bureau of Statistics (BBS).

Trends in CPI at the national level for general, food and non-food items are presented in Figure 2.17. Increases in CPI for food at the national level was higher than that of non-food. General CPI at the national level increased from 140 in July 2003 to 173 in January 2007, and rose to 207 in July 2008. Food CPI at the national level increased from 141 in July 2003 to 179 in January 2007 and then went up to 224 in July 2008. Non-food CPI at the national level increased from 138 in July 2003 to 165 in January 2007 and continued increasing to 184 in July 2008.

**Figure 2.18: All Rural Consumer Price Index in Bangladesh: July 2003–July 2008**

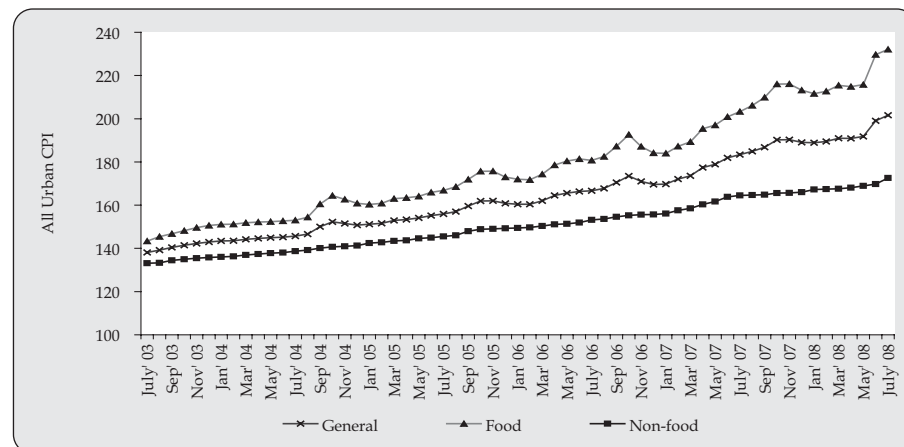


Source: Bangladesh Bureau of Statistics (BBS).

Trends in CPI in rural areas for general, food and non-food items are presented in Figure 2.18. From July 2003 to July 2008, the increase in CPI for food in rural areas was higher than that of non-food. General CPI in rural areas increased from 140 in July 2003 to 174 in January 2007, and has risen further to 209 in July 2008. Food CPI in rural areas increased from 140 in July 2003 to 177 in January 2007, and has continued rising to 221 in July 2008. Non-food CPI in rural areas increased from 140 in July 2003 to 168 in January 2007, and has risen further to 189 in July 2008.

Trends in CPI in urban areas for general, food and non-food items are presented in Figure 2.19. From July 2003 to July 2008, the increase in CPI for food in urban areas was higher than that of non-food. General CPI in urban areas increased from 138 in July 2003 to 170 in January 2007, and subsequently rose to 202 in July 2008. Food CPI in urban areas increased from 143 in July 2003 to 184 in January 2007, and reached 232 in July 2008. Non-food CPI in urban areas increased from 133 in July 2003 to 156 in January 2007, and rose to 173 in July 2008.

**Figure 2.19: All Urban Consumer Price Index in Bangladesh: July 2003–July 2008**

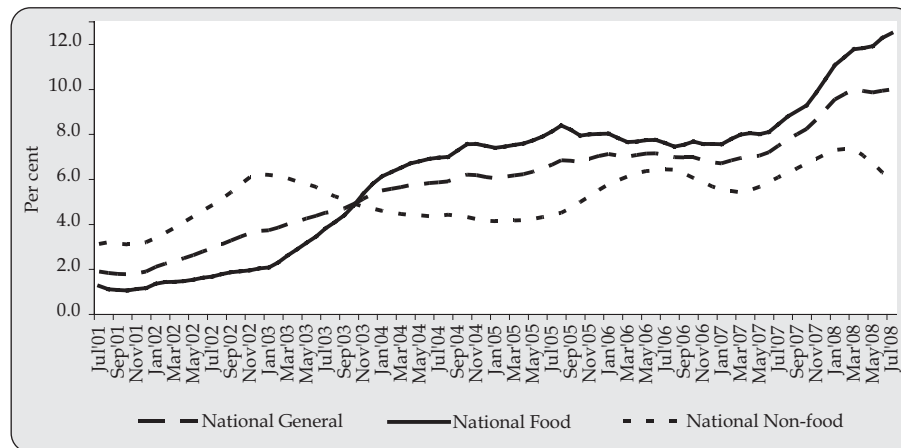


Source: Bangladesh Bureau of Statistics (BBS).

Trends in inflation (moving average) in Bangladesh are presented in Figure 2.20. Bangladesh was enjoying lower inflation rates of below 6 per cent during the early years of the current decade. However, at the beginning of 2004, inflation started to rise. High growth in consumer prices continued in 2007 and maintained a steep rising trend during the first half of 2008. Overall inflation at the national level generally showed an increasing trend with some exceptions. General inflation in Bangladesh increased from 1.90 per cent in July 2001 to 10.00 per cent in March 2008. Since March 2008, it

has decreased to about 9.9 per cent in May and June 2008, but then increased again to 10.00 per cent in July 2008. Until October 2003, food inflation at the national level was lower than non-food inflation. Since November 2003, food inflation has been consistently higher than the non-food inflation. Food inflation has gradually increased from 1.27 per cent in July 2001 to 12.50 per cent in July 2008.

**Figure 2.20: Trends in Inflation (Moving Average): July 2001–July 2008**



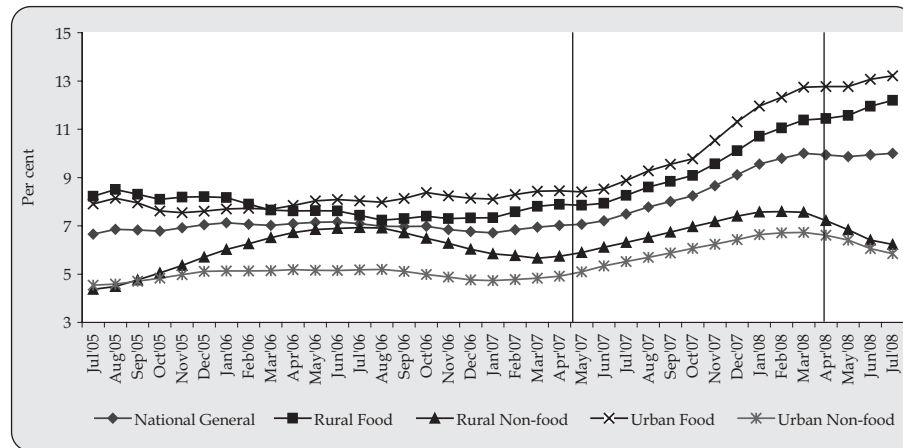
Source: CPD-IRBD database.

The rate of non-food inflation showed a declining trend during the period from December 2002 to May 2005, when it declined from 6.23 per cent to 4.24 per cent. Since June 2005, non-food inflation has been on the rise, and reached 6.44 per cent in July 2006, before gradually declining to 5.42 per cent in March 2007. Since April 2007, non-food inflation posted a continuing rise and reached its highest level of 7.35 per cent in February 2008. In July 2008, the non-food inflation rate was 6.13 per cent.

Trends in the inflationary situation in rural and urban areas of Bangladesh, between July 2005 and July 2008, can be seen in Figure 2.21. Food inflation in urban areas continued to rise at a higher pace compared to rural areas. A distinctive pattern with regard to the recent inflationary trends is the relative direction of food and non-food inflation. During the period from July 2005 to March 2007, the general movement of food and non-food inflation had been in opposite directions (higher inflation in food items was accompanied by a slower growth in non-food inflation, and a higher growth in non-food inflation was accompanied by a slower rise in food inflation). But both food and non-food inflation moved upward in tandem during the subsequent period from April 2007 to March 2008. This pattern of inflation

is obviously having serious negative consequences on food security and the welfare of lower income groups. It is also evident that rural inflation was generally higher (with exception of a few months) than urban inflation during this period. Since March 2008, food inflation displays an increasing trend but non-food inflation has been declining.

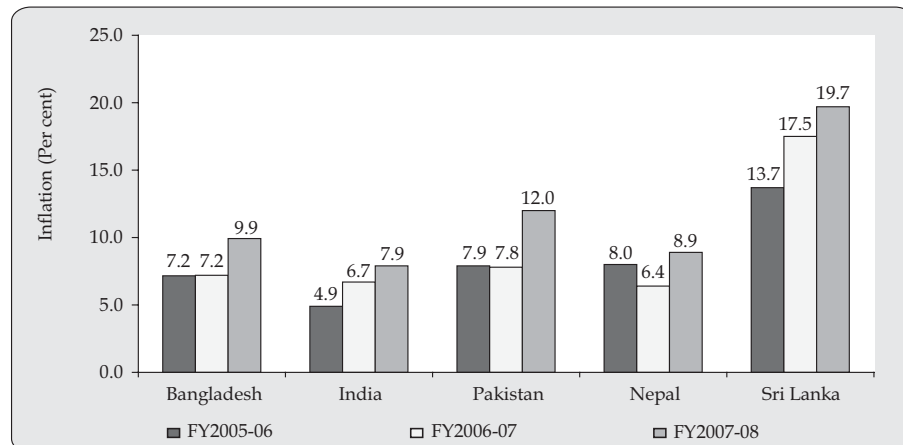
Figure 2.21: Rural versus Urban Inflationary Trends: July 2005–July 2008



Source: CPD-IRBD database.

A comparative picture of the inflationary situation in Bangladesh with other South Asian countries is shown in Figure 2.22. In FY2007-08, inflation in all of these countries (Bangladesh, India, Nepal, Pakistan and Sri Lanka) was higher than that in FY2005-06 and FY2006-07. During the last two years (FY2006-07 and FY2007-08), the inflation rate in Bangladesh was lower than

Figure 2.22: Inflationary Trends in the Neighbouring Countries of Bangladesh



Source: Central Banks of the respective countries.

that of Pakistan and Sri Lanka, but higher than that of India and Nepal. In FY2007-08, the average inflation rate in Bangladesh (9.9 per cent) was higher than that of India (7.9 per cent) and Nepal (8.9 per cent), but lower than the inflation rates in Pakistan (12.0 per cent) and Sri Lanka (19.7 per cent). In FY2006-07, the inflation rate in Bangladesh (7.2 per cent) was higher than rates in India (6.7 per cent) and Nepal (6.4 per cent), but lower than in Pakistan (7.8 per cent) and Sri Lanka (17.5 per cent). In FY2005-06, the inflation rate in Bangladesh (7.2 per cent) was lower than Pakistan (7.9 per cent), Nepal (7.8 per cent) and Sri Lanka (13.7 per cent), but higher than in India (4.9 per cent). However, one must keep in mind that the financial year in Bangladesh and Pakistan correspond to the same months of July to June, while this is different from the financial years of—in India (April-March), Nepal (16 July-15 July), and Sri Lanka (January-December).

#### **2.4 Causes and Determinants of Inflation: A Survey of Recent Studies**

Several studies have made an effort to understand the causes of inflation in Bangladesh. Osmani (2007) tries to explain the underlying factors using various hypotheses based on economic growth, growth in remittances, global inflation in food prices, accommodating monetary policy by the Central Bank and the exchange rate policy of Bangladesh. He argues that rising world prices, accommodating monetary policy and exchange rate policy, particularly the value of the Taka against the Dollar (non-appreciation of Taka against Dollar, while Dollar was depreciating against all international currencies) all have probably contributed to the recent inflation in Bangladesh. He points out that the value of the Taka declined against the Indian Rupee (INR) over time, and India, being the major source of imports, has contributed significantly to the increase in prices and thereby inflation in Bangladesh. He also argues that economic growth, a non-competitive market (i.e. oligopoly, syndicate) and increased flow of remittances have not contributed to recent inflation in Bangladesh. He notes that growth in national income means growth in national output as well; since additional demand is matched by additional output, pressure of excess demand should not cause inflation. Also, Engel's law stipulates that rising prosperity should be associated with falling relative price of food. Osmani is of the view that growing remittances have certainly added pressure from the demand side, but it cannot serve as an explanation of overall inflation because the extra demand has been matched by the extra availability of goods imported using the newly acquired foreign exchange. With regard to the non-competitive market proposition of the supply side hypothesis, which argues that concentrated market power (formation of a syndicate may be an example) generates price fixing, which eventually could lead to

inflationary pressure in the economy. Osmani is of the opinion that there is no evidence that non-competitive markets always raise price levels. Instead, he argues that sometimes it generates fierce competition. If market power exists and it increases at an accelerated rate then it can be argued that it helps raise price level on a continuous basis. There is no empirical evidence to support this proposition either, he observes.

Akhtaruzzaman (2005) analyses trends and the underlying factors responsible for inflation during the 1973-2002 period in Bangladesh. Using an econometric analysis, he shows that the rate of depreciation of the exchange rate, growth of the money supply and the deposit interest rate have played statistically significant roles in explaining the long run inflationary process in Bangladesh. He also observes that inflation is negatively correlated with real income.

Mortaza (2006) finds that money supply and exchange rates had a significant positive influence on inflation in Bangladesh during FY1990-FY2006. The study also identifies a significant negative relationship between the deposit rate of interest and inflation.

Mortaza and Hasnayan (2008) observe that the poor are facing a higher rate of inflation than the non-poor, because they spend almost two-thirds of their income on food items. The study groups Bangladesh's population into four categories: the hardcore poor, absolute poor, middle income and rich income groups. The study estimates that the gap between overall inflation and inflation for the hardcore poor is 4.4 percentage points; whereas the difference is 5.8 percentage points between the hardcore poor and the rich households. It is agreed that higher transport costs, inadequate infrastructure, and imperfect market organisation are responsible for higher food prices in Bangladesh. The authors suggest that Bangladesh Bank follow a pro-poor monetary policy by minimising the rapid depreciation of domestic currency and designing a better inflation forecasting mechanism.

Chowdhury and Siddique (2006) observe that exchange rate fluctuations did not have any significant effect on the Wholesale Price Index or Consumer Price Index during the period from July 1997 to March 2005. They find a positive relationship between demand shocks and CPI.

The analysis of the present study indicates that recent increases in the price of essential commodities and inflation in Bangladesh has been driven by a number of factors, both domestic and international. These include—domestic shortages caused by natural disasters (floods and Sidr); weak



transmission of price signals along the value chain; market power of particular agents; rise in prices of key inputs with consequent increases in the cost of production of agricultural commodities; increases in the world price of foodgrains, edible oil, petroleum products; export restrictions imposed by major exporting countries; and an unfavourable exchange rate, particularly against INR.

**IMPACT OF RECENT INFLATION  
ON REAL INCOME  
AND POVERTY**

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### **3.1 Trends in Poverty Situation in Bangladesh**

By any measure, poverty is widespread in Bangladesh. Estimates of the poverty level are important in understanding its dynamics and also to assess the efficacy of policies to address the attendant issues. Poverty is usually measured with reference to a threshold level of income or expenditure (called the poverty line) needed to meet the food and non-food basic needs of a person which are required to maintain a healthy and productive life for him or her. These measures are called "Income Poverty." At present, there is wide agreement among social scientists and policymakers that low levels of education and health are of concern in their own right. Literature on poverty deals with two types of poverty, namely, Income Poverty and Human Poverty. Income Poverty indicates that a person or a family does not have an adequate amount of income to satisfy basic needs. Human Poverty encompasses issues related to human development. Three broad dimensions of Human Poverty are generally considered: (a) deprivation in health, (b) deprivation in education, and (c) deprivation in nutrition (including food insecurity).

There are several indices to measure the incidence, intensity and severity of income poverty. The Headcount Index (HCI) is a measure of the incidence of poverty. This measure is easily understood by general public, and hence is popular with policymakers and development practitioners. The limitation of the measure is that it is insensitive to changes in the level and distribution of income among the poor. Other measures of poverty, commonly used to take into account the distribution issue, are: (a) the Poverty Gap Index and (b) the Squared Poverty Gap Index. The Poverty Gap Index measures the average per cent (of both poor and non-poor households) of income gap of the poor households from the poverty line, and is thus used as a measure of intensity of poverty. It measures the per cent of total income needed to be transferred from the non-poor to poor households to lift the poor above the poverty line. Along with poverty alleviation, decreasing inequality in income is also perceived to be a core task that needs to be addressed in the context of low income countries such as Bangladesh. If a society is keen to

decrease inequality in the distribution of income among the poor, poverty measures also ought to be sensitive to income transfers from the moderate to the extreme poor. So, measuring the poverty gap is very important for the national economy. Consequently, this indicates that higher priority should be given to the improvement of the economic conditions of the extreme poor compared to the moderate poor. The Squared Poverty Gap Index satisfies this condition as a measure of the severity of poverty.

In spite of a large number of studies (Muqtada 1986; Hossain and Sen 1992; Ravallion and Sen 1996; Sen 2003) conducted for Bangladesh on the subject, an accurate assessment of the trend in income poverty alleviation has remained a difficult task (Hossain 2002). The Household Income and Expenditure Survey (HIES), conducted by the Bangladesh Bureau of Statistics (BBS), reports the incidence of poverty and income inequality through periodic generation of household level data. Over time, the method of data collection and the measurement of the poverty line have undergone some changes. Thus, while making a judgment about poverty trends in Bangladesh, one needs to be cautious about the interpretation of the information (Hossain 2002).

A study by Ahmad and Hossain (1983) estimated that the number of poor households in rural Bangladesh remained almost stagnant at 75 per cent from 1963-64 to 1973-74. According to the BBS, the poverty ratio for rural areas declined from 74 per cent in 1981-82 to 48 per cent in 1988-89. The dramatic improvement in the poverty situation in the 1980s, as shown by the official figures, has come under close scrutiny however, generating a lively debate in the relevant literature. This is partly attributed to the change in the data collection method in the 1983-84 Household Expenditure Survey (HES) (Hossain 2002). From 1983-84 to 1989-90, there was a decline in poverty ratio from 57 to 48 per cent in rural areas and from 50 to 44 per cent in urban areas. The slow progress in poverty reduction, in spite of the acceleration of economic growth in the 1990s, is attributed to growing inequality in the distribution of income in both rural and urban areas (Sen 2003).

Hossain (2002) observes that agricultural research in general, and rice research in particular, has contributed to poverty reduction of the landless households in Bangladesh in an indirect way. He elaborates this claim in the following manner. Agriculture produces food for the people. The increase in the supply of food, which has been faster than the growth in demand, has helped keep food prices within affordable limits for low-income people, and thereby has contributed to achieving food security in Bangladesh. The amount of food the poor can access from the market with their limited

income depends on the price of food. Rural landless and the urban labouring class spend two-thirds of their income on staple food and one-third on rice, compared to 44 and 10 per cent respectively for the top 10 per cent of the income scale. So a reduction in the price of rice relative to industrial products, benefits the poor relatively more than non-poor households, he adds. In Bangladesh, the poverty situation deteriorated in the early 1970s, due mainly to the decline in the per capita availability of rice. The soaring price of rice caused tremendous hardship to the landless, marginal farmers and artisans in rural areas, and industrial labourers, and transport and construction workers in urban areas (Hossain 2002).

Since the mid 1980s, foodgrain prices have increased at a much slower rate than the general price index due to favourable growth in agriculture in general, and in rice production in particular. Large farmers have been hurt by the decline in the real rice price, but the landless have gained. An agricultural wage labourer could buy 2.8 kg of rice with their daily wage in 1987-88. The rice-equivalent wage was 5.7 kg in 2000, an increase of 5.8 per cent per year during the 1987-2000 period. Thus, rice farmers' main role in poverty alleviation lies in maintaining the supply of food, at least at the rate at which demand has been growing, thereby keeping rice prices stable and within affordable limits for low-income households (Hossain 2002).

The poverty situation at the national and regional level is reported in Table 3.1 to Table 3.4. As can be seen, the incidence of poverty (as per the upper poverty line) has declined from 56.6 per cent in 1991-92 to 40.0 per cent in 2005. On the other hand, the poverty incidence (using the lower poverty line) has reduced from 41.0 per cent in 1991-92 to 25.1 per cent in 2005. In 2005, the highest incidence of poverty (according to the Head Count Ratio (HCR)) was in the Barisal division (52.0 per cent), followed by Rajshahi division (51.2 per cent), and Khulna division (45.7 per cent). On the other hand, Dhaka division recorded the lowest level of poverty incidence (32.0 per cent) followed by Sylhet division (33.8 per cent), and Chittagong division (34.0 per cent).

**Table 3.1: Incidence of Poverty (HCR by Cost of Basic Needs (CBN) Method) in Bangladesh: 1991 to 2005**

(in Per cent)

Residence	Upper Poverty Line				Lower Poverty Line			
	2005	2000	1995-96	1991-92	2005	2000	1995-96	1991-92
National	40.0	48.9	50.1	56.6	25.1	34.3	35.1	41.0
Rural	43.8	52.3	54.5	58.7	28.6	37.9	39.4	43.7
Urban	28.4	35.2	27.8	42.7	14.6	20.0	13.7	23.6

Source: Report of the Household Income and Expenditure Survey (HIES), 2005.

**Table 3.2: Incidence of Poverty (HCR by Cost of Basic Needs (CBN) Method) by Division: 1995-96 to 2005**

*(in Per cent)*

Poverty Line and Division	2005			2000			1995-96		
	National	Rural	Urban	National	Rural	Urban	National	Rural	Urban
<b>1. Using the Lower Poverty Line</b>									
National	25.1	28.6	14.6	34.3	37.9	20.0	35.6	39.8	14.3
Barisal	35.6	37.2	26.4	34.7	35.9	21.7	43.9	44.8	28.9
Chittagong	16.1	18.7	8.1	27.5	30.1	17.1	32.4	35.3	12.1
Dhaka	19.9	26.1	9.6	34.5	43.6	15.8	33.0	41.5	10.8
Khulna	31.6	32.7	27.8	32.3	34.0	23.0	32.2	33.2	25.8
Rajshahi	34.5	35.6	28.4	42.7	43.9	34.5	41.6	44.4	19.2
Sylhet	20.8	22.3	11.0	26.7	26.1	35.2			
<b>2. Using the Upper Poverty Line</b>									
National	40.0	43.8	28.4	48.9	52.3	35.2	53.1	56.7	35.0
Barisal	52.0	54.1	40.4	53.1	55.1	32.0	59.9	60.6	47.7
Chittagong	34.0	36.0	27.8	45.7	46.3	44.2	44.9	47.2	29.2
Dhaka	32.0	39.0	20.2	46.7	55.9	28.2	52.0	58.9	33.6
Khulna	45.7	46.5	43.2	45.1	46.4	38.5	51.7	51.5	53.3
Rajshahi	51.2	52.3	45.2	56.7	58.5	44.5	62.2	65.7	33.9
Sylhet	33.8	36.1	18.6	42.4	41.9	49.6			

Source: Report of the Household Income and Expenditure Survey (HIES), 2005.

The poverty gap (using the lower poverty line) in 2005 was 4.6 per cent, which experienced a reduction of 2.9 percentage points over the 2000 figure. The poverty gap (using the upper poverty line) in 2005 was 9.0 per cent, which marked a reduction of 3.8 percentage points over the 2000 level. Chittagong division recorded the lowest poverty gap of 2.2 per cent in 2005, compared to 5.7 per cent in 2000.

**Table 3.3: Poverty Gap and Squared Poverty Gap by Cost of Basic Needs (CBN) Method**

*(in Per cent)*

Poverty Line and Division	Poverty Gap			Squared Poverty Gap		
	National	Rural	Urban	National	Rural	Urban
2005						
<b>1. Using the Lower Poverty Line</b>						
National	14.6	5.3	2.6	1.3	1.5	0.7
Barisal	9.1	9.6	6.4	3.3	3.4	2.6
Chittagong	2.2	2.7	9.0	0.5	0.6	0.2
Dhaka	3.6	4.9	1.5	1.0	1.4	0.3
Khulna	6.2	6.3	5.5	1.7	1.7	1.7
Rajshahi	6.4	6.5	5.5	1.8	1.8	1.6
Sylhet	3.4	3.7	1.9	0.8	0.8	0.5

*(Table 3.3 contd.)*

(Table 3.3 contd.)

(in Per cent)

Poverty Line and Division	Poverty Gap			Squared Poverty Gap		
	National	Rural	Urban	National	Rural	Urban
2005						
2. Using the Upper Poverty Line						
National	9.0	9.8	6.5	2.9	3.1	2.1
Barisal	15.5	16.3	10.7	6.3	6.6	4.3
Chittagong	6.3	6.5	5.6	1.7	1.7	1.6
Dhaka	6.9	8.6	4.0	2.1	2.7	1.1
Khulna	10.8	10.4	12.3	3.5	3.2	4.6
Rajshahi	11.9	12.0	11.4	3.8	3.8	3.9
Sylhet	7.2	7.6	4.5	2.1	2.2	1.5
2000						
1. Using the Lower Poverty Line						
National	7.5	8.3	4.1	2.4	2.6	1.2
Barisal	6.9	7.0	4.9	1.9	2.0	1.6
Chittagong	5.7	6.3	3.6	1.7	1.9	1.1
Dhaka	8.1	10.5	3.0	2.6	3.5	0.8
Khulna	5.6	5.7	4.5	1.4	1.4	1.3
Rajshahi	10.2	10.5	7.8	3.5	3.6	2.7
Sylhet	4.4	4.4	4.5	1.1	1.1	1.2
2. Using the Upper Poverty Line						
National	12.8	13.7	9.1	4.6	4.9	3.3
Barisal	13.7	14.2	8.3	4.7	4.9	3.1
Chittagong	11.3	11.3	11.4	3.9	3.9	4.2
Dhaka	12.9	12.9	6.6	4.7	6.0	2.2
Khulna	1.0	10.0	10.3	3.0	2.9	3.7
Rajshahi	16.2	16.2	13.6	6.2	6.3	5.4
Sylhet	9.2	9.2	12.5	2.8	2.7	4.1
1995-96						
1. Using the Lower Poverty Line						
National	7.9	8.9	2.7	2.6	2.9	0.8
Barisal	10.2	10.4	7.6	3.4	3.4	2.6
Chittagong	6.1	6.7	1.7	1.7	1.9	0.4
Dhaka	8.0	10.2	2.0	2.8	3.6	0.5
Khulna	6.5	6.5	6.2	2.0	1.9	2.2
Rajshahi	9.8	10.6	3.7	3.4	3.7	1.0
2. Using the Upper Poverty Line						
National	14.4	15.4	9.2	5.4	5.7	3.4
Barisal	18.0	18.1	16.7	7.1	7.1	7.7
Chittagong	10.5	11.2	5.9	3.4	3.6	1.7
Dhaka	14.9	17.1	8.9	5.8	6.7	3.4
Khulna	12.4	11.7	16.6	4.3	3.9	7.0
Rajshahi	17.9	19.1	8.5	7.0	7.6	2.9

Source: Reports of the Household Income and Expenditure Survey (HIES), 2005

An analysis of poverty incidence, as measured by the HCR, in different regions (old districts) reveals that poverty has increased in 11 regions (Bogra, Dhaka, Jamalpur, Jessore, Khulna, Noakhali, Pabna, Patuakhali, Rajshahi, Rangamati and Tangail); and decreased in nine regions (Barisal, Chittagong, Comilla, Dinajpur, Faridpur, Kushtia, Mymensingh, Rangpur and Sylhet) between 1995-96 and 2005 (Table 3.4).

**Table 3.4: Poverty Incidence (HCR) in Different Regions (Old Districts) in Bangladesh: 1995 to 2005**

Regions (Old Districts)	1995			1999			2005	Poverty Incidence in 2005 Compared to 1995
	Total	Urban	Rural	Total	Urban	Rural	Total	
Barisal	0.648	0.617	0.654	0.500	0.445	0.510	0.440	Decreased
Bogra	0.324	0.164	0.339	0.459	0.443	0.460	0.432	Increased
Chittagong	0.367	0.468	0.293	0.418	0.397	0.434	0.315	Decreased
Comilla	0.546	0.479	0.555	0.431	0.301	0.449	0.285	Decreased
Dhaka	0.211	0.152	0.300	0.433	0.433	0.434	0.214	Increased
Dinajpur	0.623	0.650	0.620	0.390	0.455	0.382	0.533	Decreased
Faridpur	0.601	0.524	0.611	0.526	0.508	0.528	0.402	Decreased
Jamalpur	0.603	0.789	0.564	0.499	0.503	0.498	0.626	Increased
Jessore	0.417	0.216	0.450	0.425	0.362	0.435	0.511	Increased
Khulna	0.409	0.469	0.386	0.421	0.496	0.392	0.551	Increased
Kishoreganj	n.a.	n.a.	n.a.	0.393	0.396	0.392	0.300	
Kushtia	0.399	0.554	0.372	0.348	0.436	0.333	0.245	Decreased
Mymensingh	0.613	0.547	0.622	0.549	0.450	0.563	0.479	Decreased
Noakhali	0.176	0.183	0.175	0.461	0.361	0.475	0.351	Increased
Pabna	0.474	0.897	0.396	0.468	0.464	0.469	0.533	Increased
Patuakhali	0.531	0.185	0.563	0.406	0.522	0.395	0.692	Increased
Rajshahi	0.411	0.625	0.359	0.417	0.439	0.412	0.446	Increased
Rangpur	0.708	0.670	0.713	0.519	0.517	0.519	0.574	Decreased
Sylhet	0.526	0.484	0.532	0.400	0.354	0.406	0.338	Decreased
Tangail	0.294	0.353	0.285	0.465	0.576	0.449	0.372	Increased
Chittagong	n.a.	n.a.	n.a.	0.437	0.484	0.415	n.a.	
Hill Tracts								
Bandarban	n.a.	n.a.	0.090	n.a.	n.a.	n.a.	0.607	
Khagrachhari	n.a.	n.a.	0.498	n.a.	n.a.	n.a.	0.332	
Rangamati	0.314	0.441	0.248	n.a.	n.a.	n.a.	0.503	Increased

Note: n.a. indicates data not available.

Source: Bangladesh Bureau of Statistics, 2005.

Bayes and Hossain (2007) analyse the changes in income poverty situation in rural Bangladesh between 1987-88 and 2003-04. Their analysis is based on



a household level survey conducted in 62 villages in 57 districts of Bangladesh. The income poverty level of the surveyed households is estimated using two standards: the Food and Agriculture Organization of the United Nations (FAO) standard and the National Nutrition Council (NNC) standard. According to the FAO standard, the per capita minimum daily calorie requirement is 2,120 calories. On the other hand, as per the NNC standard, the per capita average daily minimum energy requirement is 2,260 calories. Table 3.5 provides estimated poverty line expenditure for moderate and extreme poverty lines, using both the FAO and the NNC standards. As per the FAO standard, moderate poverty line expenditure has increased from Tk. 4,609 per person per year in 1987-88 to Tk. 8,332 in 2003-04, while this amount has increased from Tk. 5,198 to Tk. 9,495 under the NNC standard. On the other hand, during the same period, extreme poverty line expenditure has increased from Tk. 2,830 to Tk. 4,677 under the FAO standard, and from Tk. 3,066 to Tk. 5,125 under the NNC standard.

**Table 3.5: Estimates of Poverty Line Expenditure (Tk./Person/Year): 1987-88 to 2003-04**

Reference Year for Survey	Moderate Poverty Line		Extreme Poverty Line	
	FAO Standard	NNC Standard	FAO Standard	NNC Standard
1987-88	4609	5198	2830	3066
1999-00	7023	7649	4009	4385
2003-04	8332	9495	4677	5125

Source: Bayes and Hossain, 2007.

According to the estimates of Bayes and Hossain (2007), between 1987-88 and 2003-04, on the basis of the FAO standards, the extent of poverty (HCR) in rural Bangladesh decreased from 64.3 per cent to 43.3 per cent; and on the basis of the NNC standard, it declined from 70.7 per cent to 49.2 per cent. During the same period, as per the FAO standard, extreme poverty came down from 35.6 per cent to 17.5 per cent, and according to the NNC standard it was reduced from 40.1 per cent to 20.1 per cent. The Poverty Gap Index came down from 23.4 per cent to 15.3 per cent (as per the FAO standard) and from 30.7 per cent to 19.4 per cent (as per the NNC standard). In the case of the Squared Poverty Gap, the ratio came down from 12.1 per cent to 7.9 per cent (as per the FAO standard) and from 17.1 per cent to 10.4 per cent (as per the NNC standard). In other words, irrespective of the standard used, we observe that extent of poverty in 2003-04 was about two-thirds of that in 1987-88, and the level of extreme poverty was about half that of the initial situation in 1987-88. With regards to the intensity of poverty as measured by the Poverty Gap Index, and the severity of poverty as measured by the Squared Poverty Gap Index, the reduction was about two-fifths.

**Table 3.6: Changes in the Incidence of Income Poverty in Rural Bangladesh: 1987-88 to 2003-04**

Poverty Measure	On the Basis of FAO Standard			On the Basis of NNC Standard		
	1987-88	1999-00	2003-04	1987-88	1999-00	2003-04
Head Count Ratio	64.3	48.1	43.3	70.7	52.4	49.2
Extreme poor	35.6	21.8	17.5	40.1	25.2	20.1
Moderate poor	28.7	26.3	25.8	30.6	27.2	29.1
Poverty Gap Index	23.4	19.7	15.3	30.7	21.6	19.4
Squared Poverty Gap Index	12.1	10.5	7.9	17.1	11.9	10.4

Source: Bayes and Hossain, 2007.

### 3.2 Impacts of Inflation on Real Income and Poverty

Inflation erodes the purchasing power of money. If the rate of inflation is higher than increase in nominal income, then there is a reduction in real income. Rapid erosion in real income may in turn impact the poverty situation. An attempt has been made here to measure the possible consequences of inflation on the poverty situation in Bangladesh. Poverty data from HIES 2005 and inflation rates from the publications of the BBS were used for this purpose. At the time of the exercise, inflation data were available up to March 2008 and poverty estimates were available for 2005. Hence, the analysis here covers the period from January 2005 to March 2008. Both inflation and income growth have been considered for the purpose of estimation. It is to be recognised that many factors contribute to poverty alleviation or poverty accentuation in a country such as Bangladesh, with regard to both overall poverty alleviation and poverty alleviation within sub-groups. The elasticity of poverty reduction with respect to growth varies across income groups. The dynamics and depth of income inequality are also important factors to be considered. The last HIES was carried out only in 2005. In absence of comprehensive household level data, any estimate of the impact of recent inflation on poverty levels is bound to be severely constrained. Thus, the CPD estimate, as also other estimates presented in the following sections, have serious limitations. However, the merit of such exercises is that these could perhaps provide some general directions as to how inflation has impacted on real income of low income households, and thus on poverty levels in Bangladesh. The exercise carried out by the CPD is limited to capturing the impact of inflation given the rise in income, and has considered only those groups which would be vulnerable to falling below the poverty line in the context of a rapid rise in prices.

### 3.2.1 Income Erosion

In accounting for income erosion arising out of inflation, we have considered the weighted impact of rice price rise, which constitutes about 46 per cent of poor household expenditure in Bangladesh (Table 3.7, which has been calculated from HIES 2005 that provides consumption data for different expenditure groups). In other words, for 46 per cent of a poor household's expenditure, income erosion was calculated by taking rise in the price of rice into account during the period under consideration.

**Table 3.7: Distribution of Households in Different Expenditure Groups and Share of Rice in Total Expenditure within the Respective Groups: 2005**

Per Capita Income Group	Per cent HH (a)	Per cent of Per Capita Monthly Expenditure on Rice (b)	a*b
< 200	1.31	45.68	59.8
200-249	1.02	48.70	49.7
250-299	1.70	46.64	79.3
300-349	2.12	48.47	102.8
350-399	2.38	47.74	113.6
400-449	3.05	47.05	143.5
450-499	3.51	47.66	167.3
500-599	7.71	45.75	352.7
600-699	7.86	44.85	352.5
700-799	7.35	42.21	310.2
<b>Total</b>	<b>38.01</b>		<b>1731.4</b>
<b>Weighted Average</b>			<b>45.6</b>

Source: Household Income and Expenditure Survey (HIES), 2005.

The price of coarse rice was 17 Tk./kg in January 2005, and rose to 35 Tk./kg in March 2008, experiencing a 105 per cent growth. Consequently, due to 105 per cent erosion of purchasing power on 46 per cent of income, overall income erosion due to rice price growth came to about 48.1 per cent. For the rest of the consumption basket (54.4 per cent), general inflation has been used to measure the income erosion of poor households. Taking the CPI values for January 2005 and March 2008, it is estimated that 27.42 per cent income erosion has taken place due to general inflation. Accordingly, 27.42 per cent erosion of purchasing power on 54.4 per cent of total expenditure of the poor signifies that another 14.9 per cent in overall income erosion had taken place. As a result, in combination, a 63 per cent (48.7 per cent + 14.9 per cent) erosion of total income (expenditure) of the poor has taken place over this period.

It must be mentioned that estimates are based on expenditure group data from HIES 2005. The population below the poverty line (about 40 per cent) is distributed within the 10 expenditure groups at the bottom, and partially within the eleventh group as well. Since the eleventh group consists of both households below the poverty line and those above, the lower 10 groups comprising 38 per cent of the population were taken to represent households below the poverty line. It needs to be kept in mind that using the general inflation rate for the remaining 54.4 per cent of expenditure of the poor could underestimate their real income erosion, since the general inflation level comprises both food and non-food items and many of the products that experienced lower price growth, particularly belonging to the non-food basket, are not part of the consumption basket of the poor. On the other hand, general inflation covers rice as well, and since the effect of rice has been estimated separately, this might lead to some over estimation of the income erosion (since the rice price increased faster than other items during the period under examination). However, this should be offset by the under estimation caused by the incorporation of the inflation for non-food items.

### **3.2.2 Income Growth and Net Income Erosion**

During the period of high inflation, which was eroding the real income of the people, an increase in income was also being experienced by the general populace in the form of the growth of per capita Gross Domestic Product (GDP) or Gross National Income (GNI). In accounting for income growth, per capita GNI growth has been considered, as GDP growth does not account for income of earnings from private transfers, which mainly consist of remittances. As per capita GNI for 2008 was not available at the time of the study, this was estimated at Tk. 40,356 based on the trends of the previous two years. Per capita GNI in Taka terms was used to reflect nominal changes in income. The resultant income growth was found to be 41.9 per cent.

Since income erosion during the period due to price changes was higher than nominal income growth, the result was a net loss of real income. Net erosion was calculated by subtracting income growth from overall erosion, which was found to be 21.1 per cent.

### **3.2.3 The New Poverty Line and the Additional Population below the Poverty Line**

The new poverty line was estimated by recalculating poverty line income (income of the upper line of the highest expenditure slab living below the

poverty line of 2005) taking into cognisance the net income erosion factor. This establishes the new poverty line at Tk. 968 (per head/month).

While the old poverty line of HIES 2005 included 40 per cent of the total population, the new poverty line estimated by this study covers two additional expenditure groups over the tenth group from the bottom (one group fully and the other to the extent of 68 per cent). This includes an additional 10.5 per cent of the total population. Since the 10 groups at the bottom cover 38 per cent of the population (2 per cent lower than the poverty rate), the additional population below the poverty line is 8.5 per cent of the total population or 2.5 million new households (about 1.21 crore people).

### **3.3 Findings of Recent Studies on Impact of Inflation on the Poverty Situation**

Bayes and Hossain (2008) have carried out a survey in 62 villages in 57 districts in Bangladesh to examine the poverty situation. Based on the survey results, the study reports that the poverty rate in Bangladesh increased to 46.9 per cent in 2007, from 43.3 per cent in 2004. The survey also reveals that 37 per cent of the landless and 37 per cent of land owning households reported that their economic situation has deteriorated in FY2007-08 compared to the previous year. The study, however, does not report the extent of decrease in income or deterioration in the economic situation of the sample households. As regards the factors responsible for the decrease in income, 71 per cent of the landless households mention unfavourable prices as the reason. Other reasons cited by the landless households include: an increase in the number of dependants (31 per cent); natural calamity (13 per cent); fewer earners (11 per cent); decrease in land (9 per cent); and medical expenses (7 per cent). Land owning households included in the survey, whose economic situation deteriorated in FY2007-08, mention—unfavourable prices (64 per cent); natural calamity (36 per cent); increase in the number of dependants (19 per cent); fewer earners (11 per cent), and medical expenses (10 per cent)—as factors responsible for the decline in their economic situation. It should be noted that the survey allowed for multiple responses to queries about factors which have contributed to deterioration in the economic situation.

Raihan *et al.* (2008) has updated the data on household income and poverty lines and estimates poverty levels for the years 2006, 2007 and 2008. According to the study, head count poverty declined from 40 per cent in FY2004-05 to 39.38 per cent in 2006, but increased by 2.14 percentage points

in FY2006-07 (from 39.38 to 41.52 per cent), and increased further by 4.34 per cent in FY2007-08 (from 41.52 per cent to 45.86 per cent).

According to a recent study by the World Bank (2008b), between 2005 and March 2008, the rate of poverty in Bangladesh was expected to decline by 5 per cent, as a consequence of economic growth and based on the poverty elasticity of growth. However, because of food price shocks and natural disasters, poverty reduction was 3 per cent lower, with about four million people having failed to come out of poverty. Thus, according to the World Bank estimate, about 38 per cent of the population of Bangladesh in 2008, is living below the poverty line. The study argues that the price of rice alone has eroded nearly one-fifth of the income of poor households.

According to FAO/WFP (2008), as a result of rising food prices and general inflation, nearly half (45 per cent) of Bangladesh's 145 million population is now food insecure (consuming <122 kcals/person/day), and nearly one-fourth of the population (23.9 per cent) is severely food insecure (<1805 kcals/person/day). The report adds that because of higher food prices, the number of food insecure people has increased by 7.5 million. Consequently, the total food insecure population has reached to 65.3 million. The report cautions that most of this rise in numbers has occurred within the ranks of the more severely food insecure, meaning those below the 1805 kcals/person/day threshold. The number of undernourished people has grown by 6.9 million, from 27.9 million prior to the inflationary impact, to a much larger 34.7 million following the price shock. In other words, more than 90 per cent (92 per cent) of the newly food insecure are amongst the more severely food insecure.

Recent inflation has not affected the real income and poverty situation in Bangladesh alone. It is a global phenomenon and continues to remain a major concern of low income and developing countries. A study by the Asian Development Bank (ADB) (James *et al.* 2008) reports that an increase in food prices in the Philippines of 10 per cent, 20 per cent and 30 per cent risks creating an additional 2.72 million, 5.65 million, and 8.85 million poor people, respectively. The study adds that in Pakistan, a 10 per cent increase in food prices would result in an additional 7.05 million poor people. In the cases of a 20 per cent and 30 per cent increase in food prices, the increment in the number of poor people in Pakistan would be 14.67 million and 21.96 million, respectively.

A study by the World Bank (Ivanic and Martin 2008) quantifies the impact of increases in food prices on poverty in nine low-income countries



(Bolivia, Cambodia, Malawi, Nicaragua, Pakistan, Peru, Vietnam and Zambia) over the period from 2005 to 2007. The study concludes that both the extent (the HCR) and severity in poverty (the Poverty Gap) have increased as a result of increases in global food prices. According to the estimates of the study, poverty has increased in seven countries (Bolivia, Cambodia, Madagascar, Malawi, Nicaragua, Pakistan and Zambia). On average, national poverty rates (USD 1 per day) in these nine countries registered an increase of 4.5 percentage points. Applying this average result to all low income countries, Ivanic and Martin (2008) argue that there has been an increase in the poverty head count of 105 million people in the low-income countries (out of the low-income country population of 2.3 billion). They add that this increase in the poverty headcount (as a consequence of price hikes) corresponds to a loss of almost seven years of poverty reduction.

According to FAO (2008) provisional estimates, the number of undernourished people in 2007 increased by 75 million, over and above FAO's estimate of 848 million undernourished in 2003-05, with much of this increase attributed to high food prices. This brings the number of undernourished people worldwide to 923 million in 2007, of whom 907 million live in the developing world. Given the continued and sharp increase in prices of staple cereals and oil crops that has continued well into 2008, the number of people suffering from chronic hunger is likely to have increased further.

An ADB report released in August 2008 increases the cut-off level for poverty from USD 1 per day to USD 1.35 per day. This would mean that millions more people are trapped in poverty than was previously thought. A point to note here is that the new measure does not take into account the higher food and fuel prices of 2008, which according to some estimates have plunged a further 100 million people below the poverty line. Although the export price of rice has settled from more than USD 1,000 per ton in May 2008, to around USD 700 per ton in September 2008, this is still double the price that prevailed about a year back, with dire consequences for the poor.

A review of the available literature on the impacts of the recent price hike in Bangladesh and elsewhere indicates that the poverty and food insecurity situations have worsened as a result of the recent price rises. There could be differences with regard to the extent of deterioration in the poverty and food insecurity situation, however, there is no denying the fact of a worsening situation in 2007 and 2008, in Bangladesh and in many countries around the developing world. Urgent attention is required from



policymakers at the national and global level to correct this situation, which has reversed the trend of poverty reduction for the first time in the last two decades.

**GOVERNMENT ACTIONS TO MITIGATE  
INFLATION AND ENSURE  
FOOD SECURITY**

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#### **4.1 Measures Announced by the Government**

As was mentioned earlier, prices of commodities which had been on the rise even before the caretaker government (CTG) assumed power in January 2007, have continued to rise until recent times. Indeed, the prices of many commodities and the general price situation have worsened since then. In view of the rising inflation, the government took a number of initiatives, during the period from March to June 2007, which were followed up by a set of concrete measures adopted in the National Budget for FY2007-08. Government initiatives to curb inflation included in general: the reduction and withdrawal of import duties from a number of commodities including rice, wheat, lentils and salt; involvement of state enterprises such as the Trading Corporation of Bangladesh (TCB) in the selling of essential items; setting up fair price shops and an "open market" (Unmukta Bazaar) by the Bangladesh Rifles (BDR), Open Market Sales (OMS) through the Public Foodgrain Distribution System (PFDS); and reduction in the letter of credit (L/C) requirement by banks (see Box 4.1 and Annex 4.1, for initiatives taken by the government during March to June 2007). However, in terms of volume, TCB, BDR and PFDS have had a very limited scale of operation.

To mitigate the inflationary pressure, the government announced a number of measures in the National Budget for FY2007-08 which included both short term and medium term actions. Close scrutiny of the measures taken by the CTG would indicate that it has taken cognisance of various recommendations articulated in the CPD Diagnostic Study. Measures taken by the government to curb inflation have related to both fiscal and monetary policies. On the intervention level, these measures can be grouped into three broad areas: market-based intervention, non-market measures and institutional reforms. The outcomes of these interventions were expected to be any one or more of the following: (a) To increase the supply of essential commodities through increased imports and higher production; (b) To reduce production and import costs; (c) To raise the efficacy of the marketing system by reducing the number of market intermediaries; (d) To introduce measures such as OMS by BDR, TCB, the Directorate-General of

Food and establish an open market (Unmukta Bazaar); (e) To provide price support to the poorer segments of the population, provide dearness allowance to public servants and widen social safety net programmes (e.g. Food for Work (FFW), Vulnerable Group Development (VGD), Test Relief (TR), Gratuitous Relief (GR), etc.).

**Box 4.1: Chronology of Initiatives Taken by the Caretaker Government: 1 March 2007 to 28 June 2007**

March 7	At a meeting of high level officials of the Bangladesh Bank and the Armed Forces with Chief Advisor Fakhruddin Ahmed, it is decided to cut import duties on a number of essential commodities including rice, lentil and salt; the joint forces are asked to coordinate their drives against corrupt and dishonest businesses only, and to take assistance for the drives from concerned government departments— National Board of Revenue (NBR), Anti-corruption Commission (ACC) and Bangladesh Bank. The government also decides to intensify the import of essentials through the state-run trading agency, Trading Corporation of Bangladesh (TCB), in order to reduce the prices of essentials. The government decides to involve state-run agencies, including the TCB, to increase the supply of products in the market.
March 8	The government decides to reduce the import duty to zero per cent, which was 5 per cent previously; the government also decides to import 1 lakh tonnes of wheat through public agencies, start selling rice and wheat in the open market from 18 March 2007 and start a Food for Work programme from 15 March 2007.
March 11	An inter-ministerial meeting organised by the Ministry of Commerce (MoC) drafts a proposal defining the amount and period for hoarding of nine essential items including paddy, rice, wheat, lentil, sugar, edible oil, onion, milk powder and baby food. The draft proposal is sent to different business bodies for an opinion by 14 March 2007. The meeting reviews the <i>Special Powers Act 1974</i> , <i>East Bengal Food Stuffs, Price Control and Anti-hoarding Order 1953</i> and <i>Essential Commodities Control Order 1981</i> , before defining hoarding in view of the "present context."

(Box 4.1 contd.)

*(Box 4.1 contd.)*

March 12	The Bangladesh Bank asks the commercial banks to encourage large scale and mid scale importers to import more essential commodities and to keep the L/C margin at a tolerable level for essential imports, as its recent study revealed that some banks require up to 100 per cent cash deposit.
March 15	Bangladesh Rifles (BDR) installs 17 makeshift open markets in the capital and starts selling essentials like pulses, potatoes, onions, garlic and ginger at fair prices.
March 18	Thirty-two dealers begin to sell rice at a fair price under the open OMS programme at 19 points in the city, and 90 points in nine upazilas of the district.
March 23	BDR sets up "free markets" at 25 places in the capital, where essential commodities are sold at fair prices.
March 26	Barisal district administration orders shops to hang price and stock lists of commodities to check hoarding and profiteering, following a meeting with businessmen at the office of the Deputy Commissioner (DC), attended by the leaders of the Barisal Chamber of Commerce and Industries, businessmen and high level civil and military officials.
April 16	TCB floats a tender for importing 3,000 tonnes of refined soybean oil and decides to launch the OMS of the imported soybean oil through its dealers.  The Bangladesh Bank initiates an investigation into the allegations of smuggling out of USD 75 lakh, by opening L/C with different banks under the guise of importing essential commodities from India. Following the allegation, the government has ordered the banks not to open L/Cs for 346 export-import firms in Rangpur, Bogra, Naogaon, Joypurhat and Nilphamari.
June 28	President Iajuddin Ahmed approves the budget for the fiscal year 2007-08. The budget contains a number of proposals to reduce inflation and stabilise prices.

A minimum of 22 measures were introduced by the CTG in the National Budget for FY2007-08 to address inflation (Table 4.1). Out of these 22 measures, 6 could be categorised as market-based (4 for increasing supply, 1 for escalating the effectiveness of markets and 1 to minimise production risk and facilitate supply); 13 non-market-based (4 for reducing import cost, 4 for decreasing production cost, 2 for increasing production, 1 for increasing production with reduced cost, and 1 for raising supply and providing price support); and 3 institutional measures to reduce market volatility (CPD 2008c).

**Table 4.1: Budgetary Measures to Fight Inflation: Intervention Types and Expected Outcomes**

Measures	Intervention Type	Expected Outcome
<b>Short Term Measures</b>		
1. Establishment of four wholesale markets in Dhaka city	Market-based measure	More competition
2. Eight lakh tonnes of foodgrains imports by public sector	Market-based measure	Increased supply
3. Intensify internal procurement of foodgrains	Market-based measure	Increased supply
4. Six lakh metric tonnes of foodgrains to be distributed through TR, GR, FFW and VGD	Market-based measure	Increased supply
5. Special project to control bird flu and encourage hygienic poultry production and marketing	Market-based measure	Minimise production risk and facilitate supply
6. Strengthen BDR's Dal-Bhat programme	Market-based measure	Increased supply
7. Withdrawal of customs duty (CD) on crude edible oil and lentils and continuation of duty-free treatment of rice, wheat, onion, matar dal and chola dal	Non-market measure	Import cost reduction
8. Existing supplementary duty (SD) reduced from 25 per cent and 65 per cent to 20 per cent and 60 per cent, respectively	Non-market measure	Import cost reduction
9. Commercial banks to provide credit facilities on softer terms to new importers	Non-market measure	import cost reduction

(Table 4.1 contd.)

(Table 4.1 contd.)

Measures	Intervention Type	Expected Outcome
Short Term Measures		
10. Withdrawal of the provision of annual renewal of value added tax (VAT) registration by commercial importers	Non-market measure	Import cost reduction
11. Continuance of duty-free facility to import of fertilisers for farmers	Non-market measure	Increased production
Short and Medium Term Measures		
12. Subsidy for diesel used in irrigation directly to card holding farmers amounting to Tk. 750 crore	Non-market measure	Production cost reduction
13. To continue with 20 per cent subsidy for electricity used in irrigation	Non-market measure	Production cost reduction
14. Tk. 1,500 crore as fertiliser subsidy	Non-market measure	Production cost reduction
15. Distribution of agricultural credit (Target Tk. 6,351 crore)	Non-market measure	Increased production
16. Increased coverage and amount of individual grants under the social safety net programme	Non-market measure	Increased supply and price support
Medium Term Measures		
17. Tk. 350 crore endowment fund for agricultural research	Non-market measure	Increased production and cost reduction
18. Increased allocations for road and railway maintenance	Non-market measure	Import cost reduction
19. Allocation of Tk. 68 crore (19 per cent of total allocation) for repairing of two fertiliser units (Zia and Jamuna Fertilizer Company)	Non-market measure	Production cost reduction
20. Establishment of a task force at the national and district levels to review prices of essential commodities regularly	Institutional measure	Reduction of market volatility
21. Inter-Ministerial monitoring committee to analyse the price situation of essential commodities and make recommendations	Institutional measure	Reduction of market volatility
22. A legal framework to protect consumers' rights	Institutional measure	Reduction of market volatility

Source: CPD, 2008c. Table 6 (p.44).

It was also expected that concerned government departments/agencies would take prompt actions to generate information as regards production, import and consumption of essential commodities in a timely and systematic manner.

#### **4.1.1 Price Stabilisation Measures in FY2008-09**

In the National Budget for the fiscal year 2008-09, the Finance Advisor identified "maintaining price level of essentials within tolerable limits," as one of the eight priorities of the budget. A number of measures, both market-based and non-market-based, were announced to keep prices of essential commodities at a tolerable level. These measures ranged from fiscal measures (e.g. continuation of zero or reduced import tariff on certain commodities) to direct market interventions (e.g. continuing OMS outlets of daily essentials). To mitigate the negative impact of high prices on the food security of the poor segment of the society, the budget proposed to broaden the allocation of safety net programmes by 48 per cent and the coverage by 45.8 per cent. In addition, the budget adopted employment generation programmes for the poor and the marginalised. A new programme titled "*100 Days Employment Guarantee Scheme*" was undertaken with an allocation of Tk. 2,000 crore to generate employment for 20 crore man-days for the ultra-poor and marginal farmers of rural areas with a special emphasis on areas prone to river erosion, Monga and Char areas. Additionally, a further allocation in terms of food worth Tk. 1,578 crore was proposed under the FFW programme, which is expected to generate another 14.4 crore man-days of employment. The budget has also taken measures to stimulate agricultural production through the provision of subsidies for agriculture and the reduction of duties on imports of agricultural inputs and machinery.

To arrest the rising prices, the following direct measures were proposed in the National Budget for FY2008-09.

- *Continuation of zero tariff on necessary food items:* Considering the high global price of rice and wheat, the budget proposed to continue with the zero duty on imports of rice and wheat (initiated on 8 March 2007), and other essential items.
- *Measures through monetary policy:* In order to curb inflation, the Bangladesh Bank stated that it would continue following an accommodative monetary policy. The government set a target rate of 9 per cent inflation against the prevailing 10 per cent inflation rate. Somewhat revising its

policy, on 17 September 2008, the Bangladesh Bank raised its Repurchase Agreement (REPO) rate from 8.50 to 8.75 per cent, which would imply that the cost of borrowing would be higher, and could thus lead to some decline in demand for credit money.

- *Direct market interventions:* The government decided to raise the efficacy of the marketing system by reducing the number of market intermediaries and also continuing temporary measures such as OMS by BDR, TCB, the Directorate-General of Food and the establishment of an open market (Unmukta Bazaar). The budget proposed to distribute food to the tune of 30 lakh metric tonnes through PFDS, at a subsidised price.
- *Institutional measures:* The government has taken the initiative to introduce the "Consumers' Rights Protection Ordinance." It is expected that this will help safeguard consumers' interests which have been severely undermined due to lax supervision.

The Finance Advisor has referred to keeping prices of essential items like rice, wheat, edible oil, lentils, onion and garlic at a normal level, including during the month of Ramadan. Much, however, will depend on how successfully the measures proposed by the CTG are implemented on the ground.

Success of a policy critically depends, to a large extent, on the quality of its implementation. Therefore, it is important to review the implementation status of various measures announced by the government which were targeted toward reducing inflation and ensuring food security.

#### **4.2 Implementation Status of the Measures Announced**

An attempt has been made in this section to trace the implementation status of the measures proposed by the government to curb inflation and mitigate the negative impact of price hikes on low-income and poor households. The findings of this tracking exercise are reported below.

##### *Establishment of Four Wholesale Markets in Dhaka City*

It was decided that 4 wholesale markets would be established in Dhaka city in Jatrabari, Lalbagh, Mahakhali and Aminbazaar. The project was scheduled to be completed by December 2010. However, the project has faced formidable difficulties which have put the timely delivery of its objectives into question. Among the four locations, land preparation work on the proposed Jatrabari and Lalbagh wholesale markets could not be



started as of yet. Work at Mahakhali has also faced problems due to the construction of a compressed natural gas (CNG) filling station by a private company at the entrance to the market, which is still under construction. Until now, land development work at Aminbazaar has been going on without a hitch, with about 85 per cent piling work having already been completed (Daily Star, 31 August 2008).

#### *Procurement and Distribution of Foodgrains by Public Sector*

To increase the operation of the PFDS, the government decided to intensify public procurement from domestic sources, import 8 lakh metric tonnes of foodgrains and to increase distribution under non-priced channels such as TR, GR, FFW and VGD.

The government decided to intensify internal procurement of foodgrains and set the procurement target at 12.50 lakh metric tonnes against 11.39 lakh metric tonnes of actual procurement of foodgrains in FY2006-07. In reality, total procurement in FY2007-08 was 8.68 lakh metric tonnes which was not only 30.6 per cent lower than the targeted procurement of 12.50 lakh metric tonnes, but also 23.8 per cent lower than that of the previous year's procurement. It should be noted that no wheat could be procured in FY2006-07 and FY2007-08; therefore, all of the procured foodgrain was rice. The low level of domestic procurement was mainly due to loss in production caused by natural disasters and higher prices prevailing in the market compared to the procurement price set by the government. In such a situation, it is expected that the government would meet the short fall in domestic procurement through higher levels of imports from the international market. In FY2008-09, the target for procurement of foodgrains has been fixed at 15.50 lakh metric tonnes comprising 15.0 lakh metric tonnes of rice and 50,000 metric tonnes of wheat. In July 2008, 90,000 metric tonnes of rice was procured.

As regards the import of foodgrains, the government declared that 8 lakh tonnes of foodgrains would be imported through the public sector. Total commercial imports of foodgrains by the public sector in FY2007-08 amounted to 2.96 lakh metric tonnes (Table 4.2). Public imports as food aid in FY2007-08 were only 2.59 lakh (rice: 82,000 metric tonnes, wheat: 177,000 metric tonnes). In view of the damage of approximately 20 lakh tonnes of food production by floods and Sidr, more imports were needed than the initial targets of 8 lakh metric tonnes. However, the government failed to import even the targeted amount. Government agencies were also not successful in importing the 5 lakh metric tonnes of rice from India, which

were offered by India after Sidr. It may be recalled that in FY1998-99 (i.e. after the flood of 1998), total public import was 20.12 lakh metric tonnes of foodgrains (12.35 lakh metric tonnes as food aid and 7.77 lakh metric tonnes as GoB commercial import). In FY2004-05 (after the flood of 2004) total public import of foodgrains was 3.91 lakh metric tonnes (2.90 lakh metric tonnes as food aid and 1.01 lakh metric tonnes as GoB commercial import). Both in FY1998-99 and FY2004-05, commercial imports of foodgrains by the private sector were also very high (34.80 lakh metric tonnes in FY1998-99 and 29.83 lakh metric tonnes in FY2004-05), because international prices of foodgrains were lower than those in Bangladesh.

**Table 4.2: Food Import in FY2007-08**

(in '000 Metric Tonnes)

Category of Imports	FY2006-07 (July-June)			FY2007-08 (July-June)		
	Rice	Wheat	Total Foodgrains	Rice	Wheat	Total Foodgrains
Food aid	25	65	90	82	177	259
Public commercial import	0	121	121	296	0	296
Private import	695	1514	2209	1681	1235	2916
Total	720	1700	2420	2059	1412	3471

**Source:** Food Planning and Monitoring Unit (FPMU).

The government also declared its intention to distribute 6 lakh metric tonnes of foodgrains through TR, GR, FFW and VGD. Actual distribution of foodgrains through TR, GR, FFW and VGD in FY2007-08 was 5.36 lakh metric tonnes, which was 11.9 per cent less than the target. In a year of severe natural calamity, it was expected that distribution under these categories would be significantly higher than the target in a normal period; however, actual distribution was even lower than the initial target. It may be noted that VGD card holders received 25 to 30 kg of rice/fortified wheat flour on a monthly basis, while Special VGD programmes were in operation for 3 months, in the Sidr affected areas. In the case of Vulnerable Group Feeding (VGF) card holders, each family received 10 to 15 kg rice per month for a period ranging between one and six months. On the other hand, 10 kg rice per family was given, in a single installment, under GR in FY2007-08.

Total distribution of foodgrains under PFDS (including the distribution of 231,000 metric tonnes of rice distributed as VGF relief obtained from a Saudi grant) in FY2007-08 was only 6.7 per cent higher than that of previous year (Table 4.3). Another important point noted by the CPD (2008b) was that actual distribution of total foodgrains through PFDS during the first six months of FY2007-08 (July-December) was 15 per cent less than the comparable months of FY2006-07, while it was 9 per cent lower for non-

priced distribution (FFW, VGF, VGD, GR, TR, and others) of foodgrains. The above mentioned CPD report also pointed out that there was a need to strengthen the public distribution system to attain the planned target for food distribution. The report also suggested that considering the slow progress with regard to implementation under PFDS, an independent monitoring mechanism should be put in place on an urgent basis, to ensure the timely delivery of the aid and that the VGF and VGD beneficiaries are appropriately targeted, so that those in need are not overlooked.

**Table 4.3: Channel-wise Distribution of Foodgrains under PFDS in Bangladesh: FY2006-07 and FY2007-08**

(in '000 Metric Tonnes)

Channel	FY2006-07			FY2007-08		
	Rice	Wheat	Total	Rice	Wheat	Total
<b>Priced</b>						
Essential Priorities (EP)	153.4	106.9	260.3	128.2	81.3	209.5
Other Priorities (OP)	11.3	9.7	21.0	14.6	5.9	20.6
Large Employers (LE)	5.9	8.9	14.8	7.9	4.4	12.3
Open Market Sale (OMS)	407.9	-	407.9	268.0	-	268.0
Flour Mill (FM)	-	2.0	2.0	-	-	-
Fair Price Campaign (FPC)	-	-	-	-	-	-
Other	-	-	-	-	-	-
Sub-total	578.5	127.5	706.0	418.7	91.6	510.4
<b>Non-priced</b>						
Food for Work (FFW)*	121.3	0.2	121.7	98.5	55.9	154.3
Test Relief (TR)	148.2	-	148.2	65.6	10.4	75.9
Vulnerable Group Development (VGD)	103.0	44.3	147.3	198.5	69.2	267.7
Vulnerable Group Feeding (VGF)	230.2	-	230.2	187.6	-	187.6
Gratuitous Relief (GR)	33.3	0.2	33.5	38.2	-	38.2
VGF (Relief)**						231.0
Others	57.9	15.8	73.7	73.7	21.5	95.1
Sub-total	693.9	62.3	756.2	661.9	156.9	818.8
<b>Total</b>	<b>1272.4</b>	<b>189.8</b>	<b>1462.2</b>	<b>1080.7</b>	<b>248.5</b>	<b>1560.2</b>

**Note:** \* includes direct distribution of wheat by World Vision International; \*\* in FY2007-08, 231,000 metric tonnes foodgrain have been distributed as VGF relief (Saudi grant) through non-priced channel.

**Source:** Food Planning and Monitoring Unit (FPMU), Ministry of Food and Disaster Management.

*Market Interventions by BDR*

BDR has taken several initiatives with a view to stabilise prices and provide essential commodities at a subsidised rate to ensure the food security of the poor community. These include the Operation Dal-Bhat programme, the establishment of Unmukta Bazaar (open market) and OMS. Under the Operation Dal-Bhat programme, BDR has been selling a number of essential items (rice, atta, lentil, soybean oil, chick pea, milk powder, potato, onion, garlic, ginger, salt and date) at subsidised prices in their fair price shops. These initiatives, whilst welcomed by many, have also been questioned on the ground of a number of issues ranging from their operational modality and time span, to their opportunity costs and possible adverse implications for the prevailing market structure and price situation. BDR's Operation Dal-Bhat programme was strengthened during the Ramadan in 2007 when the number of shops in Dhaka City was increased from 75 to 193. During the Ramadan in 2007, BDR established 5 monitoring cells at the 5 wholesale markets (Karwan Bazaar, Shyambazaar, Mirpur Shah Ali Bazaar, Tongi Bazaar and Jatrabari) of Dhaka City for strict vigilance of the prices of essential commodities, particularly of vegetable items. From 15 March 2007 to 15 March 2008, 328,110 metric tonnes (worth Tk. 599.56 crore) of food items were sold to a cumulative number of 6.37 crore buyers in Dhaka City under BDR activities. From March 2007 to February 2008, BDR sold 65,395 metric tonnes of rice (15.505 metric tonnes of the total distribution) under the OMS programme through 341 outlets in Dhaka and other cities of the country. 122 OMS centres are also being run by the BDR authority. BDR has also supplied 50,936 metric tonnes of rice to the Directorate-General of Food and procured 25,560 metric tonnes of rice (up to August 2008) from farmers and markets. BDR has established 10 mega shops which are known as BDR Mega Shops in Dhaka and other cities (see Annex 4.2 for detailed information about BDR interventions).

As regards the impact of the BDR programme on the retail market, divergent opinions have been noted among the various stakeholders, including the retailers. According to some retailers, the BDR's operation has had no significant impact on retail prices and daily sales as the number of BDR outlets is rather small compared to total market demand. Some retailers felt that market prices have not been influenced by BDR markets, but daily quantity sold by those retailers was coming down. This happened mostly in case of retail shops in BDR outlet-adjointing areas. Most buyers at the BDR markets belonged to the lower or lower-middle income groups; middle income groups were not buying from these outlets because of the long queue and perhaps they were also not comfortable being seen standing

in the long queues. Overall, buyers appeared to be satisfied with the price offered in the BDR-run markets. However, they were not happy that these markets sold only a few items, because they had to go to other stores in order to complete their purchases. They felt that in order for the programme to be more effective, the number of BDR-run outlets should be increased further. However, it is very important to note that many thought that such initiatives could serve only as temporary measures to stabilise the price, and by no means should be seen alternatively as a permanent measure. BDR officials have also expressed their concerns in this regard and have mentioned that they were unable to stay in the market for a protracted period of time given their limited human resources. However, they also believe that in this situation of constant price hike of daily essentials, their presence as market watchdog would surely have a positive impact on the market. BDR officials believe that the monitoring of BDR Mega Shops in Dhaka and other cities should be left to the BDR itself.

*Special Project to Control Bird Flu and Encourage Hygienic Poultry Production and Marketing*

Two projects for the poultry sector were initiated in the Annual Development Programme (ADP) for FY 2007-08. These were: (i) Prevention and Control of Avian Influenza: Tk. 19.81 crore for FY2007-08 (total budget: Tk. 154 crore for 4 Years); and (ii) Poultry Technology Development and Testing Project: Tk. 18.21 crore for FY2007-08 (total budget: Tk. 33.51 crore for 5 years) to improve the quality of poultry and poultry products and to develop the marketing system. The government has taken bio-security measures to protect poultry and other birds from all types of infectious agents. Poultry production in many areas had to confront bird flu (avian influenza) in FY2007-08. It is to be noted and appreciated that the concerned agencies of the government have taken prompt actions to address the situation. These actions include active disease surveillance, culling of birds in the affected farms, limiting human movement in affected farms and disinfecting the affected farms. All these were crucial for containing the situation. According to the Department of Livestock Services, bird flu was found in 219 poultry farms (commercial: 177 and family: 42), in 110 upazilas and 13 Metro Thanas of 47 districts. Culling was conducted in 425 poultry farms (commercial: 383 and family: 42), where 1.433 million birds were culled and 1.553 million eggs were destroyed by the concerned authority. The government distributed Tk. 11 crore 20 lakh to compensate the affected farm owners. Each farm owner received Tk. 95 per domestic chicken, Tk. 90 per layer, Tk. 60 per broiler and Tk. 3 per egg as compensation. The threat of bird flu is not yet over. In view of this, continuation and effective

implementation of the two projects concerned with the prevention of bird flu and the development of the poultry sector is required.

#### *Withdrawal of Customs Duty (CD) on Essential Items*

One important fiscal measure taken by the CTG to curb inflation was to reduce import duties and para-tariffs. The government decided to withdraw customs duties (CD) on crude edible oil and lentils, as well as continue the duty-free treatment of rice, wheat, onion, matar dal and chola dal. Zero CD on crude edible oil and lentils has also been introduced in FY2007-08. Zero duty is still continuing on imports of rice, wheat and onion. Thus, total operative tariffs on import of rice, wheat, edible oil (crude), onion and pulses were zero in FY2007-08 (Table 4.4). The operative tariffs on imports of milk powder and refined edible oil were 37.15 per cent and 28.32 per cent, respectively. However, in spite of zero-duty, because of restrictions imposed on rice exports by major exporters, import of rice was a problem in FY2007-08. In the case of soybean oil, the government initially withdrew the import duty on crude soybean oil, and later from refined edible oils as well. Unfortunately, export restrictions on edible oil in the form of an export tax in Argentina, and export ban imposed by India on all types of edible oils for one year beginning 17 March 2008, made it difficult to import these products from the international market. As was mentioned, these actions also led to a rise in their global prices. As a result, the desired results could not be achieved.

**Table 4.4: Tariff Schedule of Essential Imported Commodities: 2001-02 and 2007-08**

Products	2001-02	2006-07	2007-08						
			Total Operative Tariff Rate (per cent)	Total Operative Tariff Rate (per cent)	Customs Duty (CD)	Supplementary Duty (CD)	Value Added Tax (VAT)	Advance Income Tax (AIT)	Advance Trade VAT
Rice	13.50	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wheat	7.50	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Edible Oil (Refined)	52.50	20.75	10.00	0.00	15.00	0.00	1.50	2	8.32
Edible Oil (Crude)	36.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onion	30.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Milk (Sweetened)	52.95	50.75	15.00	0.00	15.00	3.00	1.50		37.15
Milk (Not-sweetened)	52.95	72.31	25.00	20.00	15.00	3.00	1.50		77.98
Pulses	15.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Source:** For 2001-02, Deb (2005); for 2007-08, The MFN Tariff Schedule for FY2007-08 by the National Board of Revenue (NBR).



*Commercial Banks to Provide Credit Facilities on Softer Terms to New Importers*

The Bangladesh Bank encouraged the banks to provide credit facilities on softer terms to new importers, eased the L/C margin for food items, and extended the time limit for customer facility.

*Withdrawal of the Provision of Annual Renewal of VAT Registration by Commercial Importers*

The government withdrew the provision of annual renewal of VAT registration in FY2006-07.

*Subsidy for Diesel and Electricity Used in Irrigation*

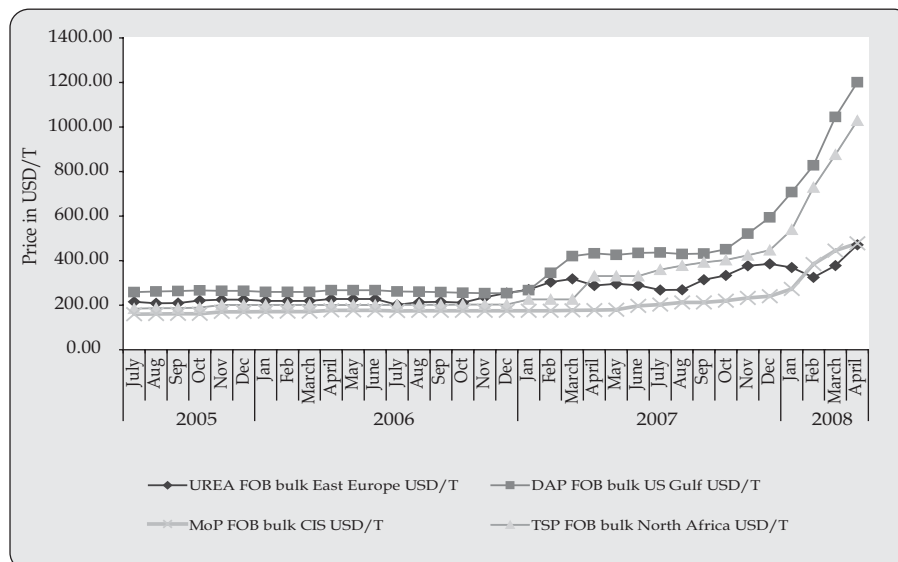
The National Budget for FY2007-08 decided to provide Tk. 750 crore as a subsidy for diesel used for irrigation purposes and to continue with the 20 per cent subsidy for electricity used in irrigation. The actual amount of subsidy provided for diesel used in irrigation was Tk. 250 crore. Small and marginal Boro farmers received this subsidy at the rate of Tk. 545 per acre. A total of 67 lakh farmers received benefits under this scheme.

During the Boro season in FY2007-08, electricity supply for irrigation was relatively good. It may be recalled that to ensure that farmers received the required electricity for irrigation, the government decided to strictly enforce closure of all shops and shopping malls (except pharmacies, food stores and restaurants) by 8:00 pm. This was a timely decision considering the fact that districts that have big townships and shopping facilities also have a higher proportion of area under irrigation with electrically operated engines (Deb 2008). In FY2006-07 Rabi Season, the area irrigated using electricity in the Dhaka district was 23,651 hectares (ha) (46 per cent of the irrigated area of the district), 22,423 ha in the Chittagong district (45 per cent of the irrigated area of the district), 79,473 ha in the Rajshahi district (47 per cent of the irrigated area of the district), 89,281 ha in the Comilla district (57 per cent of the irrigated area of the district), and 15,475 ha in the Narayanganj district (75 per cent of the irrigated area of the district). Total consumption of electricity by irrigation pumps from July through March of FY2007-08 was 75.84 MKWh, which was 17.9 per cent higher than that of the comparable months of FY2006-07. Electricity consumption by irrigation pumps during the Boro season (November-March) of FY2007-08 was 72.99 MKWh, which was 24.6 per cent higher than that of the comparable months of FY2006-07. The amount of subsidy on this account was about Tk. 75.0 crore (CPD 2008a).

### Fertiliser Subsidy

The National Budget for FY2007-08 set aside Tk. 1,500 crore on account of fertiliser subsidy as opposed to the Tk. 1,100 crore in the FY2006-07 budget, and the Tk. 1,541 crore in the revised FY2006-07 budget. Available information suggests that the total subsidy expenditure for fertiliser in FY2007-08 was about Tk. 3,408.5 crore. Though the amount of subsidy on account of fertiliser was increased, farmers could not reap the full potential benefit due to enormous increase in the prices of all types of fertilisers in the international market. Between the June 2007 budget announcement and April 2008, the price of urea increased from USD 289.00 per metric ton (MT) to USD 471.30. During this period, the per MT price of Triple Super Phosphate (TSP) increased from USD 331.00 to USD 1,029.00, and that of Diammonium Phosphate (DAP) increased from USD 434.50 to USD 1,201.00; the price of Muriate of Potash (MoP) increased from USD 196.90 to USD 477.60 (Figure 4.1). Thus, the increase in the amount of fertiliser subsidy could not deliver the expected amount of total fertiliser which was needed to cater to the demand for fertiliser. A recent report (Karim 2008), prepared on the basis of field visits to a large number of areas, observed that the supply of fertiliser was able to cater to the needs of only medium yield goals. The report added that for achieving high yield goals, the fertiliser requirement needed an upward revision. According to the report, the actual fertiliser requirement in FY2007-08 was 35.2 lakh metric tonnes of urea, 5.9

**Figure 4.1: International Price of Fertiliser (Urea, DAP, TSP & MoP): July 2005—April 2008**



Source: FADINAP and Commodity Price Data (World Bank).



lakh metric tonnes of TSP, 5.0 lakh metric tonnes of MoP and 3.2 lakh metric tonnes of DAP (Table 4.5). On the other hand, fertiliser demand, as estimated by the government, was 28.14 lakh metric tonnes of urea, 4.75 lakh metric tonnes of TSP, 4.0 lakh metric tonnes of MoP and 2.5 lakh metric tonnes of DAP. Thus, there was a gap between the actual requirement to attain high yield goals and the amount of total fertiliser distributed. However, there is a general agreement that the concerned agencies were able to distribute the available fertiliser in an effective manner.

**Table 4.5. Demand-Supply Situation in Bangladesh: FY2007-08** *(in lakh metric tonnes)*

Types of Fertiliser	Demand as per Govt.	Estimate of Actual Demand	Gaps
Urea	28.14	35.2	7.0
TSP	4.75	5.9	1.2
MoP	4.0	5.0	1.0
DAP	2.5	3.2	0.7

Source: Karim, 2008.

#### *Distribution of Agricultural Credit*

Distribution of agricultural credit in FY2007-08 was Tk. 8,580.66 crore against the target of Tk. 6,351 crore earmarked for FY2007-08 and actual distribution of Tk. 5,292.51 crore in FY2006-07. Agricultural credit recovery in FY2007-08 was Tk. 6,003.70 crore. Thus, agricultural credit disbursement in FY2007-08 was 35 per cent higher than the targeted amount, and 62 per cent higher than that of the previous year. As is known, the target for disbursement of agricultural credit during FY2008-09 was Tk. 9,379.23 crore.

#### *Social Safety Net Programme*

The National Budget for FY2007-08 stipulated increased coverage and also a higher amount of individual grants under the social safety net programmes (Table 4.6). It was decided that 20 lakh people would directly benefit from the various safety net programmes. The budget for FY2007-08 made an allocation of Tk. 3,893 crore towards social empowerment, social safety net, poverty reduction, and employment generation (including microcredit support scheme) programmes. This was 33.4 per cent higher than in the revised budget of FY2006-07. An amount of Tk. 2,273.90 crore was allocated for the expansion of existing safety net programmes, which was 36.23 per cent higher than the allocation in the revised budget in FY2006-07. Along with this, the number of targeted beneficiaries of the allowance was increased from 25.14 lakh to 27.5 lakhs (9.3 per cent increase).

**Table 4.6: Allocation of Funds for Social Safety Net Programmes** (in Crore Taka)

Existing Programme	FY2007 (Budget)	FY2007 (Revised Budget)	FY2008 (Budget)	Growth (per cent) over FY2007 Revised Budget
Old-age allowance	384.00	384.00	448.80	16.90
Allowance programme to the widowed, deserted and destitute women	156.00	156.00	198.00	26.90
Honorarium programme for insolvent Freedom Fighters	60.00	78.20	99.50	27.20
Programme for the assistance to the fully retarded	40.00	40.00	52.80	32.00
Fund for mitigating risk due to natural disaster	130.00	130.00	135.00	3.80
Fund for rehabilitation of the acid burnt women and the physically handicapped	10.00	5.00	10.00	100.00
Fund for the housing of the homeless	50.00	0.00	0.00	--
Seasonal unemployment reduction fund	55.00	00.00	50.00	--
Retraining and employment of voluntarily retired/retrenched employees/ labourers	30.00	10.00	0.00	-100.00
Development fund for the RMG workers	20.00	0.00	20.00	--
VGD, VGF, TR and GR	10.57 lakh MT foodgrain	1232.00	1649.00	33.80
<b>Total</b>		1669.20	2273.90	36.23

Source: Budget documents.

A "Seasonal Unemployment Reduction Fund" of Tk. 55 crore was created under the budget for FY2006-07. The budget for FY2007-08 made a further allocation of Tk. 50 crore to this fund. It is pertinent to mention here that funds allocated on this account in FY2006-07 were not spent at all. The government also allocated Tk. 25 crore for the welfare of readymade garment (RMG) workers, and Tk. 20 crore for training for the enhancement of worker efficiency. In addition, several new schemes were also introduced. These were: (i) Maternity Allowance for the Poor Lactating Mothers, (ii) Rural Employment Opportunities for Protection of Public Property, and (iii) assistance to fully retarded children. Maternity Allowance for the Poor

Lactating Mothers was introduced with an allocation of Tk. 17 crore to ensure safe motherhood, better health and nutrition for the hardcore poor mothers, as well as safe birth and sound upbringing of their infants. Under this programme, the expecting poor mothers receive an allowance of Tk. 300 per month—the target was to bring about 45,000 mothers of 3,000 unions under this programme. On the other hand, Rural Employment Opportunities for Protection of Public Property aims to create employment for 24,000 destitute women in 387 unions. The programme for the assistance to fully retarded children provides a monthly allowance of Tk. 200 for diasabled children studying in the primary level, Tk. 300 for secondary level, Tk. 400 for higher secondary level and Tk. 600 for university level. Additionally, Tk. 600 was to be provided as an honorarium for the insolvent Freedom Fighters, on a monthly basis.

Social safety net programmes are administered by different Ministries, departments and organisations, with a large group of non-government organisations (NGOs) also involved in the implementation of some of the schemes. Initiatives under the social safety net programme include old-age allowance; an allowance programme for widowed, deserted and destitute women; capitation grant for public and private orphanages; an honorarium programme for insolvent Freedom Fighters; a programme for the assistance of the fully retarded; a fund for mitigating risks due to natural disaster; a fund for the rehabilitation of acid burnt women and the physically handicapped; a seasonal unemployment reduction fund; a development fund for the RMG workers; Maternity Allowance for the Poor Lactating Mothers; VGD, VGF, TR and GR.

An allowance of Tk. 220 per person is provided to the beneficiaries of the old-age allowance programme and the allowance programme for widowed, deserted and destitute women. Under the VGD programme, women receive 30 kg of rice or wheat or 25 kg of atta for one year.

During FY2007-08 (July-April), 100 per cent of the target for the full fiscal year was achieved in the cases of the allowance programmes for widowed, deserted and destitute women, Maternity Allowance for the Poor Lactating Mothers and capitation grants for public orphanages (Table 4.7). More than 99 per cent of the target was achieved in the case of capitation grant for private orphanages. In the case of the honorarium programme for insolvent Freedom Fighters, about 93 per cent of the target beneficiaries were covered, but only 40 per cent of the total budgeted allocation was spent from July through April of FY2007-08. About 88 per cent of the targeted beneficiaries received benefits from the programme for the assistance to the fully retarded, but total spending was about 66 per cent of the budgeted allocation. Under

Table 4.7: Utilisation of Funds Allocated for Social Safety Net Programmes

Programmes	FY2008 Allocation	Target Number of Beneficiaries	Achievement in FY2008 (July-Apr)				Achievement in FY2008 (July-Apr) as Per cent of Target	
			Disbursed	Distributed	Number of Beneficiaries	Distribution with Respect to FY2008	Beneficiary	
Old-age allowance	448.80	1700	336.60	331.17	1672	73.79	98.39	
Allowance Programme to the widowed, deserted and destitute women	198.00	750	198.00	198.00	750	100.00	100.00	
Capitation grant for public orphanage	14.94	10	14.94	14.94	10	100.00	100.00	
Capitation grant for private orphanage	30.74	42.7	30.78	30.58	42.5	99.48	99.48	
Honorarium programme for insolvent Freedom Fighters	99.50	100	36.00	33.40	93	39.57	92.78	
Programme for the assistance to the fully retarded	52.80	200	39.60	34.65	175	65.63	87.50	
Fund for mitigating risk due to natural disaster	35.00	n.a.	20.00	n.a.	n.a.	57.14	n.a.	
Fund for rehabilitation of acid burnt women and the physically handicapped	10.00	6	4.84	4.84	5	48.40	83.24	
Seasonal unemployment reduction fund	50.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Development fund for the RMG workers	20.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Maternity allowance for the poor lactating mothers	17.00	45	17.00	17.00	45	100.00	100.00	

Notes: Allocation amount in Crore Taka; Number of beneficiaries in Thousand.

Source: Information collected from the concerned departments.

the fund for the rehabilitation of acid burnt women and the physically handicapped, 83 per cent of the targeted beneficiaries received support, but total spending was only 48 per cent of the budgeted allocation.

#### *Endowment Fund for Agricultural Research*

An allocation of Tk. 350 crore was approved in FY2007-08 as an endowment fund for agricultural research compared to Tk. 244 crore allocated for this purpose in FY2006-07. However, not a single Taka allocated under this fund was spent up to June 2008. Agricultural research generates technological improvement. A critically important determinant of agricultural growth in Bangladesh is technology and better management techniques generated through research. Growth in agricultural production through increased productivity, and consequent reductions in per unit costs of production, mainly depends on success in technology generation and dissemination. Allocation for agricultural research is necessary; however, unless the allocated amount is spent in an effective manner, the desired outcome cannot be expected.

#### *A Legal Framework to Protect Consumers' Rights*

On 20 August 2008, the CTG approved the "Consumer Rights Protection Ordinance 2008" with the provisions of imprisonment and financial penalty in cases of consumer rights violation. The approval was given at a meeting of the council of Advisors presided over by the Chief Advisor. The Act includes eight chapters with 83 clauses on various aspects of consumer protection. After coming into force through a presidential proclamation, the proposed law will allow consumers to take legal actions against people involved in malpractices, such as adulteration, cheating, price manipulation and violation of related laws. According to the Ordinance, the government will set up a consumer rights protection Directorate in Dhaka and set up consumer rights protection tribunals in districts and upazilas to check against unfair practice related to consumer goods. The law proposes the establishment of Consumer Rights Protection Committees to be headed by DCs, at district levels. There will be similar committees in upazilas and unions. The law stipulates a maximum of three years' imprisonment and financial penalty of Tk. 2 lakhs for the violation of the law.

#### *Monetary Measures to Curb Inflation*

According to its Monetary Policy Statement (MPS) of January-June 2008, the Bangladesh Bank aims to "support the highest sustainable output growth along with maintaining price stability" (Bangladesh Bank, January 2008).

To this end the Bangladesh Bank was resisting the suggestion of the International Monetary Fund (IMF) to raise interest rates and follow a contractionary monetary policy. The Bangladesh Bank appears to be pursuing an "accommodative monetary policy," in view of domestic and global price developments. In an attempt to reduce money supply, in September 2008, the Bangladesh Bank raised the interest rate on REPO from 8.50 per cent to 8.75 per cent, a policy that the IMF had been recommending for quite some time.

#### *Other Measures*

The FY2007-08 budget also stipulated an increased allocation for road and railway maintenance so that transportation costs would be reduced. ADP implementation in this regard was rather poor in FY2007-08. Road condition (highways and feeder roads) all over the country has deteriorated. There was also an announcement stipulating the allocation of Tk. 68 crore (19 per cent of total allocation) for repairing two fertiliser units (Zia and Jamuna Fertilizer Company), and the establishment of a task force at the national and district levels to review prices of essential commodities on a regular basis. It was also mentioned that an inter-Ministerial monitoring committee would analyse the price situation of essential commodities and make recommendations. There was not much progress in terms of effective implementation of these decisions except 20,000 metric tonnes of increased production of urea Fertiliser by the Jamuna Fertilizer Factory (JFF) in FY2007-08. In FY2007-08, JFF produced 5.20 lakh metric tonnes of fertiliser against its normal production of 5.0 lakh metric tonnes and it installed an annual capacity of 5.60 lakhs or 1,700 tonnes a day.

#### *Overall Situation*

As is evident from the above analysis, the government has indeed made an honest effort to reduce inflation and introduce a number of measures to curb the price hike. However, implementation of a number of measures, particularly those that would have a direct impact on prices, was only partial. For example, the government failed to import the targeted increased amounts of foodgrains from the international market in a timely fashion, even though this was required because of severe losses in domestic production caused by flooding and Sidr. Subsequent export restrictions imposed by major foodgrain exporting countries made it harder when the government tried to. As a consequence of lower than targeted imports by the public sector, the expected positive impact on domestic price did not materialise, and also operations under PFDS had to be conducted on a much lower scale than was aimed for in the first place. On the other hand, the

government acted on a war footing to increase Boro production in FY2007-08, which paid off very well in the form of increased production in the Boro season (about 17.6 million tonnes against 15.0 million tonnes in the previous Boro season). Although the domestic price of rice increased substantially in FY2007-08, rice prices in Bangladesh have been lower than those of the international market.

### **4.3 Actions Taken by Different Countries to Curb Inflation**

As mentioned in earlier chapters, high inflation of essential items in 2007 and 2008 was a global phenomenon of varying magnitude. Countries, particularly the governments of developing countries in Asia, had to respond to the inflation in a prompt manner. Many did. Governments took various measures which included short, as well as medium term ones. James *et al.* 2008 have compiled the short term policy responses of different countries of developing Asia (Table 4.8). The types of policy responses varied according to whether countries were net importers or net exporters. Net importing countries have reduced import restrictions and tariffs, while the net exporting countries adopted policy of increased taxes and restrictions on exports. In this regard, it is significant that Thailand, one of the leading net exporters, has liberalised imports of rice and eschewed export restrictions. This is an important factor in helping to ensure that countries with shortfalls will now have access to rice supplies. Safety net programmes and policies to mitigate the rise in food prices through subsidies, using stocks to stabilise prices, and providing assistance to farmers to meet rising input costs were widespread. Food assistance programmes have been in place for some time in Asia, although their impact has been mixed—at times helping consumers, at other times weakening incentives for producers. All of these programmes have distributional consequences, particularly for the poor. Adoption of some policies has been consistent with the objectives of helping the poor, such as assisting vulnerable households, preserving incentives for farmers, not imposing costs beyond national borders, good governance in implementing food distribution programmes, etc. However, some have criticised some of the other measures, such as imposing price controls, trade restrictions and increasing general subsidies, as being inconsistent with market economy objectives and causing more harm than good. However, in many developing countries, policies have been dictated by short term urgencies, and many policymakers have thought that these were times when they should be more concerned with welfare considerations, rather than with concerns of pursuing market fundamentalist principles.

Many developing and low-income countries are faced with a dilemma—what can/should their governments do? Critically important trade-offs are



involved, and governments have to take decisions. After a thorough examination of various short run, medium run, and long run measures taken by the Asian countries to combat inflation, (James *et al.* 2008) suggests the following. First, shifting from costly general subsidies to targeted safety net programmes, such as cash transfers or food stamps, feeding programmes for school children, and FFW programmes can be used in the short run, as can the release of stocks to stabilise prices. Closing the yield gap in Asia between low productivity areas and high productivity areas in rice and wheat production by making input supplies more reliable and providing credit at market interest rates, freeing up trade, and avoiding protectionism are responses that can work over the course of one year. Medium term responses, such as improving institutional capacities and governance structures in Asia's rice economy, and investing in improved post-harvest facilities are also considered to be important from the perspective of sustainable outcomes. Along with the above, long term investment in education in rural areas, agricultural technology and infrastructure can elicit productivity gains and alleviate the trend of higher rice and food prices, in general.

A recent International Food Policy Research Institute (IFPRI) study (Benson *et al.* 2008) documented policy responses undertaken by governments in view of the food crisis and the symptoms of political actions triggered by the crisis in different countries during the period between 2006 and August 2008 (Table 4.9). The study identified five types of policy measures that were undertaken by different countries. These included trade restriction, trade liberalisation, consumer subsidy, social protection and measures to increase supply. Countries sometimes undertook several measures together. Many net importing countries have liberalised imports, but restricted the export of foodgrains and other essential commodities. On the other hand, many net exporting countries imposed temporary restrictions on exports with a view to increase domestic supply. Protests have been of both violent and non-violent form. According to the report violent protests were observed in 21 countries (Bangladesh, Burkina Faso, Cameroon, Côte d'Ivoire, Egypt, Guinea, Haiti, Honduras, Kenya, Mauritania, Mongolia, Morocco, Mozambique, Pakistan, Peru, Senegal, Somalia, Thailand, Trinidad and Tobago, United Arab Emirates and Yemen); while non-violent protests were observed in 43 countries (Afghanistan, Argentina, Austria, Bangladesh, Belgium, Bolivia, Burkina Faso, Cambodia, El Salvador, Ethiopia, Germany, Guatemala, India, Indonesia, Italy, Japan, Jordan, Kenya, Lebanon, Madagascar, Mexico, Mongolia, Morocco, Nepal, The Netherlands, Nicaragua, Niger, North Korea, Pakistan, Peru, The Philippines, Russia, Senegal, Singapore, Somalia, South Africa, South Korea, Switzerland, Thailand, Togo, United Kingdom, Uzbekistan and Yemen).

Table 4.8: Policy Responses Taken by Developing Countries of Asia to Face Inflation

Region / DMC	Major Exporter of	Reduce Import Duties	Increase Supply Using Reserves	Build Reserves/ Stockpiles	Increase Imports/ Relax Restrictions	Raise Export Duties	Export Restrictions	Price Controls/ Consumer Subsidies	Minimum Support Prices (MSP)	Minimum Export Prices (MEP)	Assistance/ Subsidy to Farmers	Promote Self-sufficiency	Actions Against/ Appeals to Profiteers	Cash Transfer	Food Ration/ Stamp
EAST ASIA															
Cambodia	Rice	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓		
PRC		✓	✓			✓	✓	✓	✓		✓	✓	✓		✓
Indonesia		✓	✓		✓		✓	✓							
Korea		✓	✓				✓	✓							
Malaysia				✓				✓							
Mongolia		✓			✓			✓							
Myanmar								✓	✓						
Philippines				✓	✓			✓	✓						✓
Singapore				✓										✓	
Taipei, China				✓											
Thailand	Rice	✓	✓	✓	✓		✓	✓							
Vietnam	Rice			✓	✓		✓	✓		✓					
Central Asia															
Kazakhstan	Wheat						✓	✓							
Kyrgyz Rep.							✓	✓							
Tajikistan		✓													
SOUTH ASIA															
Afghanistan		✓						✓	✓						
Bangladesh			✓	✓	✓			✓	✓	✓	✓	✓			✓
India		✓		✓	✓		✓	✓							✓
Nepal					✓										
Pakistan	Rice and Wheat			✓	✓		✓								
Sri Lanka		✓		✓	✓		✓								
PACIFIC															
Fiji												✓			✓
FSM												✓			
PNG												✓			
Samoa								✓							
Solomon Islands		✓													
Tonga								✓							

Sources: Adapted and expanded from World Bank (2008a); various news articles, as cited in James *et al.* (2008).

**Table 4.9: Government Policy Responses to the Food Crisis and the Symptoms of Political Actions Triggered by the Crisis in Different Countries: 2006 to August 2008**

Country	Government Responses					Protests	
	Trade Restriction	Trade Liberalisation	Consumer Subsidy	Social Protection	Increase Supply	Violent	Non-violent
Afghanistan		X		X	X		X
Algeria			X	X			
Angola					X		
Argentina	X	X	X		X		X
Armenia					X		
Austria							X
Azerbaijan	X						
Bahrain		X	X	X	X		
Bangladesh	X		X	X	X	X	X
Belgium							X
Benin		X	X		X		
Bolivia	X	X	X		X		X
Brazil	X	X			X		
Burkina Faso		X	X	X		X	X
Burundi				X			
Cambodia	X	X	X				X
Cameroon		X		X	X	X	
China	X	X					
Comoros			X				
Congo, Rep.		X			X		
Cote d'Ivoire		X		X	X	X	
Cuba			X				
Dominican Republic				X			
Ecuador	X	X			X		
Egypt	X		X	X	X	X	
El Salvador		X					X
Ethiopia	X		X	X	X		X
Gambia		X					
Germany							X
Ghana		X			X		
Guatemala		X			X		X
Guinea				X		X	
Guinea-Bissau		X					
Haiti			X	X	X	X	
Honduras		X	X			X	
India	X	X	X	X	X		X

(Table 4.9 contd.)

(Table 4.9 contd.)

Country	Government Responses					Protests	
	Trade Restriction	Trade Liberalisation	Consumer Subsidy	Social Protection	Increase Supply	Violent	Non-violent
Indonesia	X	X	X				X
Iran	X		X				
Italy							X
Japan							X
Jordan		X	X	X			X
Kazakhstan	X		X	X	X		
Kenya					X	X	X
Kuwait				X			
Lebanon				X			X
Liberia		X		X	X		
Madagascar	X		X				X
Malawi	X				X		
Malaysia	X		X		X		
Mali	X	X		X	X		
Mauritania						X	
Mexico		X	X		X		X
Mongolia		X	X			X	X
Morocco		X	X			X	X
Mozambique						X	
Namibia			X	X			
Nepal	X						X
The Netherlands							X
Nicaragua		X	X				X
Niger	X	X		X	X		X
Nigeria		X	X		X		
North Korea							X
Oman			X	X	X		
Pakistan	X	X	X	X		X	X
Panama			X		X		
Paraguay		X	X				
Peru		X	X	X		X	X
The Philippines				X	X		X
Quatar				X			
Russia	X	X	X		X		X
Rwanda					X		
Saint Lucia					X		
Saudi Arabia		X	X	X	X		
Senegal		X	X		X	X	X
Sierra Leone	X	X	X	X	X		
Singapore							X

(Table 4.9 contd.)

(Table 4.9 contd.)

Country	Government Responses					Protests	
	Trade Restriction	Trade Liberalisation	Consumer Subsidy	Social Protection	Increase Supply	Violent	Non-violent
Somalia	X					X	X
South Africa			X	X			X
South Korea		X	X				X
Sri Lanka			X		X		
Sudan					X		
Suriname		X					
Switzerland							X
Syria				X			
Tajikistan		X	X	X			
Tanzania	X	X	X				
Thailand	X		X		X	X	X
Timor-Leste			X				
Togo			X		X		X
Trinidad and Tobago					X	X	
Tunisia			X	X			
Turkey	X	X			X		
Turkmenistan					X		
Uganda				X	X		
United Kingdom							X
Ukraine		X	X				
United Arab Emirates				X	X	X	
Uruguay		X	X				
Uzbekistan	X		X				X
Venezuela		X	X	X	X		
Vietnam	X	X			X		
Yemen			X		X	X	X
Zambia	X				X		
Zimbabwe		X	X				

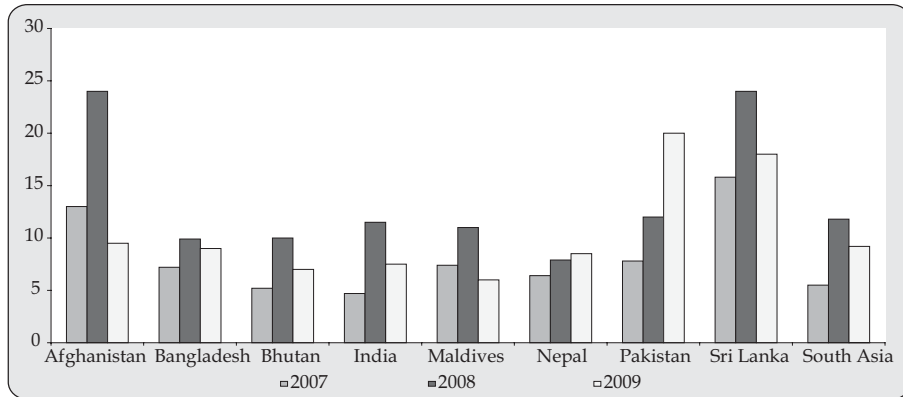
**Sources:** Government responses: International Monetary Fund (IMF), FAO and news reports, 2007-08; food related protests: news reports, 2007-08; as cited in Benson *et al.* (2008).

#### 4.4 Projected Inflation Level in 2008 and Beyond

The Asian Development Bank (ADB) in a recent report published in September 2008 (James *et al.* 2008) has come up with projections for the inflation situation in the second half of 2008 and in 2009. The report observes that inflation in South Asia has accelerated in 2008, reaching double digits by mid year. Food price inflation, for obvious reasons, is of special concern, because food consumption is a very high proportion of consumer spending, especially for the very poor. It is affected by adjustments in administrated

fuel prices through, for example, higher costs of transportation and for operating farm equipment. The weakening of local currencies against the US Dollar (USD) in India and Pakistan in 2008 has contributed to inflationary pressures, exacerbating the rise in global commodity and other import prices.

**Figure 4.2: Projected Inflation in South Asia: 2008 and 2009**



Source: ADB, 2008.

The ADB report adds that despite efforts to tighten macroeconomic policies, inflation in South Asia is now expected to escalate to 11.8 per cent in 2008, before moderating to 9.2 per cent in 2009 (Figure 4.2). In Afghanistan, a 49 per cent increase in food prices, as well as higher prices of imported fuel took year-on-year inflation to 33 per cent in June 2008. Projected average inflation for Afghanistan in FY2008 and FY2009 are 24.0 per cent and 9.5 per cent, respectively. In the case of Bangladesh, inflation increased to 9.9 per cent in the first half of 2008. The projected inflation rate for Bangladesh in FY2009 is 9.0 per cent. In Bhutan, the consumer price index (CPI) increased to 8.9 per cent (year-on-year) in the April-June quarter of 2008. The projected inflation rates for Bhutan in FY2008 and FY2009 are 10.0 per cent and 7.0 per cent, respectively. On the other hand, projected inflation for India in FY2008 and FY2009 are 11.5 per cent and 7.5 per cent, respectively. In Maldives, the CPI mainly reflecting the escalating costs of food and fuel, rose by 15.5 per cent (year-on-year) in June 2008. Projected average inflation for the year 2008 is 11.0 per cent. In Nepal, as a result of sharp increases in food and oil prices, year-on-year inflation rose to 13.4 per cent in mid July 2008, and projected inflation in FY2009 was likely to be 8.5 per cent, compared to the 7.9 per cent average inflation in FY2007. In Pakistan, high inflation is expected to persist in FY2009 (averaging 20.0 per cent compared to 12.0 per cent in FY2008) as domestic fuel, food and power subsidies are rationalised. In Sri Lanka, average inflation for 2008 is projected at 24.0 per cent in 2008. While global prices of food and oil are expected to moderate in 2009, wage increases in the public and private sectors (public sector wages and pensions are partially inflation-indexed) indicate that demand pressures will remain high. The

forecast for inflation in Sri Lanka in 2009 has been raised to 18.0 per cent from 14.0 per cent in the Asian Development Outlook (ADO) 2008.

According to the aforesaid ADB report, the projected inflation levels for the Central Asia sub-region in 2008 and 2009 are 15.4 per cent and 11.4 per cent, respectively (see Annex 4.3 for details). In the case of East Asia, the projected inflation rate is 4.8 per cent in 2008, against the 3.9 per cent seen in 2007. In other words, the projected rise in price would put inflation at the double rate, recorded over the five years between 2003 and 2007. In Southeast Asia, inflation has accelerated at a faster pace than was earlier expected, and the inflation forecast for the sub-region in 2008 is 9.4 per cent (more than double the actual rate in 2007), and is expected to come down to 6.9 per cent in 2009. The projected inflation level for the Pacific sub-region in 2008 is 8.7 per cent and is projected to remain high at 6.4 per cent in 2009.

Thus, it would appear from the aforesaid cross-country projections that inflationary trends have come to stay, at least for the foreseeable future. Bangladesh, like many other developing economies, will need to adjust her policies accordingly, if attendant problems and their implications are to be addressed in an adequate manner.

#### **4.5 Implications for Policy**

As the preceding analyses bear out, the global food price shock is unlikely to ease in the foreseeable future. Whilst some projections indicate that the price level should decline to some extent, it is not expected to come down to the previous level, i.e. to 2005-06 levels. This is, in part because the recent rise in prices, the most severe in more than 30 years, has primarily been the result of structural factors that will not go away in the near future. World food prices are on an upward trajectory and are quite volatile as a result of the thin volume of international trade, relative to total production and consumption. The situation has been exacerbated by the low level of stocks of staple grains (James *et al.* 2008). In this situation, the pertinent question to ask is: will Bangladesh be able to face the challenge of sustained high prices of food by translating it into a new opportunity? The future of poverty reduction in Bangladesh will depend to a large extent on the answer to this question. If Bangladesh can successfully turn the adverse situation arising out of high food prices into a new opportunity of increased production at relatively lower per unit domestic cost of production and increased employment and income generating opportunities, then the current challenge could be a blessing in disguise for Bangladesh. Bangladesh's deficit is not substantial and she could and should aim at becoming a net exporter of rice in near future. Food security should become a national priority for Bangladesh. By raising productivity and agricultural production, Bangladesh has the potential to



become a rice surplus economy. Bangladesh should be able to generate a large part of the resources that are required for accelerated poverty alleviation and reduction of income inequality in the country. A comprehensive plan should be designed on an urgent basis, so that Bangladesh is able to achieve these goals in the short to medium term.

To this end, we would like to suggest some actionable policy measures which would be helpful towards achieving the goal of ensuring food security and poverty reduction in Bangladesh.

- *Increase Domestic Production of Agricultural Commodities:* Increased agricultural production would require large scale investment in agricultural research and technology dissemination; most importantly, this would require assured supply of inputs (fertiliser, seed, irrigation and agricultural credit) to farmers. Price support for inputs will need to be continued, with periodic price adjustment in view of market movements. Cultivation of seasonal fallow lands in the coastal regions and in Sylhet division and increasing efficiency in agricultural production needs to be accorded high priority.
- *Increased Distribution under PFDS:* Government will need to continue distribution under PFDS and expand the social safety net programmes. The government may have to go for increased distribution under PFDS, which would require a higher foodgrain rolling stock (of about 12-15 lakh tonnes). Indeed, the government does have the physical facility to maintain a higher stock. Procurement will have to be made mainly in the Boro and Aman seasons with distribution throughout the year, and greater allocation during the October-November and the March-April periods. The social safety net programmes need to be designed in such a manner that hardcore poor families are adequately covered. To this end, an independent monitoring mechanism needs to be put in place to ensure that the VGF and VGD beneficiaries are appropriately targeted, and that those in need are not overlooked. Regular feedbacks from this oversight exercise will enable the government to closely calibrate the programme to help mitigate distress promptly and effectively, and also to avoid wastage and rent seeking in the distribution process.
- *Implementation of the Declared Employment Guarantee Scheme:* Effective implementation of the declared "100 Days Employment Guarantee Scheme" would also be necessary to increase employment and ensure food security. Towards this end, appropriate targeting of beneficiaries, proper identification of work, and catering to felt-needs depending on seasonal variations and regional peculiarities, will be required. The experience of neighbouring India, where similar programmes have been in place for some time, could serve a useful purpose in this context.

## PART B

### PRICE OF ESSENTIAL COMMODITIES

A DIAGNOSTIC STUDY OF RECENT TRENDS

#### CHAPTER 5

#### BACKGROUND AND METHODOLOGY OF THE DIAGNOSTIC STUDY

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### 5.1 Background and Objectives of the Study

Part B presents the results of the diagnostic study carried out by the CPD in March-April 2007. Part A of this volume has presented broad macroeconomic trends with regard to inflation and prices of essential items, their implications on poverty levels and government measures to address the situation. As was mentioned in the introduction, the objectives of the study were to identify the causes of the price spiral and to come up with suggestions to mitigate the situation. It was observed at the time that rural inflation was higher compared to urban inflation, and that food inflation was higher than non-food inflation. The combined effects of these trends resulted in significant erosion of income for households belonging to the lower income groups. Indeed, an earlier CPD publication which came out prior to the diagnostic study (*State of the Bangladesh Economy in FY 2007: An "Election Plus" Agenda for the Second Caretaker Government*), also mentioned about the adverse implications of high inflation for lower income people. As part of the diagnostic study, CPD initiated an extensive field level survey to examine the marketing and distribution systems of some selected essential items. Based on this analysis, an attempt was made to identify the underlying factors contributing to the price rise and to put forward some suggestions in view of the emergent situation.

#### 5.1.1 Plausible Hypotheses Regarding the Price Escalation

The marketing and distribution system of essential goods in Bangladesh follows a complex system. For many of the essential items, which are dependent to a large measure on imports, the number of significant players is rather limited, allowing for oligopolistic behaviour to perpetrate. For many items dependent on domestic producers, the number of wholesalers (aratdar/paiker) is also limited, with the number of retailers being very large, as a good number of intermediaries operate in between. The complex

pattern of markets of essential items in Bangladesh makes the question of market operation efficiency an interesting and critical one. In this backdrop, concerns with regard to syndicates, sabotage and hoardings were voiced from time to time, often without adequate proof. In view of all these, a systematic study to investigate the nature of inflation, how the current inflation differed from historical trends, and what are the underlying factors contributing to the recent price spiral were felt to be the questions that had practical significance and policy importance. The CPD study was an attempt to examine the relevant issues in this context.

There could be several hypotheses as regards the underlying causes of the current price escalation. Some of these are testable, while others are beyond the scope of the present study. Several factors may have contributed to the current inflationary pressure. However, the conjectures are not mutually exclusive. Besides, simultaneous rejection or acceptance of a number of combinations of these hypotheses could lead to interesting findings. Some of the hypotheses are the followings:

- (a) There was a shortage of supply of essential goods to match the demand, both from domestic and global perspectives.
- (b) There was no real (above historical trends) difference between import and wholesale prices (in case of imported products).
- (c) No irrational (above historical trends) gap exists between farm-gate and wholesale prices (in case of domestically produced products).
- (d) No unreasonable (above historical trends) price difference exists between wholesale and retail prices. In other words, normal profit margin exists between wholesale and retail price (both in case of domestically produced and imported products).
- (e) The market power (in terms of share of particular player in total demand) is highly concentrated in the hands of few players. This may give rise to the possibility of anti-competitive behaviour (for example, price manipulation, control of supply in the market and creation of deliberate shortage in the market through hoarding of goods for super normal profit) through a well-coordinated oligopolistic behaviour, or at the minimum, some type of "gentlemen's agreement."
- (f) Normal market behaviour was distorted by recent government initiatives. For example, one of the two specific suppositions are that there are apprehension and insecurity prevailing in the market arising from anti-hoarding and anti-corruption drive, while the other is that the number of retailers has decreased due to demolition of illegal establishments/temporary bazaars. Another

reason being cited was that enforcement of quality control measures have constrained supply in the market.

- (g) Cost of doing business has increased; extortion may have decreased (leading to lowering of costs), but per unit cost of transportation has increased significantly due to hike in oil price and stringent compliance with tonnage regulations.
- (h) Inflationary expectations have lead to rising demand and further price escalation. In addition to global and regional inflationary trends, apprehensions about bad harvests during the current fiscal fall in Aman and Boro production (two floods and the cyclone only reinforced this) have fuelled inflationary expectations.
- (i) There were widespread hoarding of essential goods, at various levels, leading to supply disruptions.
- (j) There were attempts to sabotage the supply chain.
- (k) There were entry barriers for some of the agents along the value chain.

Various combinations of the aforesaid possible reasons were cited for the inflationary trends.

### **5.1.2 Objectives of the Study**

As the title of the study suggests, the broad objective of the study was to investigate the reasons behind the recent price escalation of essential commodities in Bangladesh, and come up with policy suggestions in this respect. There are several assumptions and articulations about the factors responsible for this, most of which are however, qualitative in nature, and rather difficult to be tested systematically and scientifically. The present study had attempted to explore the testable hypotheses, within the scope and constraints of this study. Some specific objectives are as follows:

- The study makes an attempt to examine the value chains of a selected set of essential commodities by tracking the various channels of product marketing and the agents involved; the study has attempted to apportion total consumers' expenditure on per unit of products among the various agents involved. This has enabled identifying which part of the chain has actually accrued greater share of the gross and net consumer spending, and whether this was reasonable or not.
- The study also provides an analysis of the National Board of Revenue (NBR) import data for essential commodities which helped to estimate the concentration of market share for imported items.

- Domestic and global production projections for near future were studied to get greater insights into future supply and price situation.
- The study also attempts to identify how the government could monitor the market (in terms of supply, demand and price) more effectively, and support market mechanisms more efficiently. The study provides some recommendations in this context.
- Yet another objective of the study was to explore the extent to which global factors contributed to domestic inflation in Bangladesh. The commodity market of India has historically played an important role in determining the supply and price levels for a number of essential products in Bangladesh. Price situation in both international market and the Indian market was studied to this effect.
- Finally, the study was expected to articulate a set of policy recommendations to address the issue of inflation, both in the short and medium terms. Some of these suggestions are general, while others are product specific, and these include institutional, fiscal and monetary aspects of dealing with inflation.

## **5.2 Analytical Framework of the Study**

This section deals with the methodological issues, such as identification and selection of daily essential products to be covered under the study, various implementation stages, analytical framework and limitations of the study.

### **5.2.1 Product Coverage**

Through a process of consultation with various stakeholders, a list of essential food items was identified for detailed investigation. These selected commodities were: rice, edible oil, wheat flour, pulses, onion, full cream milk powder, vegetables (potato, green chilli and brinjal), and egg. Bearing in mind that prices of a number of these products vary quite significantly based on quality (and their consumption group is distinguishable based on income level, e.g. rice, milk powder), the study deliberately concentrates on the cheaper version of the product quality which is basically consumed by the lower income groups in Bangladesh.

### **5.2.2 Various Stages of the Study**

If otherwise not mentioned, the analysis presented in this study corresponds to data available up to end of April 2007. Implementation of the present study followed four sequential phases.

*(i) Phase 1: Mobilisation and Pilot Survey (10-20 March 2007)*

Following conceptualisation of the analytical framework of the study, a pilot survey was conducted covering a selected set of shops and markets (including BDR sales centres) within the Dhaka Metropolitan Area to test out the analytical framework. The objectives of the pilot survey were to: (a) identify the detailed value chain for each of the products; (b) assess information needs at each nodal point of the value chain and identify appropriate sources for relevant information; and (c) formulate the framework of the checklist of queries for the subsequent full scale survey. The pilot survey was conducted using backward tracking method. The survey teams commenced its work by interviewing retailers and then went up the value chain (Retailer→Wholesaler→....→Producer/Importer). These agents were asked a number of questions with regard to respective buying and selling prices, costs involved, suppliers and the current market situation.

The pilot survey was conducted at various retail shops, retail and wholesale markets and Bangladesh Rifles (BDR) open sales centres within the Dhaka and Narayanganj Metropolitan Areas, and hence, agents beyond wholesalers could not be interviewed during this phase (see Annex 5.1 for the locations of pilot survey).

*(ii) Phase 2: Questionnaire/Checklist Preparation, Sample Area Identification and Field Survey (21 March - 10 April 2007)*

During this period, 15 investigators belonging to 5 survey teams of CPD visited 44 spots in 12 districts of the country. A total number of 227 randomly selected active market agents were interviewed, including 60 farmers/producers, 30 beparis, 23 farias, 22 aratdars, 6 importers, 2 paikers, 2 cold storage staff, 44 retailers and 22 consumers.

To conduct the full scale survey, each team consisting of 2-4 CPD staff, were mobilised to visit different parts of the country. At this stage, the CPD team made use of a checklist, developed at the pilot stage, which served as the survey benchmark (please see Annex 5.2 for the checklist used in this study). Bangladesh imports a large quantity of essential food items including rice, pulses, wheat, onion and (crude) edible oil. The proportion between domestic production and imports varies across products. In case of rice, the imports constitute about 10-15 per cent of domestic demand, whereas most of edible oil and milk powder is dependent on imports. Wide variations exist between products (i.e. product specific), and within productions (for domestic and import specific), with regard to the value chain. The study has made an attempt to investigate the value chains of both domestically produced and imported components of the selected essential items.

*(iii) Phase 3: Secondary Information Collection and Information Validation (15 March - 30 April 2007)*

This phase entailed collection, compilation and analysis of secondary information from various organisations (government/non-government/international) through face-to-face interviews, briefing sessions and web search. Indeed, this was an ongoing exercise throughout the study period, with varying degrees of intensity. The study team members visited following government agencies for generating the required information: Ministry of Commerce (MoC) including the Trading Corporation of Bangladesh (TCB), Bangladesh Bureau of Statistics (BBS), National Board of Revenue (NBR), Ministry of Food and Disaster Management, Bangladesh Rifles (BDR) and Bangladesh Agricultural University (BAU) in Mymensingh, and met officials of the Bangladesh Bank and a number of scheduled commercial banks (both government-owned and private). Along with domestic level data generated through field survey, information on related correlates with regard to global and regional supply and price situation was also collected and analysed.

*(iv) Phase 4: Data Analysis and Report Preparation (11 April - 3 May 2007)*

Analysis initiated in the third phase was wrapped up during this phase. Both quantitative as well as qualitative techniques were applied to analyse the value chain, and understand the distribution of consumers' spendings among various agents that were active in the value chain. A number of estimations and projections were also carried out based on the secondary information. Finally, a set of recommendations were formulated with regard to addressing the ongoing inflation, both from the short and medium term perspectives.

### **5.2.3 Selection of the Study Area**

CPD survey teams visited major production and marketing points for each of the 10 selected items. Because of time constraints, the study team had to identify a limited number of areas belonging to 12 districts of Bangladesh; the team also selected a number of wholesale, as well as some retail markets in Dhaka city. Major considerations in selecting target areas were:

- a) Major areas of production of particular items;
- b) Accessibility for all agents in the particular supply chain.

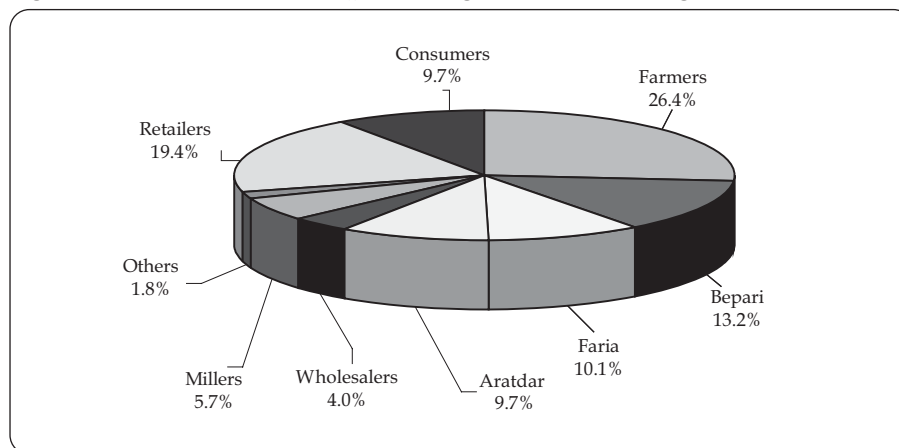
Map of locations selected for the full scale survey is presented in Annex 5.3.



### 5.2.4 Selection of Sample, Sampling Techniques and Collection of Data

To avoid confusion and definitional contradictions arising from use of various local terms for the same market agent in different regions of the country, a unifying definitional approach was developed for this study (details are presented in Annex 5.4). A total number of 227 agents were interviewed during the survey. These included 60 farmers/producers, 30 beparis, 23 farias, 22 aratdars, 9 wholesalers, 13 millers, 2 store keepers (cold) and paikers, 44 retailers and 22 consumers' which are depicted as percentage in Figure 5.1. Apart from these, a number of focus group discussions (FGDs) and a few one-to-one interviews with importers and members of corporate house were conducted. Visits to reputed agro-product cooperatives and sales centres (acting like big markets) were also undertaken. Briefing sessions were held with officials from financial institutes at Khatunganj, Chittagong.

**Figure 5.1: Distribution of Samples among Various Market Agents**



Source: CPD Field Survey, 2007.

Samples were selected randomly. Individual interviews were conducted with the market intermediaries to obtain information related to production marketing and other costs involved. FGDs and individual case studies were conducted to generate relevant information through focused questions.

### 5.2.5 Other Methodological Issues

- I. The methodology for this study was informed by the objectives that were set out. This required generation of both field level and secondary information. The study did not intend to carry out rigorous macroeconomic modelling of inflation; rather it has attempted micro level analyses to get insights into market behaviour of selected items.

Macro level information were analysed to answer some of the research questions. A major objective of the CPD field survey, however, was to identify the existing value chains for those items and examine the behaviour of agents in the value chain. The prevailing market environment in the face of government's anti-corruption, anti-hoarding and quality assurance drives, and other initiatives for strict compliance of rules and regulations were also examined, to the extent possible. The field survey methodology involved identification of the detailed value chain for each of the products, information need assessment at each nodal point and elicitation of required information deploying both upstream (forward) and downstream (backward) tracking of price formation behaviour. CPD researchers made use of the checklist as the survey instrument, which as mentioned earlier, was field-tested prior to the initiation of the main survey. FGD and individual case studies were also conducted to generate the required data and corroborate the information.

- II. A value chain is a string of agents or collaborating players who work together to satisfy market demands for specific products or services. Value systems integrate supply chain activities, from determination of consumers' needs through product/service development, operations and distribution, including (as appropriate) first, second and third-tier suppliers. Existing product specific value chains were identified by developing Flow Charts with all active market agents, starting from the importer/producer level to the final consumer level. Review of available literature with regard to product specific value chains was also undertaken. CPD researchers also arranged debriefing sessions with experts in the relevant fields to validate the field level information. Following this, distribution of consumers' spendings, among the various market agents was estimated from field level data.
- III. Data generated through various methods was summarised and analysed to seek answers to the main research questions. A number of statistical indicators, averaged over sample observations, were used in this study to analyse the data. For example, to get an estimate of the average Gross Marketing Margin (GMM) (= Sale Price - Purchase Price) for a particular agent of a specific product, an average of the all collected (and validated) sample values were taken. Similarly, agent and product specific NMM or Net Marketing Margin (= GMM - Marketing cost) were estimated. It is to be noted here that marketing cost includes transportation cost (including labour cost), market toll, loading and unloading, commission of aratdar, salary and wages of employees, packaging cost, storage cost, loss due to wastage cost, grading cost, tips and donation, and tax and personal

expenses, as applicable. As none of these estimates of margins or profits had considered investment, possible return over working capital (both in terms of gross returns over working capital (GRWC) and net returns over working capital or NRWC) were briefly considered to offer an idea about the return that the agents acquired from their investments. GRWC and NRWC were estimated as Gross (Net) Return over Working Capital = {Gross (Net) Margin x 100/ (Purchase Price + Marketing Cost)}.

IV. The study also made an attempt to estimate the extent of concentration at import level (share of top few importers in total import) in order to have an idea about possible market power. Total demand for a number of essential commodities was estimated based on Household Income and Expenditure Survey (HIES) 2005 database. Various projections and trends about future domestic, regional and international production and price were also compiled and examined. Besides, various government documents (e.g. tariff schedule, Statutory Regulatory Order (SRO) notification, policy documents, etc., and published news in the media were reviewed.

#### **5.2.6 Critical Issues and Limitations of the Study**

In spite of the maximum efforts put in by the research team to conduct their analyses based on empirical evidence and for the study to be analytically rigorous, the study suffers from a number of limitations arising from factors beyond control. For example, the data on prices was influenced by seasonal patterns of agricultural marketing. Information from big corporate houses could not be collected due to non-responsiveness of most of the market agents. Incidences of concealment of information and motivated responses were not uncommon. Major analytical challenge was to establish the inter-agent value flows, their margins and magnitudes and this proved to be not an easy task.

Few critical issues related to this study are mentioned below:

- In conducting the study, surveyors had to depend on information provided by the respondents. There was a tendency of each agent in the supply chain to show his buying price higher and selling price or profit lower, than what was actually the case. The gross and net margins could thus be higher or lower than the actual. However, validity of such information was cross-checked from various sources, and in some cases judgement had to be applied to correct the data.
- There was a tendency of all agents (except producers) to conceal information, considering this to be a business secret.

- In estimating production cost of farmers, land and family labour costs were not considered because of the complexity and unavailability of the required information.
- While calculating marketing cost, it was often difficult to obtain item specific information.
- It was complicated to acquire aratdar's fixed cost and initial investment, and only his running cost could be reliably estimated.
- Accurate information on operating cost of cold storage was not possible to generate.
- Operating costs of corporate houses were almost impossible to obtain and they were the least cooperative agents, in most cases.
- Retailers' transport costs were estimated by taking information with regard to total transportation cost of all types of products bought at a time by the particular retail shop, and apportioning this for the selected item. This required some approximation in the calculation of transportation cost, which could have resulted in under or over estimation, though perhaps negligible in proportion.
- Data at the importers' level (i.e. quotation/booking price for import order received from exporters) was not possible to verify, because information from their counterparts (at the exporters' level) were not available. Also preferential treatment received by regular importers from their business partners could not be traced.

As was mentioned above, modelling exercise, time series macroeconometrics or estimation of price and demand elasticities of essential commodities were not undertaken as part of this study. This could be dubbed as a weakness of the current study. However, they merit separate investigation in their own right. Given the conceptual framework and scope, the major limitation of the study from analytical perspective was the use of cross-sectional data from the field. The value chain analysis could indeed have been more insightful, if the same kind of exercise could be performed based on a time series data. At the same time, trend and interrelationship analyses of price, demand and supply situation, based on time series data, are pre-requisites for undertaking investigation of some of the interesting hypotheses postulated earlier. Unfortunately, no reliable secondary source for the required time series information was available. Governmental agencies do not have this type of information. As a result, changes in trends of price, demand and supply situation could not be analysed which has certainly limited the scope of the present study.

**AN ANALYSIS OF THE  
SUPPLY CHAIN OF  
SELECTED ESSENTIAL ITEMS  
AND DISTRIBUTION  
OF MARGINS**

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Chapter 6 deals with distribution of the retail value among the various participants in the supply chain of selected essential items. Product specific value chains have been identified by developing Flow Charts for each of the identified items. This includes all the active market agents that are involved at various stages of the supply chain beginning from the importer/producer level, and ending with the consumer level. An important component in this value chain analysis is the production cost. Added to this is the producer's margin which determines the farm-gate price. The difference between the farm-gate price and the retail price goes to various intermediaries. Some of the intermediaries are involved with production related activities (milling, in case of rice and wheat; packaging, in case of soybean); others are related with storage (cold storage owners, in case of potato) and distribution (trustees, aratdars, farias, wholesalers and retailers). An attempt has been made to locate how consumers' buying price was actually shared by and distributed among, the various market agents, in terms of gross margins accrued to each of these agents.<sup>1</sup> Return on working capital was also estimated for some of the agents in order to get an idea about its rate, and to see if such returns were unnaturally high.

### **6.1 Rice<sup>2</sup>**

Existence of at least eight different marketing chains was identified in the course of the field survey with respect to production and marketing of rice. The longest identified chain included seven nodal points where a separate and distinct agent operated. Flow Chart 6.1 clearly brings out the shares of the various agents in the supply chain. As can be seen from the Chart, in

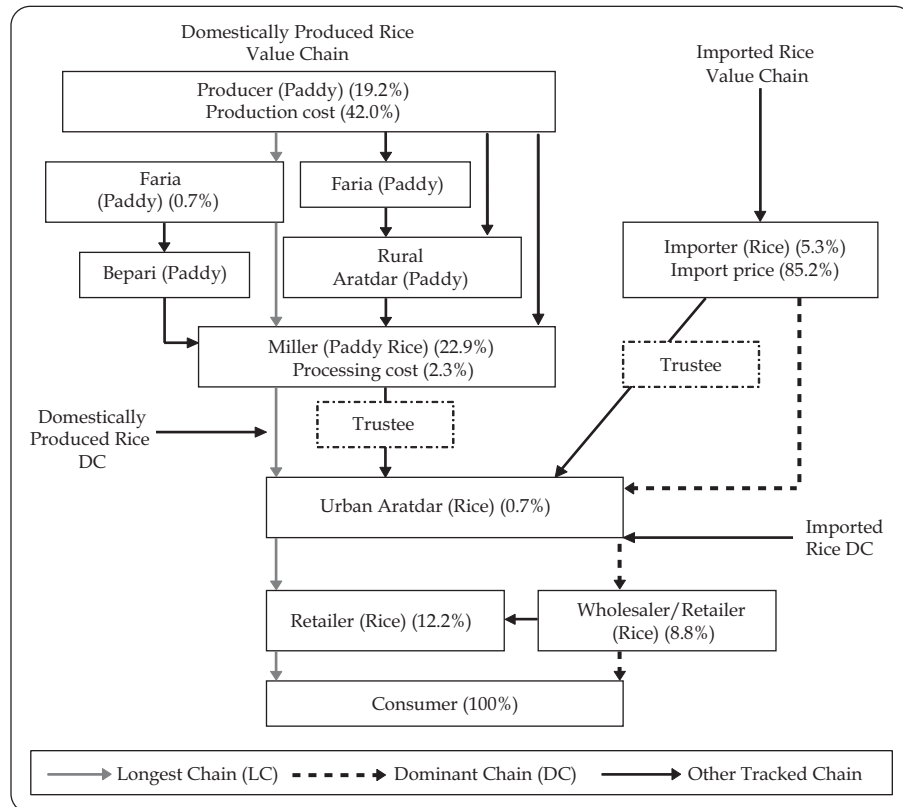
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<sup>1</sup>A value chain is a string of agents or collaborating players, who work together to satisfy market demands for specific products or services. Detailed analyses of these value chains are presented in the full report.

<sup>2</sup>Detailed analysis of the value chain for rice is presented in Annex 6.1.

case of domestic production, the difference between farm-gate price (which included a 20 per cent margin for farmers) and consumers' price at retail level was about 40 per cent of the retail value. Considering that millers' processing cost was only about 2.3 per cent of the retail value, the margin accrued to the miller appears to be quite significant (23 per cent). As is revealed from the Flow Chart, it was the millers, whose margin was the highest in case of domestic production. Wholesaler/retailer margin varied between 8 and 12 per cent.

**Flow Chart 6.1: Value Chain for Rice with Distribution of Consumers' Expenditure among the Agents**

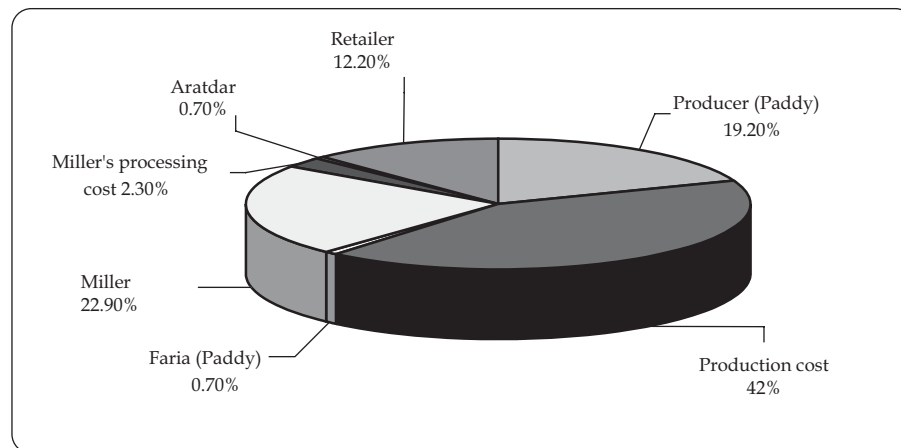


Source: CPD Field Survey, 2007.

CPD survey team found that the millers are the most powerful players in the entire supply chain wielding a significant control over the market price. Millers claimed that they determine the buying and selling price, based on the market demand and supply situation (through their own market intelligence), taking cognisance of the import, import price and domestic production costs. It was found in the course of the survey that millers

tended to store rice (various types) procured from suppliers, during the harvesting season. Millers processed the paddy according to market demand; the rest was stored from where the rice was milled gradually as per market signal. Interestingly, existence of another invisible but influential agent between the millers and urban aratdar, known as 'trustee,' was confirmed by various agents. It appeared that this trustee (some time called party), in collaboration with millers/importers, was largely responsible for retail price determination. The trustee makes profit capitalising on his networking ability, market information, local influence and market reputation. Market investigation, however, showed that this function cannot be readily substituted in the current context, although its elimination could probably make the market more competitive. The difference between import price and retail price was found to be about 15 per cent, with the margin going to the importers, trustee, wholesalers and retailers.

**Figure 6.1: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Domestically Produced Rice**

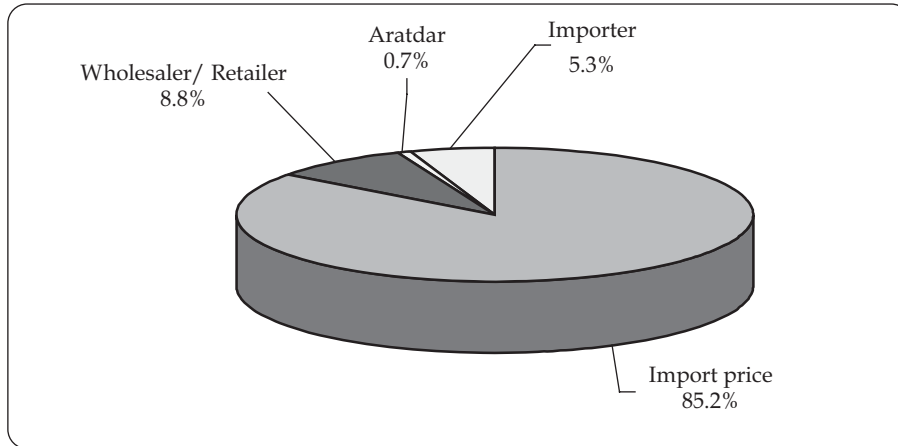


Source: CPD Field Survey, 2007.

Figure 6.1 shows that in case of domestically produced rice, apart from the share attributed to production costs (42 per cent), the largest proportion of the consumers' expenditure accrued to the millers (22.9 per cent), followed by retailers (12.2 per cent). In case of imported rice, depicted in Figure 6.2, import price accounts for the major share of the consumers' expenditure (85.2 per cent), followed by wholesaler/retailers (8.8 per cent).



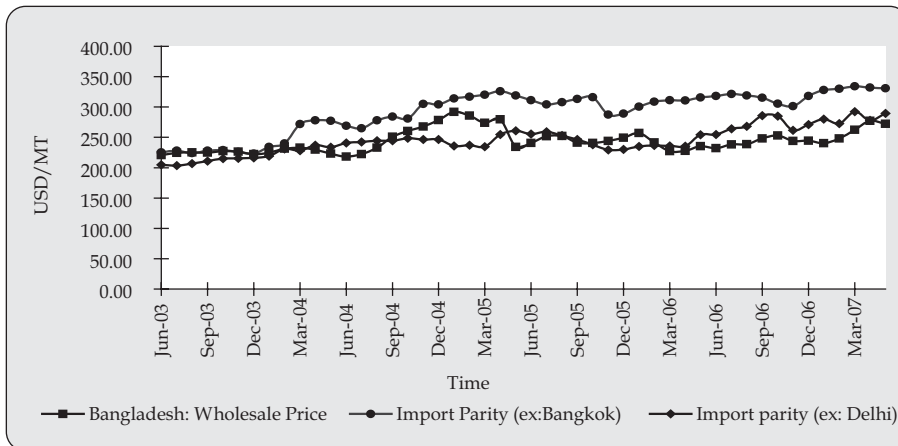
**Figure 6.2: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Imported Rice**



Source: CPD Field Survey, 2007.

Opinions vary quite significantly with regard to the possible impact of import parity price on the price of domestically produced item. Although the study does not look at the issue in detail, some insights can be drawn from field level data. It is to be noted that in case of domestically produced rice, at least 87.1 per cent of the total consumer spending was absorbed before rice enters in the urban wholesale and retail markets, while the corresponding figure for imported rice was 90.5 per cent. This finding is quite revealing, as in general price of coarse rice in Bangladesh was generally higher than the import parity price of India and Thailand.

**Figure 6.3: Comparison of Import Parity Price versus Bangladesh Wholesale Price**



Source: CPD-IRBD database.

However, in FY2007, rice price in Bangladesh was lower than that of Thailand and India which supports our field observation (Figure 6.3). This lower domestic price may have contributed to the fact that private sector import was lower in Bangladesh compared to earlier years.<sup>3</sup> It is also to be mentioned that most of the big rice millers act as importers as well (or at least millers have close networks with the importers, which is quite natural given the market structure), and it has been found from the field that rice millers have significant control over fixing the price of domestically produced paddy and processed rice (Box 6.1). It may be the case that the millers and the invisible market agents (trustee), have a role to play in this regard. This issue is important and needs further probe investigation.

Estimates of rate of return over working capital appear to show that rice market is rather competitive, although millers often tend to take advantage of the market demand-supply situation. However, they have to take cognisance of the price of imported rice. A meticulous monitoring of the demand-supply situation and ensuring speedy imports in view of this, appears to be the required strategy here. Encouraging more competition at the milling stage (by providing incentives for setting up rice mills) could be helpful in stabilising the prices (see Annex 6.1 for further details).

**Box 6.1: Rice Miller in Naogaon and the Market Intelligence**

Naogaon is a significant rice producing area in Bangladesh. In Naogaon, the biggest rice miller has some control over the price of rice. As Naogaon is one of the highest rice producing regions of North Bengal, it has significant impact on the rice price all over the country. Apart from big millers who act as importers as well, large scale trading company, agents of various other importers and individual importers are also present here who mainly import rice from India.

In one mill, which is located just outside the Naogaon's town, there is a minimum production capacity of 6,000 mounds of rice everyday. This rice mill is fully automated and it has 30 acres of land (according to the estimation of the surveyors). In this mill, paddy is converted into rice and puffed rice and packed under a brand name, which is later distributed throughout Bangladesh. Usually paddy in mills, have a by-product Bran which is sold as feed products, and on an average, the proportion of rice to Bran is 68:32. Rice millers have their local offices in Par-Naogaon, where the paper works for transactions are completed.

*(Box 6.1 contd.)*

<sup>3</sup>For a fuller discussion on private and public sector import situations, see Chapter 7.

(Box 6.1 contd.)

According to the interviews conducted by the survey team, price is usually determined at this level of the supply chain. They have a team of market intelligence which actually monitors production situation and price of rice/paddy all over Bangladesh and India, and informs millers through mobile phones. After performing a cost benefit analysis, rice millers determine the price and circulate the information to their commissioned agents all over the country.

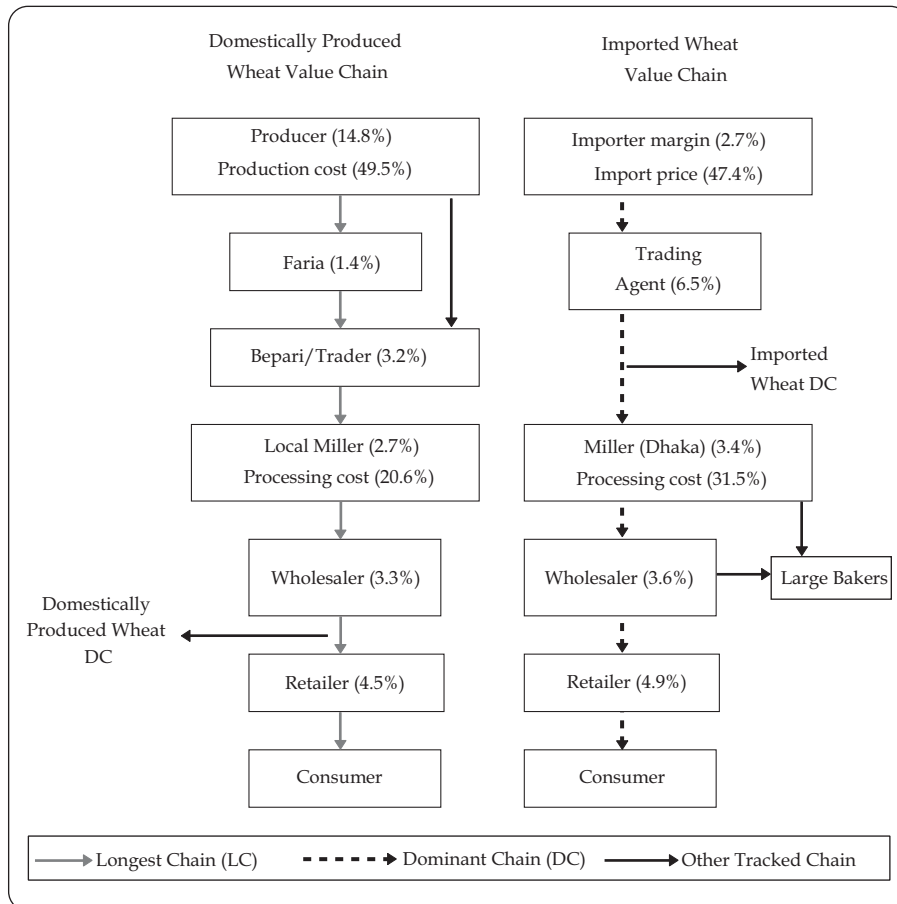
One interesting agent between the rice miller and the aratdar in the urban area is *trustee*, who are very difficult to trace; other market agents were reluctant to provide detailed information about this agent. Trustee works as a guarantor between the miller/importer and aratdar (wholesaler), without any collateral. It is his market reputation and power which work as the guarantee, and he usually retains a commission on the amount of transacted rice. Usually, rice millers have a strong network among themselves, other importers and trustees which work extensively all over the country, in their favour. As there is no public and functional mechanism in place to provide reliable, easily accessible and timely information as regards both domestic and international demand, production and price situation, millers and importers along with their own business intelligence utilise the information provided by trustees about the current market condition with a view to taking decision with regard to price. This issue of information gap will be further discussed in the subsequent chapters.

## 6.2 Wheat Flour

Four different marketing chains and eight nodal points in these chains could be identified for domestically produced and imported wheat. The longest chain consists of five nodal points. As is evidenced by the Flow Chart 6.2, the difference between farm-gate price (this includes 35 per cent production cost and a 15 per cent margin for farmers) and the retail level price was equivalent to about 40 per cent of the retail value. As distinct from rice, processing cost of miller in this case was relatively high, about 21 per cent of retail value, which includes high transportation cost as well (Box 6.2 for more details). In case of imports, margins of importers and other agents were not found to be significantly high. The rate of return on working capital also did not appear to be abnormally high. Here also, as in case of rice, demand-supply management through careful monitoring of imports appears to be the best short term strategy. Policy initiatives to reduce

processing cost at the milling stage were also likely to have positive impact on prices.

**Flow Chart 6.2: Value Chain for Wheat with Distribution of Consumers' Expenditure among the Agents**

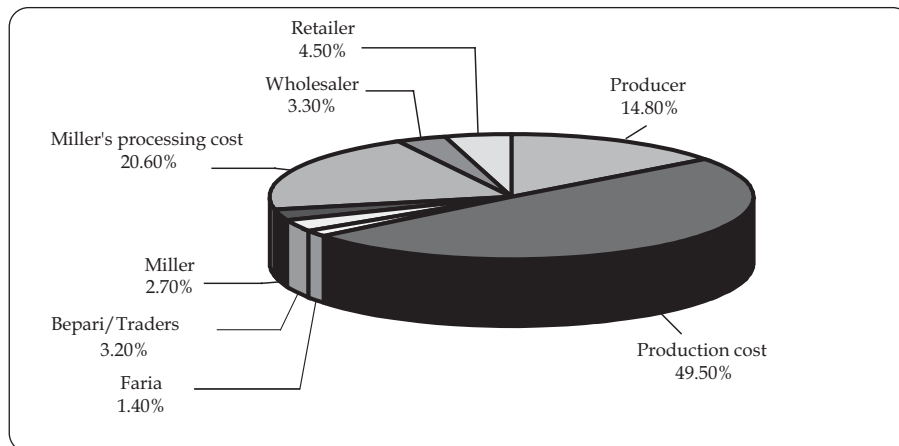


Source: CPD Field Survey, 2007.

Figure 6.4 shows that major portions of consumers' expenditure account for production (49.50 per cent) and processing costs (20.6 per cent). Apart from producers, it was retailers and traders who received the larger shares of consumers' expenditure.

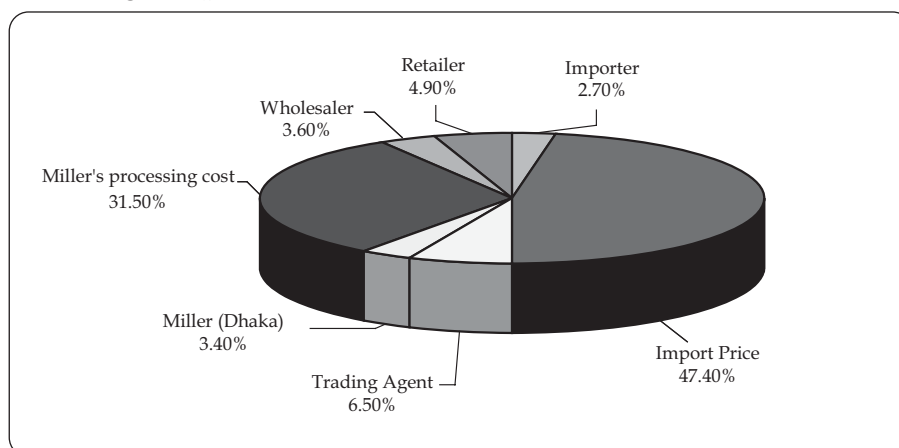
Figure 6.5 shows that in case of imported wheat, the largest portion of consumers' expenditure goes to the traders (6.50 per cent) and retailers (4.90 per cent); import (buying) price (47.40 per cent) and processing cost (31.50 per cent) accounted for about 79 per cent of retail value (see Annex 6.2 for further details).

**Figure 6.4: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Domestically Produced Locally**



Source: CPD Field Survey, 2007.

**Figure 6.5: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Imported Wheat**



Source: CPD Field Survey, 2007.

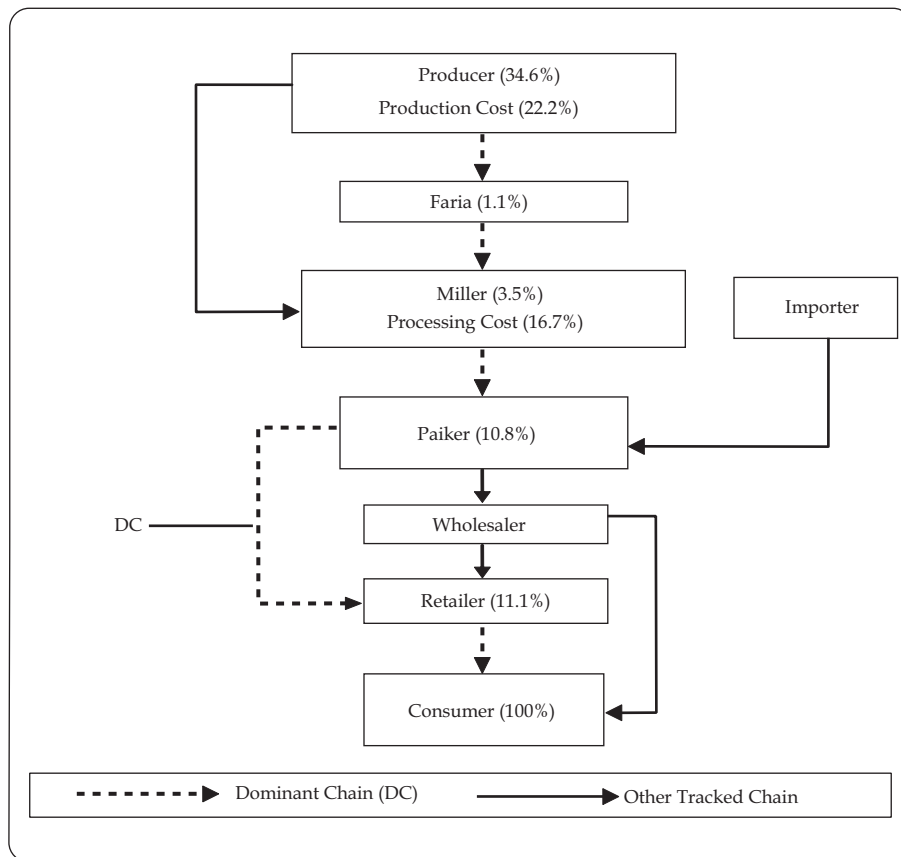
**Box 6.2: Jamuna Bridge and Wheat Transportation from North Bengal**

The bepari/flour millers claimed that the increase in wheat price was partly due to the increase in transportation cost. They could previously load up to 20 tonnes per truck while transporting wheat to Dhaka via the Jamuna Bridge, whereas at present they are allowed to carry only 10-12 tonnes. Nevertheless, the cost of extortion (previously known as "road cost") no longer existed, thanks to strict enforcement of law, leading to lowering of transportation cost. This, however, was later made flexible. Hike in oil price (April 2007) has also perhaps contributed to a rise in transport costs.

### 6.3 Lentil<sup>4</sup>

During the survey, four different marketing chains involving six nodal points were identified for both domestically produced and imported lentil. Production/import cost was equivalent to about 22 per cent of the retail value. Producer's margin was found to be 35 per cent of retail value. Thus, the difference between the farm-gate price and retail price level was found to be 43 per cent. The margin taken pocketed by retailers and paikers was estimated to be about 22 per cent of the retail price (Flow Chart 6.3). It was

**Flow Chart 6.3: Value Chain for Lentil with Distribution of Consumers' Expenditure among the Agents**



**Note:** Only dotted chain has been tracked by survey team.

**Source:** CPD Field Survey, 2007.

revealed in the course of the CPD survey that millers and paikers, particularly the paikers in Dhaka (Rahmatganj, Moulvibazaar) were the

<sup>4</sup> Detailed analysis of lentil value chain is given in Annex 6.3.

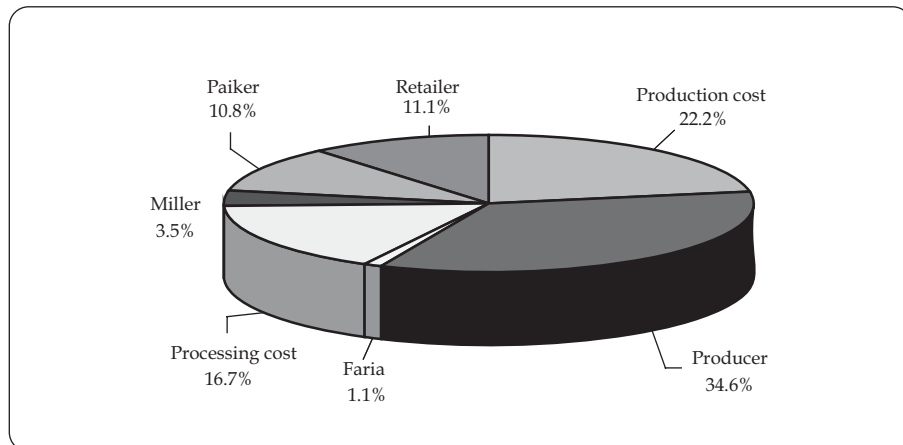
most influential players in fixing the market price of lentil (Box 6.3). It appeared that these two groups had a good understanding between them. Influencing import, based on market forecasts appeared to be a good way to keep prices of lentils under control. The other way was to reduce the role of the intermediaries between farmers and retailers, by setting up farmers' cooperatives and Bangladesh Rifles (BDR) types of outlets.

**Box 6.3: Miller in Lentil Supply Chain: Price Determiner?**

Bismillah Flour and Lentil Mill, both situated at Putia in Rajshahi, are the biggest lentil millers of North Bengal region. They are not only millers, but also importers of the whole lentil. They buy whole lentil from across Bangladesh, alongside importing from Australia and Turkey. In this mill, whole lentil is converted to finished lentil, the conversion ratio is 40:30. They supply the finished lentil to various districts in Bangladesh and by using cost benefit analysis, they determine the price of whole lentil in the local market. It was the millers, who had a significant say on the price of lentil.

Figure 6.6 highlights that major portions of consumers' expenditure accrued to production cost (22.2 per cent) and processing costs (16.7 per cent). Apart from producers, wholesaler/retailers and paikers received significant shares of consumers' expenditure (see Annex 6.3 for further details).

**Figure 6.6: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Lentil**



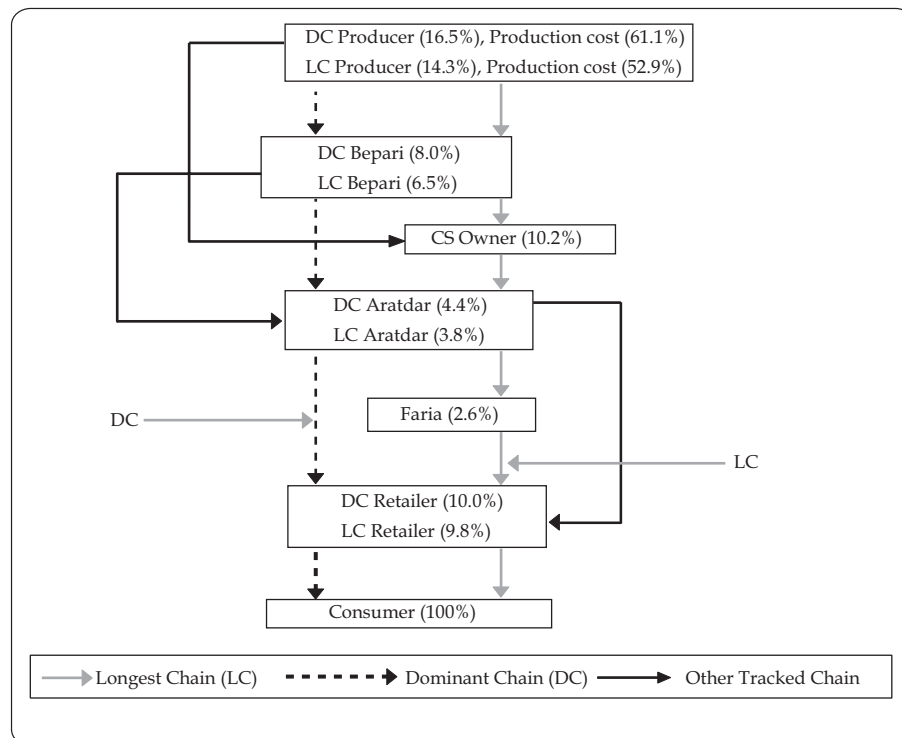
Source: CPD Field Survey, 2007.



### 6.4 Potato<sup>5</sup>

The survey team identified six major marketing chains and six market intermediaries that were involved in the supply chain for potato. The longest chain involved six nodal points, whereas the dominant chain involved five agents. As Flow Chart 6.4 shows, in case of both the dominant and longest chains, production cost constituted the major component of the consumers' expenditure (between 53 per cent and 62 per cent of the retail value). The rest remaining 40-50 per cent accrue to the various intermediaries, including paikers and retailers, whose rate of return on working capital was found to vary between 12-14 per cent. Cold storage owners appear to be important players here. About a tenth of the retail value is accrued to them. Reducing cost of operating the cold storages (electricity charges) and eliminating some of the intermediaries could help reduce the price (Box 6.4 for more details).

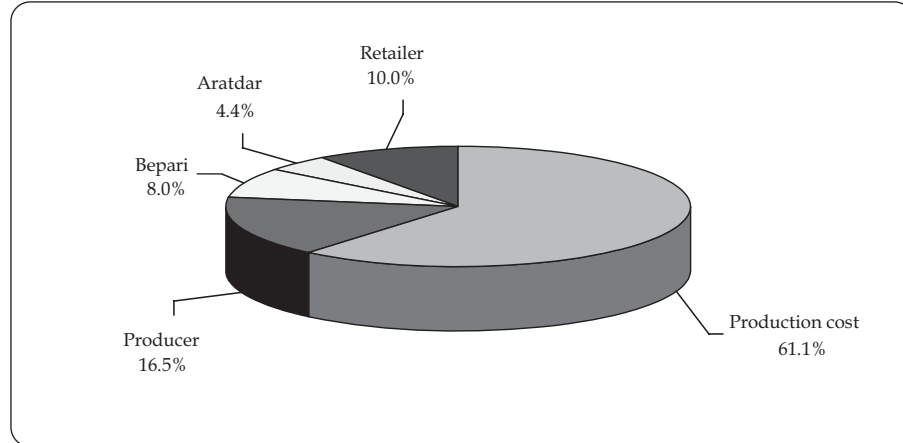
**Flow Chart 6.4: Value Chain for Potato with Distribution of Consumers' Expenditure among the Agents**



Source: CPD Field Survey, 2007.

<sup>5</sup> In Annex 6.4, value chain for potato has been discussed in details.

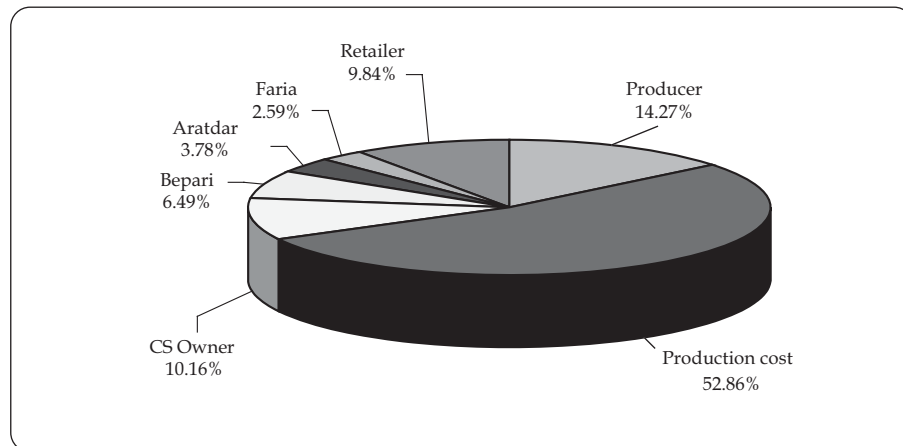
**Figure 6.7: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Potato (Dominant Chain)**



Source: CPD Field Survey, 2007.

Figure 6.7 shows that apart from the portion attributed to production costs, the largest share is accrued to producers and retailers followed by beparis.

**Figure 6.8: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Potato (Longest Chain)**



Source: CPD Field Survey, 2007.

In case of the longest chain, about 10 per cent of the total consumers' expenditure is accrued to cold storage (Figure 6.8). Other than production cost, producers and retailers obtain the highest margin (see Annex 6.4 for further details).

**Box 6.4: Modernisation of Cold Storage and Review of the Pricing Policy**

Potato farmers usually sell a portion of their produce at the time of harvesting; major portion of the produce is stored at the cold storages for later sales. Farmers can store their potato for about nine months; the usual practice is to sell when there is a higher price at the market or there is need to meet family expenses. For 80 kg of potato, Tk. 150 (Tk. 69.97 per mound) is charged at the cold storages, irrespective of the duration. A lower charge is offered only when there is significant vacant space left in the storage, as operating cost remains the same. Payment is made while getting the product out of the storage.

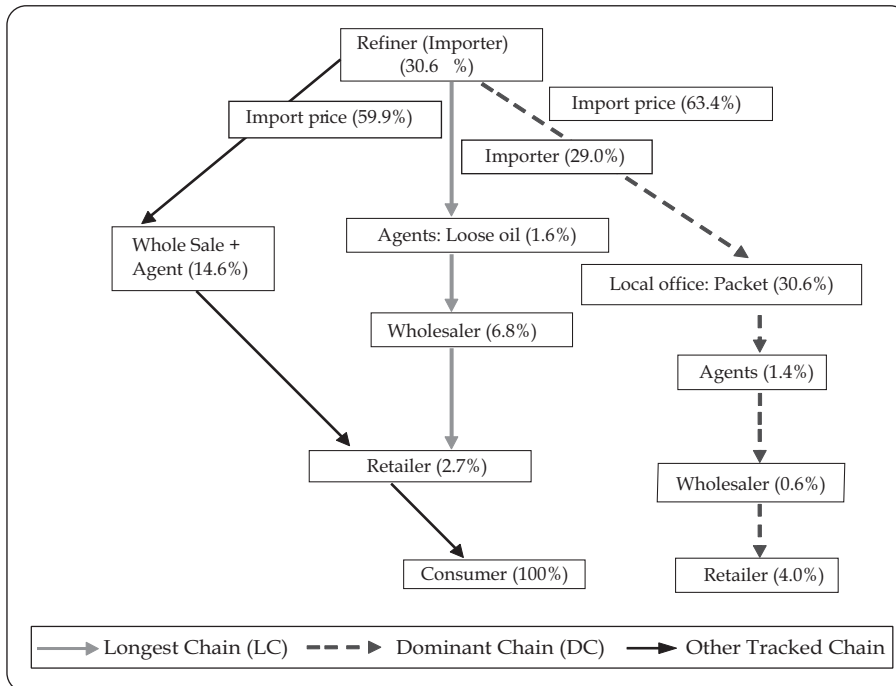
Cold storage authority, depending on demand, offers loan to the farmers at the time they load their produces to the storage, if required. It is reported that the amount of loan offered to a farmer is approximately 40 per cent to 60 per cent of the market value of his stored potato; a 13 per cent interest is applied to the loan. Hence the farmers usually take this loan only in the time of extreme hardship; in 2007, they received comparatively better price for their potato. If a farmer does not claim his potato at the end of the ninth month (the cold storage authority announces this date at the beginning of the season), the storage owner has the authority to sell the product in the open market. This happens only in cases where the farmer has taken loan, but the amount to be repaid is higher than the market value of the stored potato at the closing date, due to decrease in market price.

Cold storages perform important economic function. However, it is also evident from the study that cold storages add significant extra cost to the supply chain of potato. Compared to the scale of operation, cold storages have the minimum operating cost involved among the different actors in the product chain. Since it does not hold the ownership of the product at any phase, no purchasing cost is involved. However, these cold storages are the second largest share holder in total gross profit margin of the product. Approximately 22 per cent of the total margin added to the product cost goes to the cold storages. Cold storages add around Tk. 2.2 per kg to the ultimate cost of potato for the consumers. Considering the significant role that cold storage can play not only in the supply chain of potato, but also for other perishable agro-products, increasing the cost effectiveness by using modern, improved and health hazardless technology which would allow the diversified use of storage—could prove to be highly beneficial for owners, as well as farmers. Apart from reviewing the pricing policy practiced in the storage and providing loans to farmers, the government could provide appropriate policy support to the owners to modernise their facilities, in order to help reduce the cost and price of potato.

### 6.5 Edible Oil<sup>6</sup>

Supply of edible oil (both soybean and palm oil) in Bangladesh is entirely dependent on imports. The survey identified three major marketing chains consisting roughly of five nodal points which were involved in case of both packed and loose soybean oil.

**Flow Chart 6.5: Value Chain for Edible Oil (Soybean) with Distribution of Consumers' Expenditure among the Agents**



Source: CPD Field Survey, 2007.

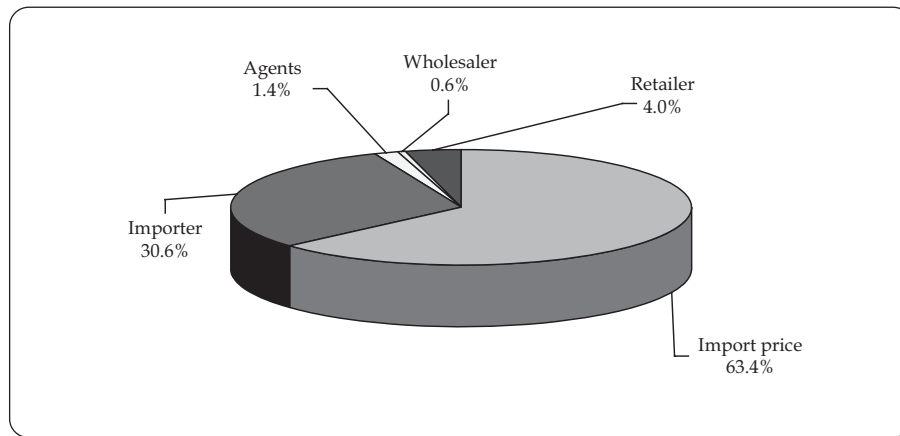
If import price (about 59-63 per cent of the retail value) is excluded, the rest (about 37-40 per cent) is accrued to importers, wholesalers and retailers (Flow Chart 6.5). Anecdotal information suggests collusive behaviour and syndication by the limited number of importers, but this could not be reliably established. However, creation of artificial scarcity and thereby influencing the price were widely reported during the survey, particularly in view of the very limited number of players active in the import market. An analysis of the National Board of Revenue (NBR) data clearly points out the controlling sway over the import market by a few importers. Another issue that emerged from the CPD findings was the mandatory requirement of radioactivity tests by

<sup>6</sup> Detailed analysis has been presented in Appendix 6.5.

only one agency. This was a rather lengthy process that added to the costs incurred by the oil importers, which in the end gets reflected in the retail price (Box 6.5 for more detail). This needs to be looked at with a view to reducing the time involved in the business and operational costs.

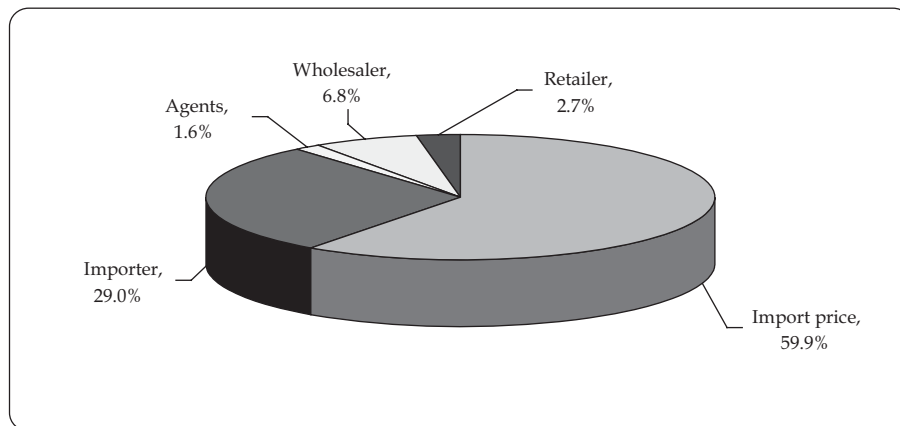
Edible oil, which has been categorised mainly as soybean and palm oil, is entirely imported. The total number of agents is seven, according to the findings of the survey. The value chain analysis considered three marketing chains with six agents.

**Figure 6.9: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Imported Packed Soybean Oil**



Source: CPD Field Survey, 2007.

**Figure 6.10: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Imported Loose Soybean Oil**



Source: CPD Field Survey, 2007.

In case of soybean oil, the importer takes a considerably large portion (almost 31 per cent) of the total consumers' expenditure (Figure 6.9). However, this share reflects fixed and variable costs of the importers. After importers, significant portion of the consumers' expenditure is accrued to retailers.

In case of the imported loose oil, the largest portion goes to importers, followed by the wholesalers. Wholesalers and retailers capture almost 10 per cent of the total expenditure of the consumer (Figure 6.10). In case of the Gross Return over Working Capital (GRWC) and the Net Return over Working Capital (NRWC), the largest portion is accrued to importers, followed by wholesalers (see Annex 6.5 for further details).

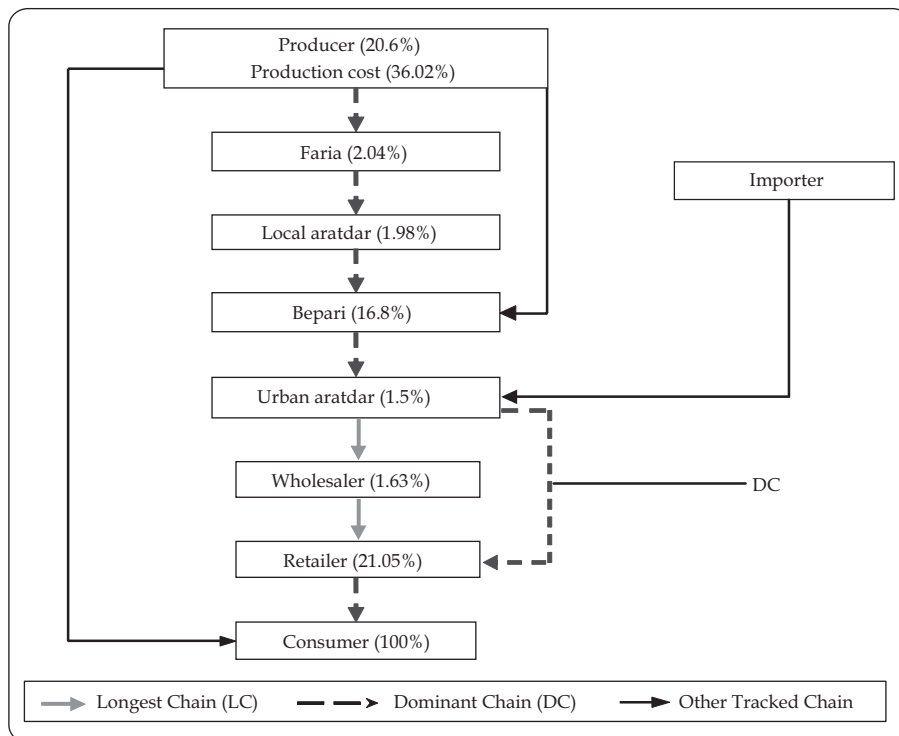
**Box 6.5: Edible Oil: The International Price Scenario Determines the Domestic Price**

For soybean and palm oil, local demand is met by import. Importers mainly import soybean in Crude Degummed Soybean Oil (CDSBO) and after refining it locally, they supply it in both loose and packet forms. As the source of local supply is entirely dependent on imports, the international price of oil plays a major role in determining the price of edible oil in Bangladesh. In recent times, due to rising demand in energy sector and the failure of the oil producing economies to increase their supply, world price of oil has significantly increased. According to a recent estimate, the average international price of crude palm oil during January to March of 2007 was USD 609, which had an average figure of USD 478 during the last year (January to December, 2006). On the other hand, price of soybean oil was USD 710 on average for January to March of 2007, while it was USD 599 during January to December of 2006 (Malaysian Palm Oil Board, Oil World). This has resulted in an increase in the local price of oil. In Bangladesh, the market is highly concentrated among limited number of importers. Anecdotal information indicates some forms of "gentlemen's agreement" as regards pricing. However, apart from the international price hike, the business community pointed out that introduction of new regulations in the international oil transport rules has resulted in negative implications in terms of gaining from economies of scale, raising per unit vessel cost. They added that after importation, there are some mandatory oil radioactivity tests to ensure public health safety, which is done by only one private company. They asked for allowing other agencies to carry out this test to expedite the process and reduce the time, which in turn would reduce the cost of the importers.

### 6.6 Onion<sup>7</sup>

The survey team identified four major marketing channels and seven marketing intermediaries in the supply chain of onion. Flow Chart 6.6 shows that like most other commodities, major component of the retail price was attributable to the production cost (36 per cent), and producers receive a margin of 21 per cent on an average. About 45 per cent of the retail value went to intermediaries of various sorts. However, the shares of beparis (17 per cent) and retailers (22 per cent) were found to be relatively high in this market. The return on working capital was found to be high at retail level (18 per cent). During the interviews, several retailers claimed that they have to add a risk premium due to the perishable nature of onion. However, onion was found to be a readily saleable item and the average storage time appeared to be rather short. More retail outlets (similar to those operated by the BDR) selling at lower price was likely to have favourable impact on the overall market price.

**Flow Chart 6.6: Value Chain for Onion with Distribution of Consumers' Expenditure among the Agents**

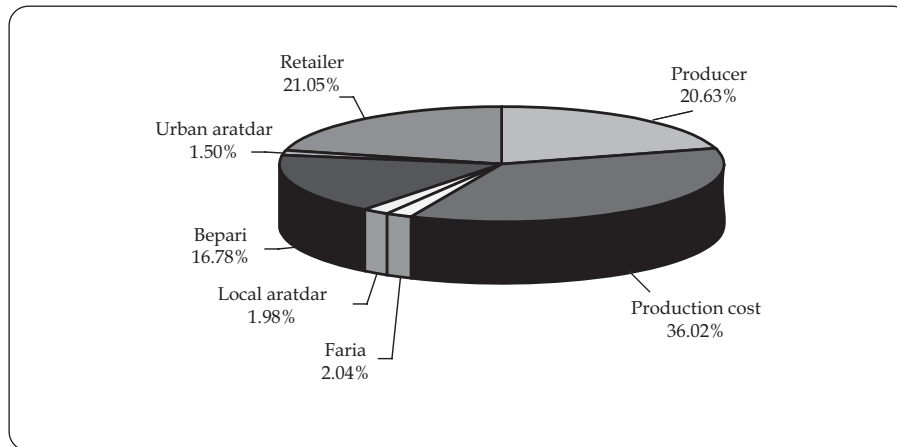


Source: CPD Field Survey, 2007.

<sup>7</sup> Please see Appendix 6.6 for details.



**Figure 6.11: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Onion**



Source: CPD Field Survey, 2007.

After the production cost, the highest portion of the consumers' expenditure is accrued to retailers (21 per cent), which is significantly higher than the other agents (Figure 6.11) (see Annex 6.6 for further details).

### 6.7 Full Cream Milk Powder

Full cream milk powder is an item which is predominantly dependent on imports. The survey team identified three different value chains for this product. However, no comprehensive analysis could be undertaken since major powder milk companies did not cooperate with the survey team, although the purpose and importance of the study was explained to some of these major players (see Annex 6.7 for further details).

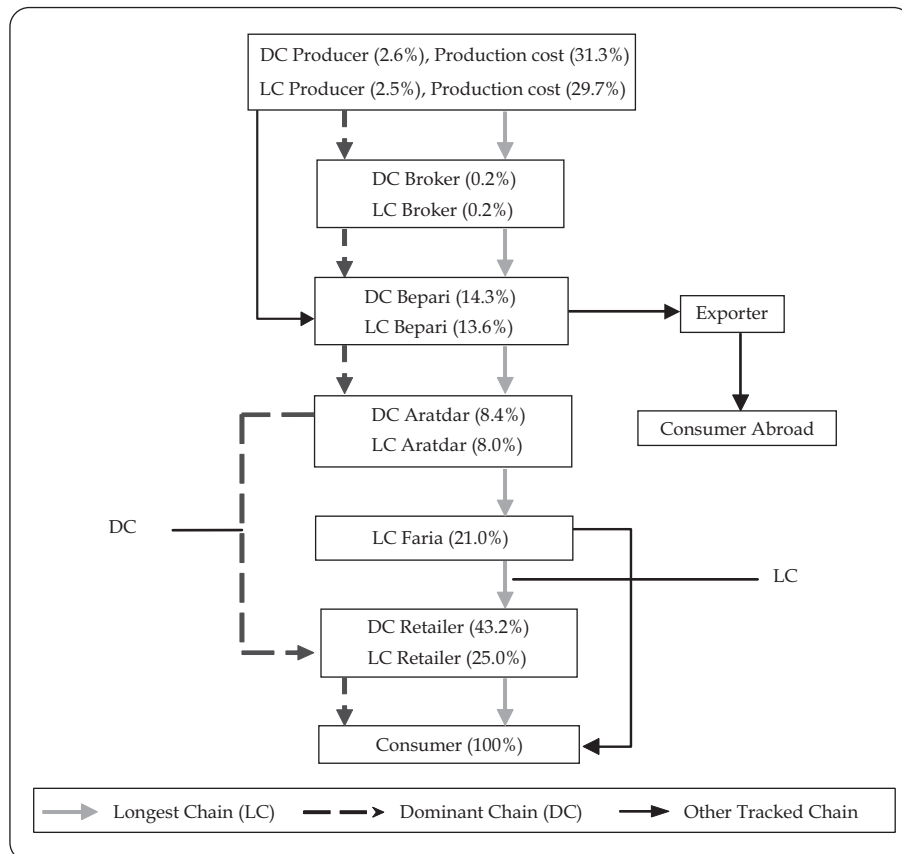
### 6.8 Vegetables<sup>8</sup>

Brinjal and green chilli have been put together under the heading 'vegetables' because of the similarity of the product types and that of the supply chains. The survey team identified six different marketing chains for both brinjal and green chilli. Major components of consumers' expenditure for these vegetables are attributable to the production costs, which ranged between 41-43 per cent of the retail value. Market intermediaries at various stages take about 60 per cent equivalent value of the retail price. Of these, retailers appeared to receive the highest share (24-28 per cent of the retail price) (Flow Chart 6.7 and 6.8). However, two important aspects need to be

<sup>8</sup> Details of brinjal and green chilli have been presented in Appendix 6.7 and Appendix 6.8, separately.

considered before drawing any conclusion about retailers' margin. Firstly, vegetables are highly perishable items and retailers add a premium to the price to offset the attendant risks. Secondly, consumers tend to pick and choose better quality vegetables first, resulting in low quality residual items which need to be sold at lower prices; some part of the vegetables could also remain unsold at the end of the day. Retailers tend to add a premium to compensate for these losses. The return on working capital of the retailers was found to be about 20-22 per cent. It was the aratdar and beparis, who were found to be critical players in the markets for vegetables. In the case of green chilli, bepari's margin was between 17 and 18 per cent of the retail value and their return on working capital was found to be about 20-22 per cent. The aratdar's margin was about 4 per cent of the retail value but the return on working capital was exceptionally high (220 per cent for brinjal and 340 per cent for green chilli). The CPD survey team found the existence

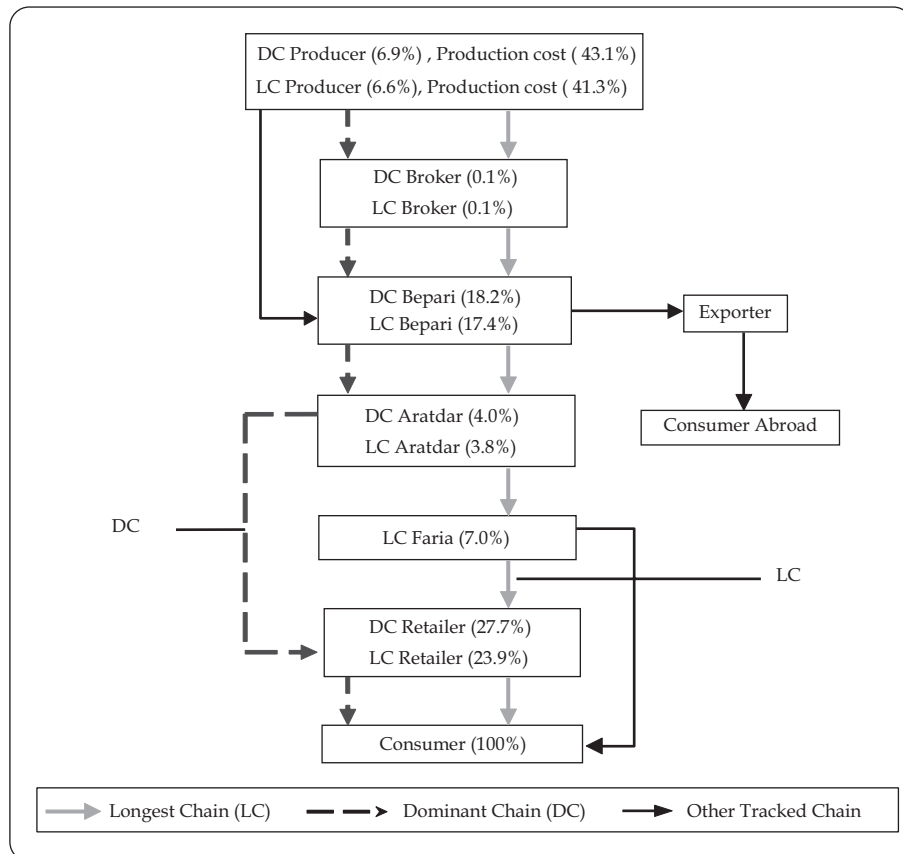
**Flow Chart 6.7: Value Chain for Brinjal with Distribution of Consumers' Expenditure among the Agents**



Source: CPD Field Survey, 2007.

of some kind of "gentleman's agreement" at the bepari level, who sets the price for the farmers (Box 6.6). The Flow Charts also substantiate the commonly held perception that producers receive only an insignificant amount of the total margin. As the Flow Chart 6.8 for green chilli shows, producer's margin was equivalent to only 6-7 per cent of the retail value, for green chilli. The BDR type of outlets, that reduce the number of agents appear to offer the best short term remedy. From the medium term, farmer's cooperatives appear to be the answer to reducing bridging the gap between farm-gate price (about 50 per cent of the retail value) and the retail price resulting in accruals of about 50 per cent of the retail value to the various intermediaries.

**Flow Chart 6.8: Value Chain for Green Chilli with Distribution of Consumers' Expenditure among the Agents**



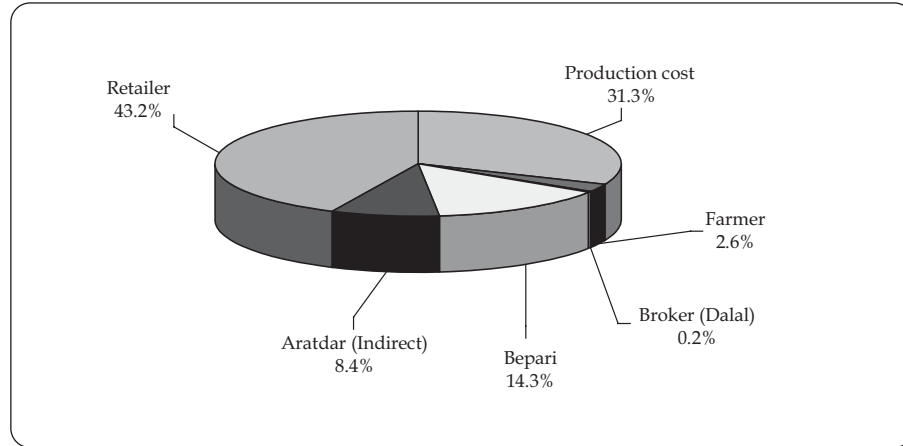
Source: CPD Field Survey, 2007.

**Box 6.6: Is it Possible to Form and Sustain Syndicate in Free Market Economy at Local Level?: The Case of Vegetable Market**

While syndicates may exist in different phases of a product chain (but hard to prove), one particular phase was found to be vulnerable to syndication, which connects producers to wholesale markets in Dhaka City or some of the other big markets. Actors of this phase are known as beparis or local businessmen, buying directly from farmers, usually from local haats or market places, and selling those to retailers or other wholesalers, at Dhaka's or some other cities' arats. A number of beparis are found in a local haats buying from farmers through open bargaining. Farmers could theoretically look for alternative beparis to sell their products. However, the beparis usually form a "gentleman's agreement" publicly, when they set a minimum price that they are willing to pay the farmers. This minimum price varies according to product quality. For example, some beparis only buy premium quality products for export purpose and price of such export quality products are higher. In some instances, all capitals from all beparis is pooled together to form a single large fund, leaving the farmer with no choice but to accept the price offered by the only fund buying in the market. Taking back the product and storing for a later sale, is not an option for farmers when the item was perishable. Hence, producers are compelled to accept the offer of a lower price. In some cases, farmers were not even being able to meet their production cost.

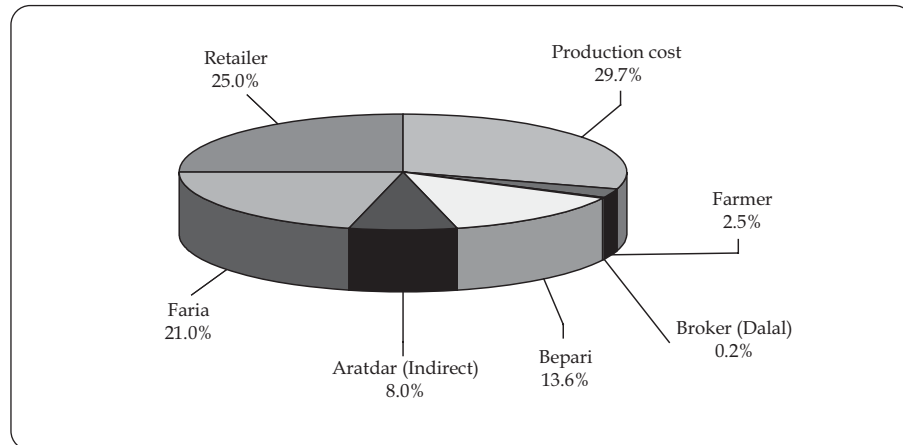
While this is found to be true at one end, local respondents believe that this is also happening on the other end, where these beparis are selling to retailers, compelling the latter to buy from them at a higher price. However, admitting that syndicates take place occasionally, beparis are defensive and argue that while carrying out such agreements, they set the price according to market signal. They also argued that they were unable to make much profit due to lower selling price at wholesale markets, and it is the wholesalers who dictate the market price and not them. This could be true since number of big wholesalers is smaller compared to the number of beparis.

**Figure 6.12: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Brinjal (Dominant Chain)**



Source: CPD Field Survey, 2007.

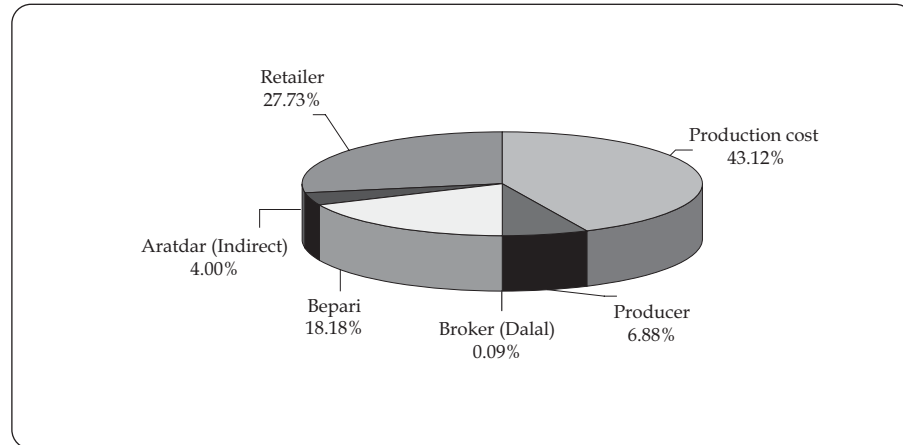
**Figure 6.13: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Brinjal (Longest Chain)**



Source: CPD Field Survey, 2007.

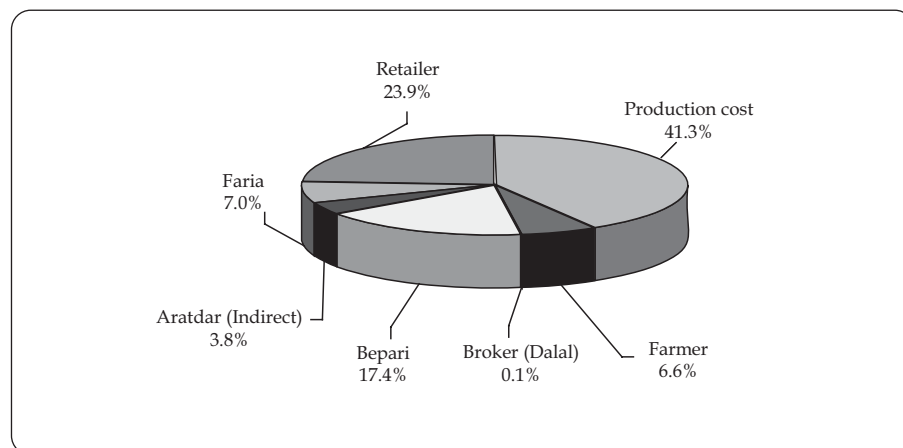
For the dominant chain of brinjal, a typical retailer takes 43.2 per cent of the total consumers' expenditure. Following retailers, second and third highest share is accrued to beparis and aratdars, respectively (Figure 6.12). The scenario is about the same for the longest chain, where retailers and beparis receive value equivalent to the highest proportion of consumers' expenditure, after the production cost of producers (Figure 6.13). Faria's share is higher compared to the bepari, while in both dominant and the longest chains, aratdars receive around 8.0 per cent equivalent of the total consumers' expenditure (see Annex 6.8 for further details).

**Figure 6.14: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Green Chilli (Dominant Chain)**



Source: CPD Field Survey, 2007.

**Figure 6.15: Distribution of Consumers' Expenditure among Agents in Terms of Gross Margin: Green Chilli (Longest Chain)**



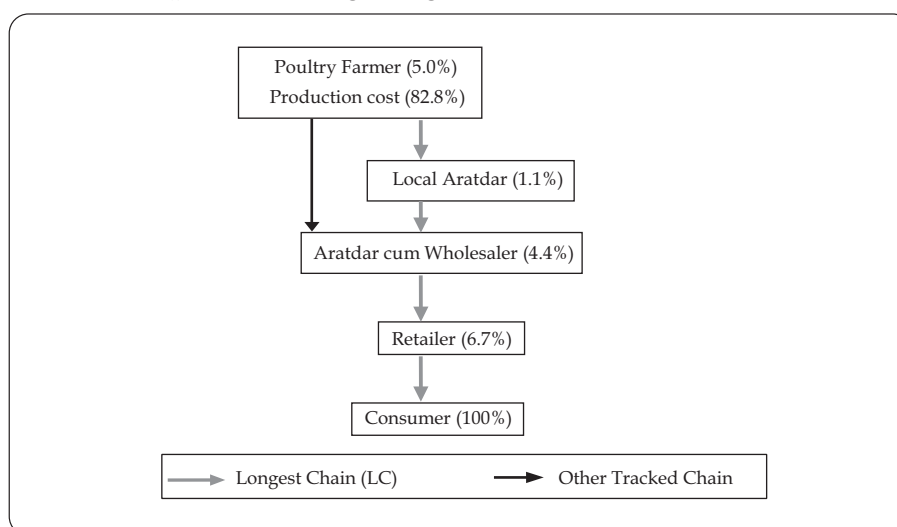
Source: CPD Field Survey, 2007.

In case of dominant chain for the green chilli, following production cost and producers' share, largest share is accrued to retailers and beparis (27.7 per cent and 18.2 per cent) (Figure 6.14). In case of the longest chain, excluding production cost, the largest share is accrued to retailers (23.9 per cent), while farias, beparis and aratdars together receive around 28 per cent of the total cost (Figure 6.15)(see Annex 6.9 for further details).

## 6.9 Egg<sup>9</sup>

Egg was accorded special importance in the present study in view of the recent outbreak of Avian Influenza (bird flu). Four different marketing chains and four nodal points in these chains were identified in the course of the survey. The dominant chain involved four nodal points (Flow Chart 6.9). Production cost accounted for about 83 per cent of the retail value of egg, with about 5 per cent of the margin going to the poultry farmers. The margin accrued to the intermediaries was not high in this market, ranging between 1 and -7 per cent of the retail value. The survey team found that the recent bird flu had a devastating impact on poultry farmers, who have seen some reduction in the retail price and drastic reduction in the farm level prices (Box 6.7). Retailers, aratdars and local aratdars continue to receive some margin, however, the entire adverse impact of the fall in egg prices appear to have been borne by the poultry farmers. The recent increase in poultry feed price has made the situation even worse for the poultry farm owners. It was found in the course of the survey, that the aratdars of Tejgaon bazaar (and not the farmers) were the main agents who determined the price of egg (Box 6.8). The survey team attempted to explore the mechanism of price setting in this market, but it was not possible to identify the basis of such price setting by the aratdars. It appears that

**Flow Chart 6.9: Value Chain for Egg (Before Bird Flu) with Distribution of Consumers' Expenditure among the Agents**

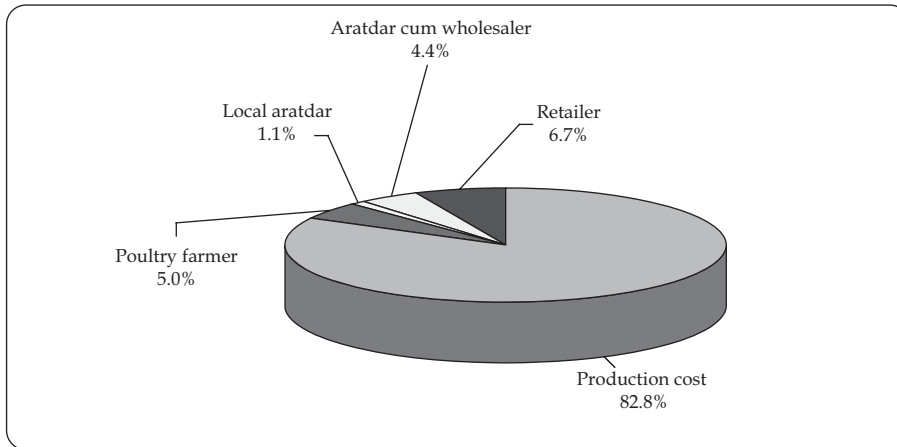


Source: CPD Field Survey, 2007.

<sup>9</sup> For details please see Appendix 6.9.

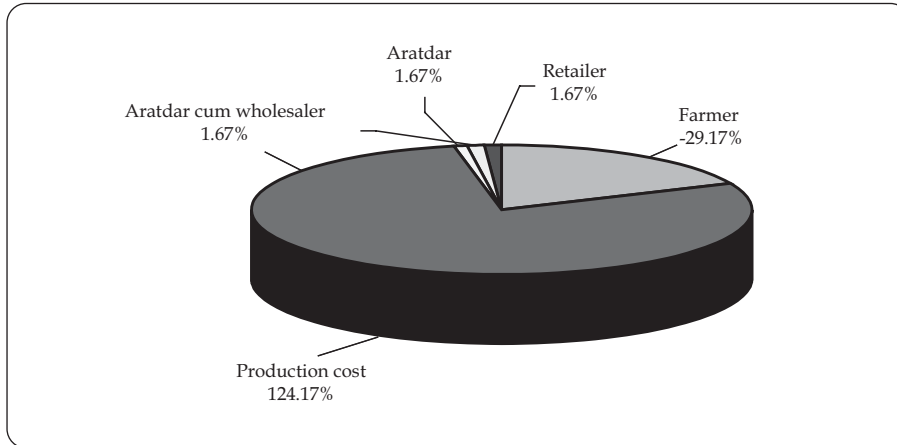
production cost and demand-supply situation play a part in this. If the adverse consequences persist, there could be large demand-supply gap in near future leading to rise in prices of egg. In view of this, price support for poultry-feed and flexible loans and incentives to producers, along with effective measures to control and prevent bird flu are needed.

**Figure 6.16: Distribution of Consumers' Expenditure among the Agents in Terms of Gross Margin: Egg (Before Bird Flu)**



Source: CPD Field Survey, 2007.

**Figure 6.17: Distribution of Consumers' Expenditure among the Agents in Terms of Gross Margin: Egg (At Present)**



Source: CPD Field Survey, 2007.

Figure 6.16 shows the pre-bird flu situation where production cost was almost 83 per cent of the total consumers' expenditure, with retailers



acquiring the second highest share of 6.7 per cent; share of poultry farmers was about 5.0 per cent. While in the post-bird flu situation production costs shot up to 124.17 per cent of the total consumers' expenditure. Farmers were the worst-hit victims, since their gross margins were in the negative (-) 29.17, implying that the additional production costs had to be borne by them. The margins for other agents have also gone down during this time (see Annex 6.10 for further details).

**Box 6.7: Bird Flu and the Poultry Industry**

As would be anticipated, bird flu had a significantly adverse affect on the country's poultry industry. Consumers' reduced their consumption of chicken and egg; demand and prices for all poultry products were on the decline.

Farmers are the biggest losers in the current situation. Poultry feed prices had increased sharply since January 2007. Farmers are incurring extra costs, coupled with higher production costs, to prevent contamination of bird flu virus. This simultaneous occurrence of price hike in poultry feed and the attack of bird flu has led to farmers' loss of livelihood. They informed the team that they expected some initiatives on the part of the government, mainly in the form of monetary compensation or special subsidy; they felt the Government of Bangladesh (GoB) could at least provide poultry feed to the farmers at a subsidised rate.

Local aratdars are comparatively less affected in the context of the current situation. They do not incur big losses as they buy and sell eggs within a span of 2-3 days. Wholesaler and retailers were also less affected by the bird flu outbreak because of similar reasons. The aratdars claimed that they are incurring substantial losses and informed that they pay farmers in advance, to ensure regular supply. As the outbreak of bird flu was not anticipated by aratdars, prices they had paid were higher than existing market price. Hence, they were also incurring losses. However, many of them, if not all, act as commission agents. This meant that rather than trading directly in the market, they facilitate trade as middlemen and made a specified profit per 100 eggs. Their average profit margin had reduced, but they are probably not incurring huge losses. Moreover, since they determine the prices, validity of their claim could be disputed.

**Box 6.8: Egg Market Price: Setting or Fixing?**

CPD survey team came across some interesting information about the price setting mechanism of the egg market. Neither poultry farmers nor local aratdars have any control over egg price. It is the, "Tejgaon Dim Aratdar Samity," commonly known as "Samity," which had the power or 'responsibility' to set the prices. All the aratdars are members of this Samity. The Samity had a working/Executive Committee, headed by a President. The traders confirmed to the survey team that they inform the Samity leaders about market situation between 10 pm and 1 am. The Samity then fixed the price. However, the assessments of the demand and supply situations are subjective rather than objective. None of the aratdars in Tejgaon could explain the exact mechanism of price determination. Businessmen trade in the market, based on these prices, until these prices are adjusted the following night by the Samity.

The survey team observed hesitation and reluctance among the aratdars in discussing or explaining the price-setting mechanism. This observation and interviews with farmers and local aratdars pose an intriguing question, "Is the price set by the Samity, or is it fixed by the Samity?"

**6.10 Summary of Results**

The above product specific analyses attempted to ascertain various channels (from longest to the most dominant) with associated market intermediaries. Distribution of consumers' spending on each unit of product (i.e. the retail price) as an equivalent share among relevant agents was estimated to ascertain how margins were distributed among various agents in the value chain. Essential commodities can be generally conceptualised as homogenous goods, where producers were price-takers and possessed insignificant ability to influence price of the product. Naturally, the question arises which market agent(s) had the most significant control over the market price? We have found that the answer varied depending on the particular item. Daily essential commodities could be divided into two major classes, viz. domestically produced and imported. This could be further divided into two sub-groups: processed and non-processed. In each of these categories, market agents occupy considerable power to influence both price and quantity. The study found discernible patterns for distribution of margin among the various market agents of the four broadly defined types of essential commodities that were investigated as part of the CPD survey.

**Table 6.1: Major Share Receiving Agents for Different Groups of Essential Commodities**

Product Type		Examples	Prominent Share Receiving Agents
Domestically produced	Processed	Rice, Lentil	Millers, Wholesalers, Retailers
	Non-processed	Vegetables, Egg	Beparis, Retailers
Imported	Processed	Edible Oil, Milk Powder	Importers
	Non-processed	Rice, Onion, Lentil	Importers

**Source:** CPD Field Survey, 2007.

Table 6.1 shows that for imported goods, both for processed or non-processed, leaving the largest portion for import cost, major share of consumers' spending equivalent went to importers. In case of domestically produced and processed products, millers were the most significant players in the value chain. It is interesting to note the similarities between importers and millers—the two dominant players. Firstly, both of these agents invested large amount of capital in the business and their scale of operation was much larger compared to other agents. The study also revealed the close network between importers and millers; they had a large role in setting market prices of relevant commodities. In case of domestically produced non-processed goods, beparis and wholesalers came out as the most significant players in setting the market prices. Although retailers act price-taker agents in the value chain, significant variation was found in retail prices of the same item. It was found that display of maximum retail price (MRP) was rare for most of the essential items. Even when this was supposed to be the case because of GoB requirement, most retailers did not comply with the regulations.

**GLOBAL PRODUCTION AND  
PRICE SCENARIO  
SUPPLY SITUATION****OF SELECTED ESSENTIAL COMMODITIES**

The previous chapter summarises the analysis of primary data of product specific value chains for selected items, carried out to identify the channels and associated market agents and their average levels of margin. The present chapter highlights secondary data based analyses which have been put together to investigate the contributions of different factors behind the price escalation in recent times. These analyses, combined with inputs from field data, would hopefully allow a comprehensive understanding as regards the nature and extent of the present inflationary phenomenon, and the shortcomings of the present institutional mechanisms in place, with regard to price management. Some of the hypotheses mentioned in Chapter 6 have also been verified based on these information. The chapter ends with a presentation of some of the diagnostic findings derived from this study.

**7.1 Lack of Information and Weaknesses of the Institutional System**

The chapter will begin by highlighting the absence of proper management information system (MIS) and weaknesses of the public institutional mechanism.<sup>10</sup> This lacking has turned out to be the most critical issue from the perspective of designing an informed policy response to tackle the price spiral of essential commodities, and most importantly, for taking necessary preparations to address this urgent issue. At present, no coordinated system is in place for information collection, compilation and analysis related to demand, supply and price projections of essential commodities. There are a number of organisations such as Bangladesh Bureau of Statistics (BBS), Department of Agricultural Extension (DAE), Space Research and Remote Sensing Organization (SPARRSO), which provide information on domestic agricultural production. However, their estimates differ substantially even at national level, let alone at the disaggregated regional level, leaving scopes for debate as regards validity of the information. It is suggested that there should be coordination with regard to methodologies of estimation and that these organisations (BBS, DAE and SPARRSO) should undertake joint

<sup>10</sup> 'MIS' is a planned system of collecting, storing and disseminating data in the form of information needed to carry out the functions of management.

estimation of actual and projected productions. This is also urgently needed for an effective procurement programme and strategy for import of rice. The dearth and inconsistency of reliable data do not allow preparation of a proper balance sheet of product-wise requirements and availability of commodities, and thus, restricts policymakers to take an informed and proactive decision. From dynamic and proactive policymaking perspectives, the most disturbing factor is the paucity of reliable information in terms of domestic demand and supply situations, both at aggregate and disaggregate (regional and district) levels.

Upto date information about global food production, projections and price movements is also of critical importance and there is a need to develop adequate human resources to analyse this type of data and draw the necessary policy decisions.

Apart from monitoring the supply and demand situation both at country and global level, effective monitoring of the domestic wholesale and retail markets (particularly supply and price situations) is another critical responsibility of the government for successful intervention, in case of crisis or unfair business practices in the essential commodity market. It is to be noted that Government of Bangladesh (GoB) used to have an agency called Department of Prices and Market Intelligence (DPMI) under the Ministry of Commerce (MoC). DPMI was governed by the "*Essential Commodities Control Order 1981*." Though DPMI was abolished in 1989, the Act is still active. However, there is no implementing agency for this Act at present.

The revealing fact is that the opportunity cost of these late initiatives which are necessarily reactive in nature, turns out to be significantly higher; current situation being a glaring example. However, the government has taken some initiatives to monitor the market and strengthen and coordinate its various organs in response to the current situation. The members of study team conducted face-to-face interviews with concerned officials of relevant organisations to identify the gaps, and the areas of intervention and improvements required to enhance the effectiveness of these organisations. In the following two sub-sections, current status, responsibilities and performance of two of the relevant public organisations, namely Trading Corporation of Bangladesh (TCB) and Department of Agricultural Marketing (DAM), have been reviewed.

#### **7.1.1 TCB: Still Lots to Contribute in spite of Losing its Importance**

The TCB is an autonomous state trading organisation under the MoC established in 1972. The main functions of TCB include the task of acting as

a watchdog to monitor the supply and price situation of the essential goods and engaging in trading and related activities as directed by the government. There is a significant amount of debate regarding the role and effectiveness of TCB in the context of globalisation and the free market philosophy, presently pursued in the country. However, considering the large group of disadvantaged people who are living below the poverty line in Bangladesh, public organisation such as the TCB could be very effective tool. An efficient TCB could act as a safeguard to address the problem of market volatility of essential items through open market sales (OMS) and safety net programmes.

It was felt that whilst TCB is still in operation, it was not being able to perform functions expected of it. In the FY1972-73, import by TCB accounted for about 25 per cent of the total import. In contrast, TCB's imports plummeted significantly after the introduction of open market policies in the country—as of 2007, TCB accounted for a mere 0.3 per cent of the total import of the country. As a consequence of sequential downsizing of the TCB, no new recruitment took place since 1993-94. Rather, the workforce has been downsized considerably in the recent past. Having distributors of their own, TCB has to depend on the registered dealers under the Directorate-General of Food, which leads to problems in terms of coordination. Another good example is the Price Monitoring Unit (PMU) which monitors the market price. However, its performance is also not up to mark, again mainly due to the shortage of trained manpower. It was also found that dissemination of information among various stakeholders is not very well organised and needs to be substantially improved.

### **7.1.2 Department of Agricultural Marketing (DAM): Can it Live up to the Expectation?**

The major objective of the DAM—a department under the Ministry of Agriculture—is to provide improved marketing services with a view to ensuring fair returns to the growers for their produces, and ensure adequate supply to the consumers at reasonable prices. One of the major activities of DAM is Market Intelligence Service (MIS). The MIS is geared towards collation of daily wholesale and retail prices of farm products from the markets of four divisional headquarters; weekly wholesale and retail prices of farm inputs and outputs are collected from 70 district headquarter markets, including four hilly thana level markets. Similarly, growers' prices of farm products are collected fortnightly, from 150 important rural assembly markets of the 64 districts. Monthly wholesale prices of minor farm products are also collected from district headquarter markets.

However, the information and the analyses by DAM are not widely disseminated. Apart from this function, the DAM also carries out services like agricultural marketing research, market regulation and development, market extension services and marketing promotion. However, the DAM lacks sufficient manpower and financial resources to deliver these responsibilities efficiently and effectively. As in the case of TCB, synchronisation, dissemination and coordination of information processed by DAM needs further improvement.

## **7.2 Estimated National Demand for Essential Commodities for 2007**

Recognising the existing gaps in the required information, an attempt was made by the Centre for Policy Dialogue (CPD) to estimate the total national demand for essential products based on the Household Income and Expenditure Survey (HIES) 2005. However, it needs to be mentioned at the outset that this exercise is an approximation based on HIES data and a number of assumptions; it is by no means a substitute for a more detailed, sophisticated and involved exercise applying a sound methodological framework. Indeed, such an exercise should be conducted by coordinating various public organisations and utilising their infrastructure and logistics. It is also to be mentioned here that the analysis carried by us did not capture the seasonality patterns and their impact on demand and supply situation. Nevertheless, these estimates should give us an idea about the true demand of major essential commodities.

The data collection procedure of the HIES 2005 followed the Integrated Multipurpose Sample (IMPS) design developed on the basis of Population and Housing Census 2001. Among the 1,000 Primary Sampling Units (PSUs) throughout the country (640 rural and 360 urban), 504 PSUs are covered that includes 10,080 households and around 49,000 people in the six divisions of the country. Data on the households were collected throughout 2005. Daily data on food consumption were collected for two weeks for each of the households with the help of diary keepers who were recruited to keep the records. The average per day commodity-wise consumption of an individual was estimated from the household consumption, reported by the HIES survey data. Household demand for the commodities was then estimated for the national level. In estimating the demand for different commodities at the household level, it was assumed that per capita household consumption for each product remained constant over the last two years. In other words, for the purpose of this estimation, per capita consumption in 2007 has been taken to be the same as in 2005. Based on the previous trend, population for FY2007 was estimated as 142 million.



However, HIES provides only the household data, whereas total national demand for food includes both household demands and non-household demands. It is to be noted that demand, as commercial and intermediate products, for some of these products (e.g. wheat) could be considerably large and should be taken into account. Accordingly, the CPD estimate includes approximate demand arising from non-household sector requirements along with the demand at the level of households. The CPD estimation shows that the household demand for different essentials vary between 70 and 80 per cent, although in case of a few products, non-household share in the total demand is considerably high. Based on the analysis of demand and supply data for the previous few years, the average non-household demand was found to be about 12 per cent of the average household demand. This, however, varies from product to product. The CPD estimate considers non-household demand to be in the range of 10-15 per cent of the household demand. Hence, the estimates considered two alternative scenarios of total national demand for food, considering the lower range to be 10 per cent and the higher range to be 15 per cent. The estimates came up with projections of total national demand for food grains in 2007 to be in the tune of 263.0-275.0 lakh metric tonnes. The estimated demand for potato, vegetables and pulses is expected to be in the range of 38.1-39.8 lakh metric tonnes, 89.5-93.6 lakh metric tonnes and 8.2-8.5 lakh metric tonnes, respectively. The projected demand for egg ranged between 4,431-4,632 lakh dozens. The figures corresponding to the lower limits of these estimates take the non-household demand to be 10 per cent of the household demand, whereas the upper limits consider the non-household demand to be 15 per cent of the household demand (Table 7.1).

**Table 7.1: CPD Estimates on Demand of Essential Commodities**

(In Lakh Metric tonnes)

Commodities	Estimated Household Demand for 2007 Based on HIES (2005)	Total Demand (Household + Non-household)	
		Considering Non-household Demand as 10% of Household Demand	Considering Non-household Demand as 15% of Household Demand
Foodgrain (Rice and Wheat)	239.1	263.0	275.0
Potato	34.6	38.1	39.8
Vegetables	81.4	89.5	93.6
Pulses	7.4	8.2	8.5
Egg (Lakh)	4,028	4,431	4,632

**Note:** For the purpose of this estimation, per capita consumption in 2007 was taken to be the same as in 2005. Population for 2007 was taken to be 142 million. Non-household demand was estimated to be about 12 per cent of the household demand.

**Source:** CPD estimate.



### **7.3: Domestic Supply Situation for 2006-07**

Similar to the domestic demand information of essential commodities, reliable estimates and projection with regard to domestic production scenario and proper import statistics of essential commodities are very important in order to gain an idea about the per capita food availability in the country. This also requires an involved and extensive research which is beyond the scope of this study. In the present report, however, available information as regards production and import situation has been presented. It is apparent that not only production and import, but storage and processing of agricultural commodities are also key factors to ensure off-season supply. It is found that at present there is no national storage policy in place. In the course of the study, it was found that information on stored food items was very difficult to have.

#### **7.3.1 Production and Import Situation of Agriculture Commodities**

As mentioned earlier, various government agencies tend to come up with divergent figures of production of agro-commodities which creates a lot of confusion about the actual scenario. For example, Table 7.2 presents the production figures of 2004-05 and 2005-06 published by BBS and DAE along with the import figures of Directorate-General of Food.<sup>11</sup> Even if the differences in data collection and compilation methodology are taken into account, one can see the significant amount of variation between the two figures of BBS and DAE, in most of the cases. According to the BBS, final estimate of actual rice production in FY2005-06 was 265.30 lakh metric tonnes, against the DAE final estimate of 292.7 lakh metric tonnes. This means the actual production in FY2005-06 was about 5.6 per cent and 8.9 per cent higher than that of the earlier figures for FY2004-05, according to BBS and DAE respectively. In case of wheat, the two estimates are reasonably close (BBS's final estimate of actual wheat production was 7.35 lakh metric tonnes against the DAE final estimate of 7.72 lakh metric tonnes in FY2005-06). The figures indicate almost a one-fourth fall in the wheat production in 2005-06 compared to the preceding year. National production of potatoes in FY2005-06 stood at 41.61 lakh metric tonnes according to the BBS figures against the DAE final estimate of 53.68 lakh metric tonnes, these were 14 and 10 per cent less than the previous year respectively. On the other hand, according to both estimates, onion production increased in FY2005-06 which was estimated at 7.68 lakh metric tonnes (BBS) against the DAE final estimate of 8.09 lakh metric tonnes. However, in case of pulses, vegetable (brinjal, cauliflower, cabbage, radish and others) and spices, opposite

<sup>11</sup> The production estimate for 2006-07 was not available at the time when this report is prepared.

directions in growth rates projections were observed according to BBS and DAE estimates. The key message of this analysis is to assert the need to address the issue of coordination and synchronisation of estimates prepared by different sources on an urgent basis, which would enable to get a clear picture of the supply situation highlighted in Section 7.1.

**Table 7.2: Production and Import of Daily Essential Commodities of Bangladesh**

(In Lakh Metric Tonnes)

Crops	2004-05		2005-06	
	DAE	BBS	DAE	BBS
	Achievement	Achievement	Achievement (Growth, in Per cent, over Previous Year)	Achievement (Growth, in Per cent, over Previous Year)
Total Rice	268.75	251.57	292.79 (8.9)	265.30 (5.5)
Wheat	10.50	9.76	7.72 (-26.5)	7.35 (-24.7)
Oilseeds	5.42	5.46	6.31 (16.4)	5.71 (4.6)
Pulses	5.10	3.16	5.87 (15.1)	2.79 (-11.7)
Onion	6.32	5.89	8.09 (28.0)	7.68 (30.4)
Potato	59.47	48.56	53.68 (-9.7)	41.61 (-14.3)
Vegetable	53.68	61.31	31.26 (-41.8)	61.76 (0.7)
Chilli	2.13	1.85	1.94 (-8.9)	1.55 (-16.2)
Spices	15.34	10.30	14.63 (-4.6)	11.09 (7.7)
Egg (million)	5,422		5,374	

**Source:** Bangladesh Bureau of Statistics (BBS); Department of Agricultural Extension (DAE) and Department of Livestock Service (DLS) for egg production.

Although official figures of production for 2007 was not available while preparing this report, it was apprehended by various actors and experts that there would be a shortage in domestic production in FY2007. In case of rice, production of Aus stood at 17.5 lakh metric tonnes in FY2007 (which fell short of target by 21.2 per cent), while the Aman production in FY2007 was estimated at 5.0 per cent lower compared to that of last year. Moreover, it was forecasted by the DAE that the spread of chita attack in Boro cultivation would result in a reduction of yield amounting to 2 lakh metric tonnes. On

top of that if there is an event of flood or other natural calamities in the remaining part of the fiscal year (the probability of which is high), then the production situation would be more disastrous.

**Box 7.1: Effect of Chita in Paddy in the Upcoming Boro Season: FY2006-07**

Paddy is cultivated in Bangladesh throughout the year as Aus, Aman or Boro varieties. Aman (broadcast and transplanted) is generally cultivated in December-January, Boro in March-May and Aus in July-August cropping seasons. Paddy is cultivated in 80 per cent of the total cultivable land in Bangladesh. Though soil, weather and geo-environment are suitable for paddy production in Bangladesh, regular natural disasters, such as flood, cyclones and drought severely undermine production potentials. Widespread presence of chita paddy was observed in the area of Kishoreganj and Brahmanbaria districts initially in March 2007. Gradually the Boro cultivated land of 18 districts in the country was also affected by chita with the estimated area projected at about 54,000 hectares (ha) (3.2 per cent of the total cultivated land). Due to chita, total estimated production of rice would be 157.55 lakh metric tonnes, which was approximately 2 lakh metric tonnes short of the previously predicted amount (see Annex 7.1 for more information).

**7.3.2 Import Scenario**

In general, Bangladesh is a net food importing country and depends on imported foodgrains and other food commodities to meet her domestic demand. The imports vary depending on domestic production. Table 7.3 displays the comparison of imports of essential commodities between first three quarters of FY2007 and FY2006. It is to be noted that these figures are

**Table 7.3: Comparison of Food Import Situation: FY2007 versus FY2006**

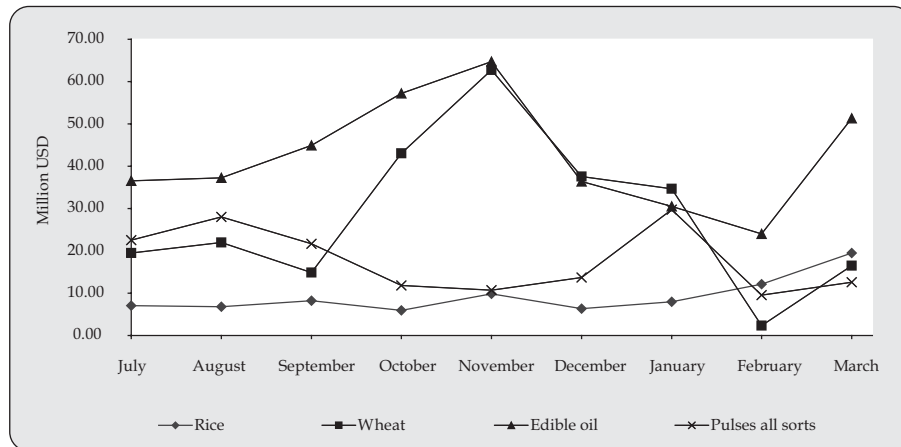
(in Million USD)

Items	FY2007 (July-March)	FY2006 (July-March)	Per cent Change
Rice	83.82	93.47	-10.33
Wheat	253.18	222.12	13.98
Milk and dairy products	65.75	52.18	26.02
Spices	56.94	24.60	131.47
Oil seeds	53.90	53.82	0.16
Edible oil	382.95	338.85	13.01
Pulses of all sorts	160.40	123.29	30.11

Source: CPD estimate based on Bangladesh Bank data.

in terms of value, and not quantity. It can be seen that there is a 10 per cent decrease in rice import in FY2007 compared to the last fiscal. Given the shortfall in domestic production and rise in international price (which means lower import in terms of quantity), this decline in rice import may result in supply shortage in the market, which in turn could push the price of rice upward. Except rice, all other major food commodities have experienced a rise in import in 2007. During this time, pulses (all sorts), wheat and edible imports posted 30, 14 and 13 per cent growths to reach USD 160, 253 and 383 millions respectively, in FY2007. Most notable rise in imports was witnessed in case of spices which posted a 132 per cent rise over the corresponding period.

**Figure 7.1: Monthly Trends in Imports of Selected Essential Commodities: July - March FY2007**

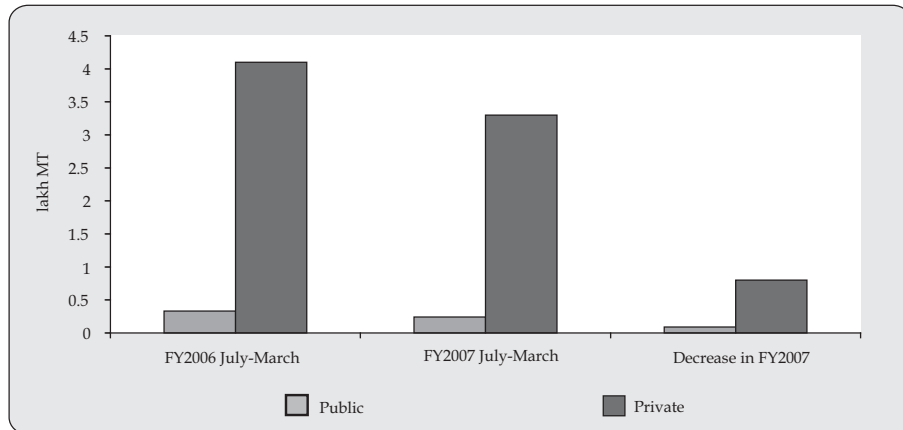


Source: CPD estimate based on Bangladesh Bank data.

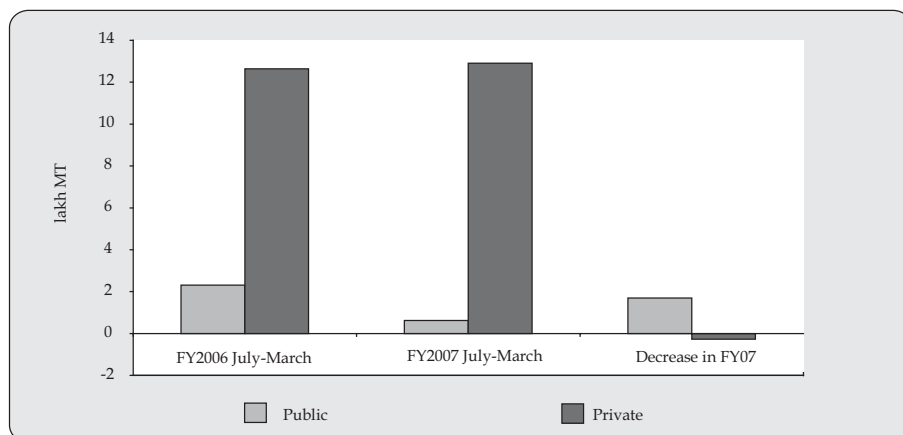
Figure 7.1 displays the monthly trends in imports during first nine months of FY2007 which is quite erratic and no decisive trend could be found. However, it can be seen that up to January, monthly rice import figures remained below USD 10 million, which started to pick up from February 2007 and touched USD 20 million in March 2007. Between July and November period both edible oil and wheat showed an increasing trend of import; however, significant fall in import was observed thereon till February. By March 2007, however, the decreasing trend had reversed for both of these commodities. These figures may support the view that the political unrest during November 2007 to January 2008 and following anti-corruption drive by the present caretaker government (CTG) had important impacts on the business environment of the country, leading to fall in imports, which in turn created shortage in supply in the market and escalated the price of essential commodities.

**Figure 7.2: Foodgrains Import Situation during First Three Quarters of FY2006 and FY2007: Public versus Private Sector**

**(A) Rice**



**(B) Wheat**



**Source:** Based on data provided by Directorate-General of Food, Ministry of Food and Disaster Management.

Another aspect of food import (particularly foodgrains) is the need for synchronisation of public and private imports to meet the domestic demand. In general, major share of the imports of foodgrains accrue to the private sector. However, apart from domestic and international supply and price situations, public sector initiatives also influence the private sector imports. Against the target set by the government to import 3 lakh metric tonnes of foodgrains (1 lakh metric tonnes rice and 2 lakh metric tonnes wheat) in FY2007, during the first nine months only 0.86 lakh metric tonnes of foodgrains (0.24 lakh metric tonnes rice and 0.62 lakh metric tonnes wheat) has been imported, which is 27.2 per cent lower compared to

corresponding figure of FY2006.<sup>12</sup> On the other hand, during this period, private sector imported 16.21 lakh metric tonnes of foodgrains (3.3 lakh metric tonnes rice and 12.91 lakh metric tonnes wheat) compared to last year's corresponding figures of 16.74 lakh metric tonnes of foodgrains (4.1 lakh metric tonnes rice and 12.64 lakh metric tonnes wheat). Although private sector import of wheat posted a marginal growth in FY2007, in case of rice, the imports experienced a fall of 0.8 million in FY2007 compared to FY2006.

### 7.3.3 Analysis of NBR Information on Importers

Investigation revealed that an overwhelming share of the total imports of essential commodities is attributable to a limited number of big importers. These big players have the potential ability to have a say on retail prices of these particular products to varying degrees. Syndication and cartels are possible under such circumstances, however, it is difficult to prove such malpractices in the absence of targeted investigation. Market manipulation in a situation of syndication and cartels is highly possible.

It should be made clear upfront that this particular study did not attempt to investigate the existence of any syndicate. Even if such an attempt was made it would have been difficult to prove. Rather, CPD has carried out a detailed analysis of the NBR data to identify and measure the extent of power of particular importers could play in the import markets for selected commodities. The analysis presented in some details in Tables 7.4 and 7.5 on import concentration of essential products reveals some very interesting findings in this context.

The exercise illustrates that top five importers have significant control over the market and accounted for a very high share of trade in essential commodities (in FY2007). The shares for some selected items were as follows: raw sugar: 96 per cent; refined sugar: 46 per cent; crude soybean oil: 67 per cent; crude palm oil: 60 per cent; wheat: 49 per cent; rice: 37 per cent; lentil: 31 per cent and onion: 31 per cent. These figures suggest that there exists a high degree of concentration in the import business for essential commodities which creates a possibility for oligopolistic coordination and syndication at importers level. It needs to be noted in this context that there is a high possibility that these figures could underestimate the actual concentration of market power among big players, since they could import identical goods through several channels, by using different agency names.

<sup>12</sup> It is to be noted that in FY2006 total public foodgrains import was 2.97 lakh metric tonnes (0.34 lakh metric tonnes of rice and 2.63 lakh metric tonnes of wheat). On the other hand, private sector foodgrains import stood at 22.65 lakh metric tonnes (4.98 lakh metric tonnes of rice and 17.67 lakh metric tonnes of wheat) in FY2006.

**Table 7.4: Import Concentration of Essential Products: 2005-06**

	Onion	Lentil	Rice	Wheat	Crude Soybean Oil	Crude Palm Oil	Sugar (Refined)	Sugar (Raw)
Total No. of Importers	72	33	176	15	16	22	89	38
Total No. of Consignments	292	82	1760	80	360	1077	468	342
Total Value of Import (Mln USD)	3.55	4.99	59.08	26.31	224.17	656.65	73.60	117.18
Share of Top 5 Importers (% Based on CIF Value)	31.33	41.78	38.66	51.69	58.17	61.65	57.76	64.17
Share of Top 5 Importers (% Based on Assessed Value)	28.04	38.54	37.87	48.35	57.84	64.35	55.83	56.58
Assessed Value of Import (Mln USD)	3.96	5.41	60.31	28.13	225.41	629.08	76.15	132.90
Total Revenue Earned	0.26	0.27	3.61	1.41	49.39	134.47	43.77	71.59
Memo Item for which Importer's Name not Available (Mln USD)*	0.11		0.06					
Total Import (Mln USD)	3.66	4.99	59.14	26.31	224.17	656.65	73.60	117.18

**Note:** \* 14 Importers' names for onion and 1 for rice were not available. Import currency was not available for 1 importer. All such entries were excluded from the analysis.

**Source:** CPD analysis based on National Board of Revenue (NBR) data.

**Table 7.5: Import Concentration of Essential Products: 2006-07 (Up to March)**

	Onion	Lentil	Rice	Wheat	Crude Soybean Oil	Crude Palm Oil	Sugar (Refined)	Sugar (Raw)
Total No. of Importers	156	123	98	45	12	22	107	13
Total No. of Consignments	1671	410	1085	563	177	675	397	126
Total Value of CIF Import (Mln USD)	18.67	44.99	36.12	266.32	139.67	487.78	80.02	156.12
Share of Top 5 Importers (Based on CIF Import Value)	31.33	30.55	37.26	48.75	67.26	60.12	46.47	95.96
Share of Top 5 Importers (Based on Assessed Value)	28.85	28.612	34.99	46.10	64.57	57.61	44.17	91.23
Assessed Value of Import (Mln USD)	20.28	48.03	38.39	281.61	145.48	508.50	84.18 1	64.23
Total Revenue Earned (Mln USD)	0.25	2.40	1.92	14.08	7.27	105.51	14.07	15.20
Memo Item for which Importer's Name not Available* (Mln USD)	1.08	0.06	0.47					
Total Import (Mln USD)	19.75	45.05	36.59	266.32	139.67	487.78	80.02	156.12

**Note:** \* 78 Importers' names for onion, 1 for lentil and 4 for rice were not available. Import Currency unit was not available for 2 importers in case of import of crude soybean oil and 1 for refined sugar. All these entries were excluded from the analysis.

**Source:** CPD analysis based on National Board of Revenue (NBR) data.

This possibility could not be probed during the field survey. However, it may be mentioned in this context that the survey team was unable to find the existence of few trading agencies at the registered addresses as of the NBR database.

Moreover, looking at the third and sixth rows of the two Tables below, one can observe that assessed value is significantly higher compared to the declared Cost Insurance and Freight (CIF) prices. This indicates presence of mis-invoicing (under-invoicing in this case) which unusually may be done with the intention of avoiding payment of ad-valorem import duties.

### 7.3.4 Prospect of Future Import Supply: Analysis of L/C Opening Data

Table 7.6 indicates that letter of credit (L/C) opening figures reveals an upward trend in terms of import value for FY2006-07, for most of the commodities, except for palm oil (crude) and onion. This trend has continued till March 2007 (latest figures). L/C opening figures show highest rise in case of crude soybean oil (189.25 per cent), followed by sugar (183.18 per cent). On the other hand, import values have come down sharply for

**Table 7.6: L/C Opening Figures for Selected Essential Commodities and Annual Changes Thereof**

Commodity	2005-06	2006-07 (July- March)	2005-06 (July- March)	Change
Rice	121.39	148.27	100.51	47.76
Wheat	316.51	318.12	229.92	88.20
Sugar	185.66	275.57	92.39	183.18
Milk Food	92.46	87.80	70.43	17.37
Edible oil (Refined)				
(a) Soybean	0.13	0.16	0.08	0.08
(b) Others	3.33	1.16	3.08	-1.92
Edible oil (Crude)				
(a) CDSBO	123.26	297.80	108.55	189.25
(b) Palm oil	321.44	130.00	236.09	-106.09
Pulses	208.33	134.96	124.06	10.90
(a) Masur dal		56.38		
(b) Chola dal		19.04		
(c) Others		59.54		
Onion	72.07	49.62	54.77	-5.15

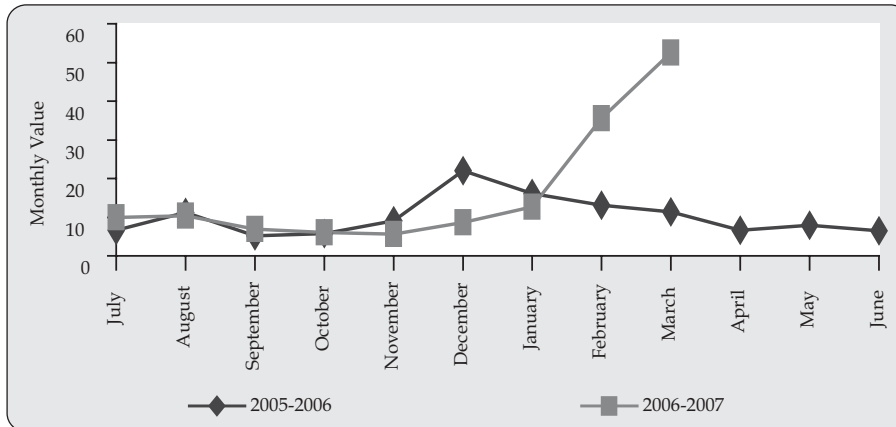
**Source:** Compiled from Bangladesh Bank data.



palm oil (fall of 106.09), followed by onion (5.15). Though the overall L/C opening figures have increased, it cannot be concluded that the quantity of imported commodities has increased in volume terms since Bangladesh Bank data provides only value of L/C openings (and not the volume).

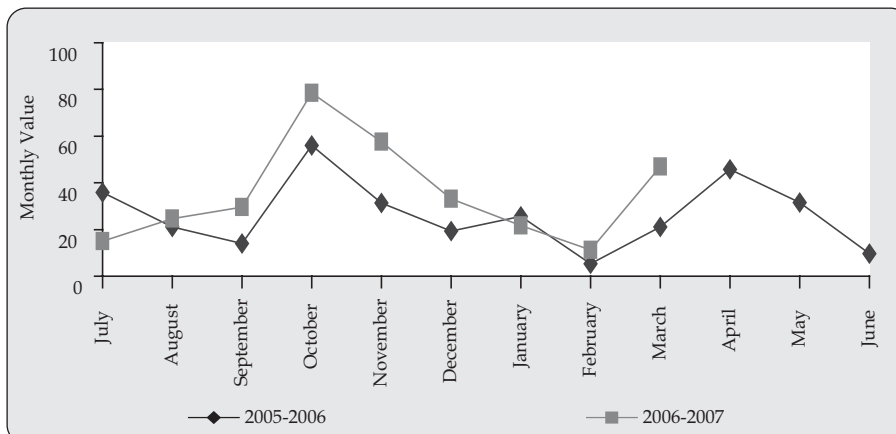
It needs to be mentioned, however, that during the field survey it was reported both by traders and bank officials that a number of L/C orders had to be cancelled in January 2007 and February 2007 mainly due to the fear factor arising out of CTG's anti-corruption drive. The monthly trends of L/C opening for rice and wheat (Figure 7.3 and 7.4) also show a decrease in L/C opening during November 2006 - January 2007 compared to the previous year.

**Figure 7.3: Monthly L/C Opening Figure for Rice: 2005-06 and 2006-07**



Source: Analysis based on Bangladesh Bank data.

**Figure 7.4: Monthly L/C Opening Figure for Wheat: 2005-06 and 2006-07**

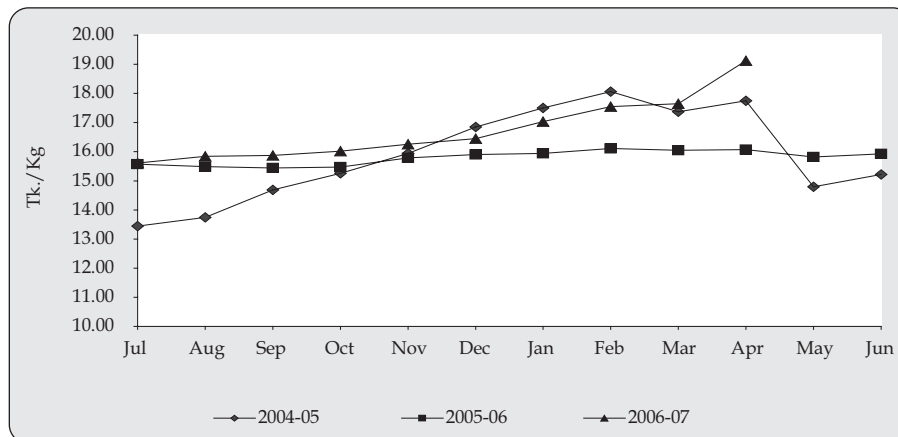


Source: Analysis based on Bangladesh Bank data.

#### 7.4 Trends in the Wholesale Price for Rice

It would be helpful for our purpose to examine the trends in the domestic wholesale price scenario in Bangladesh over the recent past. The monthly wholesale price data has been analysed here only for rice. The period covered was between FY2005 and FY2007. Figure 7.5 leads to a number of interesting observations: here in FY2005, the price movement in wholesale market was rather unstable, ranging from 13,400 Tk./MT to 18,100 Tk./MT. On the other hand, in FY2006, the wholesale market was quite stable for rice (price varying between 15,500 and 16,100 Tk./MT). In case of FY2007, one can observe a persistent upward trend between the wholesale prices of rice, reaching 17,700 Tk./MT in March 2007. In April 2007, average wholesale price of coarse rice (Tk. 19,120/MT) was 18.98 per cent higher than that of April 2006. From July 2006 to April 2007 rice price shot up by 22.49 per cent.

Figure 7.5: Trends in Wholesale Price of Rice



Source: Authors' estimation based on CPD-IRBD database and TCB.

#### 7.5 Recent Government and Private Sector Programmes / Initiatives

In response to the recent inflationary trends, the government has taken some initiatives to contain the surging prices. Government has also encouraged the private sector to come forward to work together with public sector, in order to stabilise the supply and price situation of essential food items. Various public and private sector initiatives are briefly discussed in the following few sub-sections.

### 7.5.1 Open Market Sales (OMS) Initiatives

#### *BDR's Dal-Bhat Programme*

Of all the major government initiatives, BDR's Dal-Bhat programme seems to be the most discussed initiatives. This initiative has instigated debates on a number of issues ranging from the operational modality and time span of the programme, opportunity costs of the programme, and possible adverse implications for present market structure and price situation.

From mid March 2007 onwards, BDR has been carrying out "Operation Dal Bhat" through establishing temporary markets in 21 spots located in Dhaka city, offering lower price of essential items than market. The operation's objective is to sell food items at a price lower than the existing market price. BDR has identified intermediaries in the product supply chains as the ones, to which a large part of the profit margin is accrued, and the intention was to bring this down and pass on the difference to the consumers.<sup>13</sup> To reduce the role of intermediaries, BDR has been buying products directly from farmers.

As regards the impact of BDR programme on retail market, diverse opinions were noted among the various stakeholders, including retailers. According to some retailers, the BDR's operation had no significant impact on retail prices and daily sales as the number of BDR outlet was still rather inadequate compared to the total market demand. Some retailers felt that the BDR offered prices have not influenced total market, but daily sales quantity was coming down. Most buyers at the BDR markets belonged in the lower or lower-middle income groups; higher-middle and higher income groups were not buying from these outlets, as in the past, because of the long queues. Overall, buyers appeared to be satisfied with the price offered in the BDR-run markets. However, they were not happy that these markets sold only few items, and that they had to go to other stores in order to complete their purchase.<sup>14</sup>

In spite of all the arguments and counter arguments in favour and against BDR stores, it was found that consumers favoured this initiative of the government, but they felt that the number of both outlets and items sold needed to be significantly increased. They felt that in order for the programme to be more effective, the number of BDR-run outlets should be

<sup>13</sup>This initiative is in line with the observations made in this regard, based on field survey, that intermediate agents receive a significant part of the total margins and their net returns over working capital (NRWC) were significant (see Chapter 5 and Annex 5.1 through Annex 5.10 for details).

<sup>14</sup>See Annex 7.2 for more information on products, BDR price and retail market price.

increased further. However, it is very important to note in this context that such initiatives could serve only as a temporary measure to stabilise the price, and by no means should be seen as a permanent measure.

*OMS under Trading Corporation of Bangladesh (TCB) and Directorate-General of Food*

To provide price support to consumers, the Ministry of Food and Disaster Management operates Open Market Sales (OMS) of rice through its Food Directorate-General of Food Wing. TCB was selling items at 30 spots in Dhaka city (at the time of this study) through Ministry of Food and Disaster Management dealers. Quantity of sale under OMS was found to be very low. The major reason was that dealers were reluctant to buy from the TCB, within the margin of Tk. 2.0 per kg. According to their claim, this margin was not adequate to make up even for their operation cost. TCB was facing considerable workforce shortage, leaving it with weak institutional strength to carry out large scale operations. Apart from its export-import operations, TCB was responsible for market price monitoring, and again this task was suffering because of the inadequate workforce.

Along with collecting market price information, TCB needs to have the needed analytical capacity to constantly monitor retail, wholesale and international prices and make recommendations to the government in view of their work. TCB should also develop an effective information disseminating system to share market information; procedure of generating and methodology of analysing such information should be of transparent and accountable manner.<sup>15</sup>

*OMS Initiatives at the Private Level*

Some private entrepreneurs have also started their own OMS programmes. They have come forward to sell their products at factory level price to directly benefit the consumers. These include Partex Group, Abul Khair Group, Meghna Group, PHP, Imam Group, Masud and Brothers, Alam and Brothers, S Alam, Mostafa Group and Mabco. This is an interesting development in the current context.

### **7.5.2 Other Government Initiatives**

*Withdrawal of Tariff*

Considering the high global price of rice and wheat, the government had withdrawn the existing 5.0 per cent import duty on rice and wheat, as of 8

<sup>15</sup>See Annex 7.3 for more details on the OMS through TCB.

March 2007, in an attempt to arrest the rise in prices of these items. The government was also contemplating reduction of import duties on a number of other essential items.

#### *Draft Anti-hoarding Act*

The government prepared a draft Anti-hoarding Act articulating the period for which businesses will be allowed to stock their goods (at three levels: import, wholesale and retail). This draft was circulated among the major stakeholders and businesses, and opinion was sought before 14 March 2007. Follow-up information on this was not available; however, this step was criticised on the ground that it had disruptive implications for the marketing chains and channels.

### **7.6 Product-wise Global Supply Scenario**

In this section, the global supply prospect is reviewed with respect to each of the products under study. However, regular monitoring of the context of the global supply and price situation will be required to take best-informed decisions regarding importing food in particular circumstances.<sup>16</sup>

#### **7.6.1 Rice**

According to the March 2007 forecast made by the Food and Agriculture Organization (FAO), world paddy production had declined from a record 633 million tonnes in 2005 to 629 million tonnes in 2006. This production fall was the result of an erratic monsoon in Asia, and El Nino (in the later part of 2006). In 2006, paddy production was forecast to drop by 1.1 million tonnes in India from the targeted amount of 139 million tonnes. This was caused partly because of shifting of land from rice to wheat cultivation. In Pakistan also, the production was estimated to plummet by 8.1 million tonnes in 2006, the reason being substantial crop losses in the lower Sindh caused by excessive rainfall. It is also interesting to note that China ended up with virtually no growth in rice production in 2006.

According to estimates of various international climate organisations, after the 2006-07 El Nino, global weather condition was expected to shift to a more "normal" one with an average rainfall pattern, which is a pre-requisite for a good harvest of paddy. Based on FAO estimates, global production of paddy is projected to reach to 633 million tonnes in 2007, which would be 4.0 million tonnes more than that of 2006, though this recovery is expected mostly to be

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<sup>16</sup>See Annex 7.4 for a fuller discussion.

concentrated in developing countries. In 2007, only in Asia, production is estimated to increase by 5.1 million tonnes or 0.9 per cent, which was above the current 2006 estimates. However, as far as Bangladesh was concerned, the prospects for production in the coming season are rather uncertain, as farmers had not planted the first Aus 2007 paddy crop until April 2007. But based on the average growing conditions, FAO's first production forecast for Bangladesh paddy stands at 40.50 million tonnes, 1.3 million tonnes more than what is currently estimated for 2006. It is interesting to note that in China, production is set to register a 1.0 per cent increase over the 2007 season figures. It has also been projected that in India and Pakistan production may recover to reach 137 million tonnes and 8.4 million tonnes respectively in 2007 (see Annex 7.4.1 for further details). In April 2007, average wholesale price of coarse rice (Tk. 19,120/MT) was 18.98 per cent higher than that of April 2006. It is also to be noted in this context that between July 2006 and April 2007 rice price had increased by 22.49 per cent.

#### **7.6.2 Wheat Flour**

FAO states that the global wheat production had dropped sharply in 2006 when total production was roughly 592 million tonnes. This was approximately 33 million tonnes or 5.3 per cent less than the production of 2005 and also below the average for the past five years. Wheat price, both in domestic and international markets, was high in FY2007. In July 2006 wheat price in US Gulf was USD 204/MT, which had increased by 4.9 per cent to reach USD 214/MT in May 2007. During the same period, average wholesale price of wheat in Bangladesh had increased 31.7 per cent from Tk. 13,670/MT to Tk. 18,000. However, wheat production is expected to increase significantly (to about 626 million tonnes) in 2007 with FAO's forecast indicating a growth of 4.8 per cent. Hence, the global price of wheat is expected to remain at a moderate level after a long period (most of 2005-06 marketing season) of upward trend. The supply and price of wheat may have some moderating effect on price of rice (see Annex 7.4.2 for further details). However, much would depend on the forces of nature, as bad weather could drastically change the expected scenario.

#### **7.6.3 Edible Oil**

According to the FAO forecast, production of soybean oil is expected to be 224.3 million metric tonnes during 2006-07, which is higher than the previous year; production of palm kernels is expected to be 9.6 million metric tonnes (see Annex 7.4.3 for further details).

#### **7.6.4 Lentil**

FAO forecasted the global lentil production to be 3,460 thousand tonnes in 2006-07. Lentil production is expected to decrease sharply in 2006-07 due to adverse weather conditions in the major lentil exporting countries (e.g. drought in Canada) and export bans imposed by major lentil exporting countries (e.g. India has banned export till March 2007). FAO also predicted that the prices of lentil would show an upward trend in response to the rising demand and inadequate supplies during 2006-07 period (see Annex 7.4.4 for further details).

#### **7.6.5 Full Cream Milk Powder**

Milk production in Australia was expected to decline by 4.0 per cent in 2007 despite a strong beginning in the first quarter (July-September). Milk production in New Zealand is likely to increase by 1.0 per cent to reach a record quantity of 15.4 million tonnes in 2007. The international price of full cream milk powder had shown an upward trend during 2007 (see Annex 7.4.5 for further details) and this trend would be maintained if growth projections held.

#### **7.6.6 Onion**

India, world's second largest onion producer, exported an all-time record of 1.13 million tonnes in the year up to March 2007, cashing in on output shortfall in the neighbouring countries. However, the Government of India (GoI) increased the Minimum Exporting Price (MEP) as an export restricting measure to combat the soaring domestic price of onion. As India is one of the major exporters of onion in the world, the global supply decreased significantly because of the aforesaid measures. As a result, global price for onion was showing an upward trend. It is to be noted that India's MEP for Bangladesh was set at USD 220 for the month of May 2007 (see Annex 7.4.6 for further details).

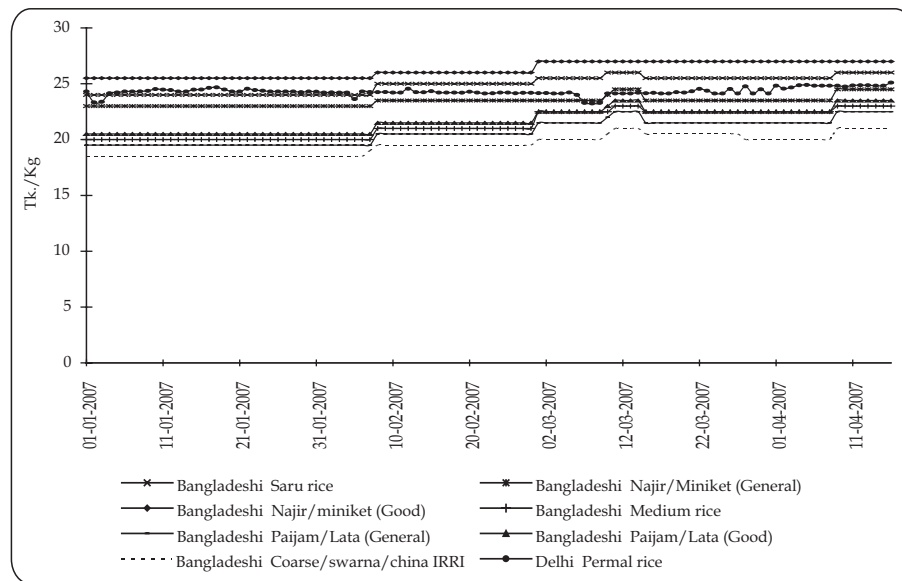
### **7.7 Comparative Picture of Daily Retail Prices of Essentials in Bangladesh and New Delhi Markets**

Being the major source of import of essential commodities of Bangladesh, prices in Indian market has significant implications for those in Bangladesh. It would also be interesting to explore whether Bangladesh alone was suffering from the price hike of essential commodities in recent times, or was this the case for India as well. This study has considered the period

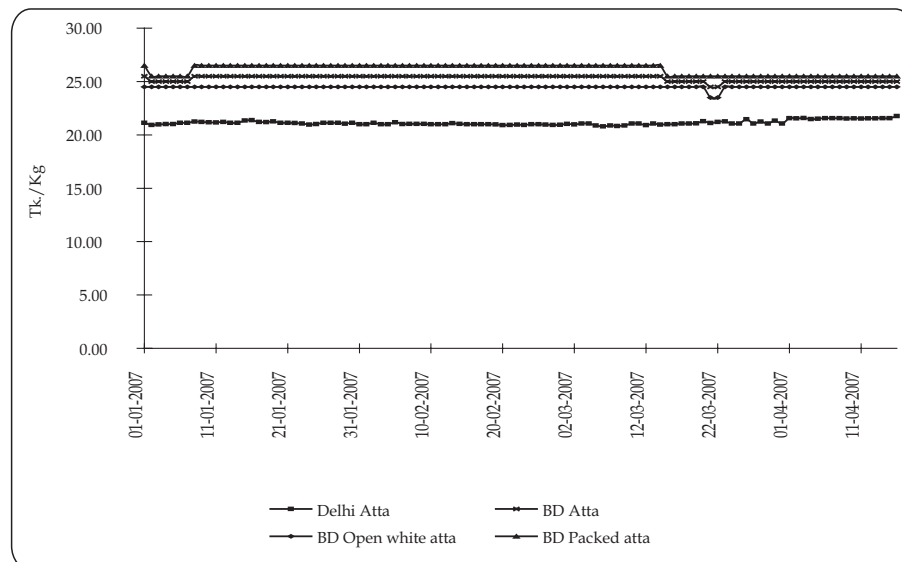
between 1 January and 16 April 2007, to compare the retail prices of a number of commodities in Dhaka and Delhi retail markets (Figure 7.6). Though in many cases the price fluctuations tend to occur in the same direction, no specific trend could be discerned from the available data set.

**Figure 7.6: Departures in the Retail Prices of Essentials in Bangladesh and New Delhi Markets: 1 January-11 April 2007**

**(A) Rice**

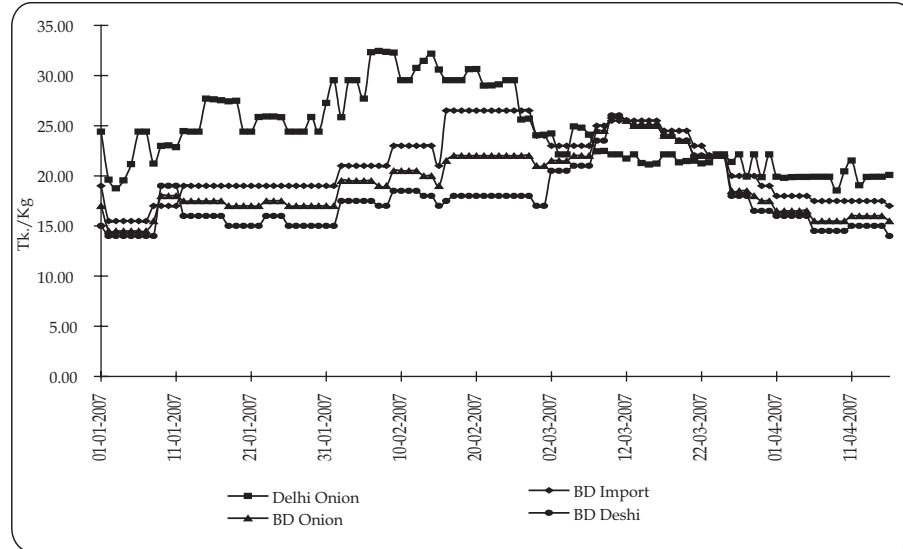


**(B) Atta (Wheat Flour)**

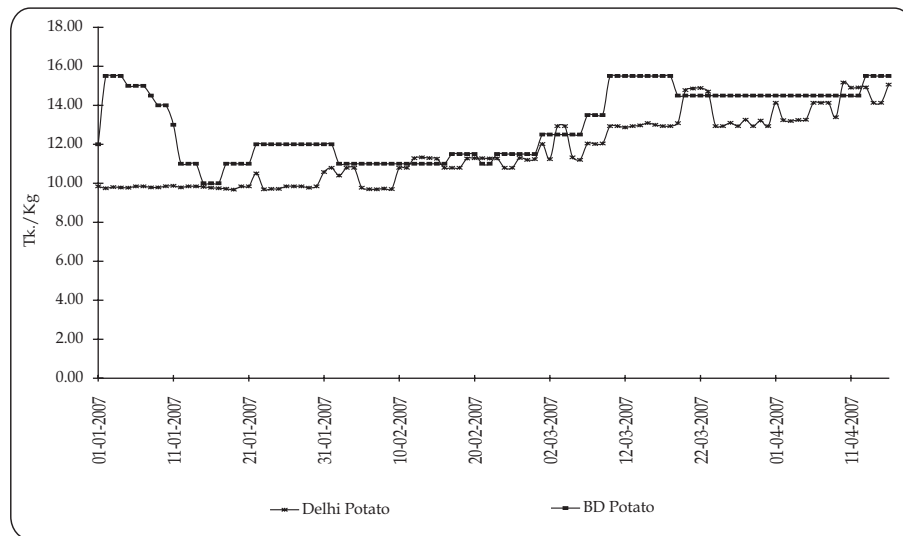




(C) Onion



(D) Potato



Source: Trading Corporation of Bangladesh (TCB) and Price Monitoring Cell (PMC), Ministry of Consumer Affairs, Food and Public Distribution, Government of India.

Retail prices of rice increased both in Bangladesh and India during this period. However, the increase was larger in value in Bangladesh compared to India, when the coarse rice of Bangladesh was compared to the permal rice of India. During this period, Bangladeshi coarse rice price went up by 13.5 per cent per kg, whilst price of Indian permal rice rose by 3.28 per cent

per kg. The retail price of onion dropped both in Bangladesh and India, though the decrease in Indian retail price (about 18 per cent) was higher than that of Bangladesh (9.0 per cent). The retail price of atta (wheat flour) increased in Bangladesh by almost 3.0 per cent per kg, and decreased by 1.96 per cent in India during this period. In case of potato, price in India increased by almost 53 per cent per kg in contrast to increase of 29.17 per cent per kg in Bangladesh.

### **7.8 Reasons behind Price Hike: Summary of Diagnosis**

The complexity and interaction of the wide range of issues associated with the market price of essential commodities make it difficult to come up with definitive answers to many of the diagnostic questions with regard to the recent inflationary trends. A large number of factors has contributed and complemented each other to result in the current inflationary pressure. The analysis, however, reveals that various supply side issues were key factors behind the price spiral; the study does not find any evidence of significant impact of demand side factors. In this final section, an attempt has been made to summarise the key findings categorising the factors under six major groups.

#### **7.8.1 Drop in Domestic Production and Lower Levels of Imports**

As discussed in Chapter 6, the bad harvest of major food crops in recent times, chita attack in Boro production, possibility of further natural disaster and relatively lower level of imports had put domestic supply situation under considerable pressure in 2006-07. Lower level of supply and inelastic demand of essential food items contributed to a rise in price that could be understood from the perspective of a simple demand-supply equation. This also generated inflationary expectations, which had triggered price rise.

#### **7.8.2 Reduction in Global Production and Rise of Import Price**

Since Bangladesh is a net importer of many food items and depends on large quantity of imported food, domestic prices were strongly correlated with the volatility of international food prices. That is to say, import parity prices had important impact on domestic food prices. Imported food items include rice, wheat, onion, edible oil, milk powder and some others. For most of these items, unfavourable climatic conditions played a pivotal role in the decreased global production in 2006-07 (See section 7.6 and Annex 7.4 for details). As a result, world prices of these items had increased due to fall in supply by major exporting countries. In some cases such as for corn, non-food demand of food items (tension between fuel and food because of use of corn for production of ethanol) has led to larger shortage of availability of

food items as food, in the global market. Besides, some of the major exporting countries have imposed bans on exporting food items to ensure greater domestic availability. On the other hand, major importing countries were demanding more agro-goods since their own domestic production had decreased due to erratic climatic conditions. This is a double-edged sword, in terms of both domestic and international contexts, leading to higher global prices that hit the poorest segment of the society the hardest.

### **7.8.3 Institutional Weakness**

As discussed in Section 7.1, lack of appropriate institutional framework to monitor domestic as well as international markets, lack of real time data on demand, supply and price (through integrated MIS), inconsistency of data provided by various sources, shortage of trained and skilled personnel to collect and analyse this information have emerged as one of the major institutional weaknesses in addressing the inflationary pressure.

### **7.8.4 Business Environment and Ensuring Compliance with Law**

The current CTG has initiated various anti-corruption drives and has made an attempt to ensure strict compliance of law. Some of the steps taken by the CTG has led to uncertainties and fear among business people leading to snags in the working of normal supply chain and had adverse implications for the overall business and investment environment. It was found that during this time (January-February 2007), many importers had cancelled their import orders fearing enquiries by the relevant GoB agencies with regard to sources of finance. New L/Cs are also not being opened for the same reason. This had created supply shortage in the market. Besides, due to strict border surveillance, informal trade and smuggling of goods have significantly declined, if not stopped, which also have had a negative impact on the supply situation. CTG's steps once again re-emphasised the need for maintaining business confidence at a time of market volatility.

On the other hand, due to strict compliance of law and vigilance, cost of doing business has decreased, port efficiency increased (particularly the efficiency of Chittagong Port); speedy delivery of service and curtailment of speed money are factors that are likely to have medium to long term beneficial impact on business environment.

### **7.8.5 Market Imperfections**

Market imperfection can be viewed as any departure from the ideal benchmark of perfect competition, due to externalities, taxes, market

powers, etc. Market imperfections affect virtually all transactions in some way or the other, generating costs that interfere with trading carried out by rational agents in the market. Market imperfections could generate competitive advantage and rent opportunities for some agents. Theoretically, imperfections can and do change over time, but they collectively never go down to zero. Identifying and solving the underlying business problems linked to these imperfections remain an ongoing challenge. Some of the factors contributing to market imperfections in Bangladesh could be the following:

#### *Information Asymmetry*

Information asymmetry among various stakeholders is one of the major reasons behind existing market imperfections. The CPD survey found that farmers often sell their produces to farias or beparis at low prices, simply because they are not aware of the price that farias/beparis get from the next agent. And this affects in two ways. Actual producers do not get their fair prices. The price level gets pushed up in the end.

The display and compliance of MRP is not widely practiced in our retail market which restricts access of knowledge about the price on the part of the consumer and allows retailers to charge different and higher price for the same product.

#### *Presence of Large Number of Intermediate Market Agents*

During the survey, presence of a large number of intermediate agents in the various value chains, for a particular product was observed. It appeared that many agents in the value chain could be done away with, if marketing channels of producers could be established. Although the intermediate agents do perform useful services, and provide employment opportunities for some, there is much scope to make the marketing channels work in favour of producers.

#### *Market Power of Importers, Millers and other Intermediaries*

Market power is measured by the ability of a firm or other market participants to influence prices by varying the amount that it chooses to buy or sell. Analysis of NBR data reveals that only a handful of large importers contains major share of total imports (and in case of domestically produced and processed products, it was the millers). These agents have a significant control over market prices and supply situation. Although this study could not find any operative syndicate as such, there was a high possibility for

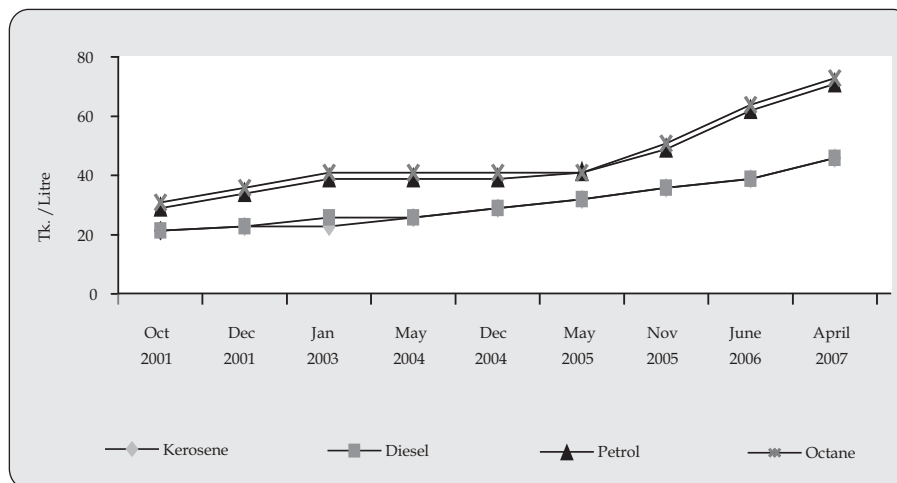
creation of cartels and syndicates in a situation of such control over market. Information barrier and indirect entry barrier could come into play under such circumstances, and this could have adverse impact on prices.

It is not only that big importers and millers potentially create cartels, the field study found that middlemen (e.g. beparis and aratdars) also often take recourse to 'understanding' with regard to supply and price. Farmers and retailers often remain price-takers, whilst the middlemen wield considerable power over market prices, both at farm-gate end and also at retail end.

### 7.9 Other Supply Side Factors

Prices of petroleum products have leaped eight times over the last five years in Bangladesh, mainly because of increase in global price of crude petroleum (Figure 7.7).

**Figure 7.7: Rise of Fuel Price in Bangladesh**



Source: CPD-IRBD database.

Prices of octane and petrol have increased 87 per cent and 80 per cent per litre respectively, during this time. As diesel is widely used for irrigation, production cost has increased significantly because of this leading to rise in farm-gate prices. Furthermore, rise in transportation cost has also contributed to rise in essential commodity prices.

It was found that high bank interest rate and high level of L/C margin for import of essential commodities, spread between buying and selling exchange rates of currency have also contributed to cost of doing business, leading to price hike. Also, a Consumer Protection Act needs to be put in place on an urgent basis to safeguard the interests of common people.

This chapter makes an attempt to pull together the major findings of the study and articulate policy implications emanating from those. The policy recommendations are presented in two broad groups. The first group of recommendations are of overarching nature and put forward a number of legislative, regulatory, institutional and macroeconomic policies to improve government's capacity to manage the market for essential commodities. The second group of recommendations relate to specific products which were covered by the study. However, these recommendations need to be seen in the context of the nature of the inflation being experienced and the overall outlook for the inflation in 2007.

### **8.1 Nature and Diagnosis of Recent Price Hike**

The analyses of field and secondary information presented in Chapter 6 and Chapter 7 provide the background platform to answer a number of questions as regards the nature and underlying reasons behind the recent price spiral of essential commodities in Bangladesh. There are historical and contemporary evidences in favour of the popular argument that supply side factors are no less important than the demand side factors in stimulating inflation in the Bangladesh economy. A time series analysis of recent inflationary trend found significant mutual relationship between consumer price inflation and supply side phenomena (such as—import cost, oil price hike, exchange rate and production shocks); while wage inflation has been found to be weakly related to inflation (Majumder 2006). Although the present study did not make any attempt to quantify the relationship between inflation and various contributing factors through complex modelling exercises, it has come out pretty clearly that recent inflationary pressure is more an outcome of the supply side problem.

Both domestic as well as global factors have acted in tandem to trigger the current price spiral. Global supply shocks due to adverse climatic conditions in major exporting countries and global price hike of petroleum products have compounded the affects of domestic factors that include poor domestic production, increased production costs, market concentration/possibility of

existence of collusion of market agents (both at importers and intermediate level), institutional weaknesses, information asymmetry among different stakeholders, large number of market intermediaries, dislocation in market structure due to anti-corruption drive, increased transportation cost, relatively high cost of doing business, high interest rate and bank charges. Finally, an inflationary expectation also seems to be at work. However, it should be borne in mind that due to the product-specific nature of price hike all factors are not equally responsible in terms of their contribution to the current price hike.

In absence of any tangible increase in real wage and real income of common people during this time, the price rise would perhaps exacerbate an already widened income inequality. The relatively high inflation of essential items has also resulted in change in relative prices, to the detriment of the real income of common people.

## **8.2 Outlook for 2007**

According to the International Monetary Fund (IMF), the global food prices rose by 10 per cent in 2006 and were expected to increase further during 2007 due to the price spirals of bio-fuels, high food demand from Asia and adverse climatic conditions in the major producing zones (e.g. drought in Australia).

The Reserve Bank of India (RBI) also made a forecast that the food inflation in India would be 8.5 per cent in FY2006-07 which is higher than the rate of the previous year. The inflation rate for rice is expected to be 5.0 per cent which is more than double the rate for FY2005-06. Similar trend is also expected for wheat and pulses. Increased price inflation in India was likely to significantly affect the retail prices of these commodities in Bangladesh, as India continues to remain dominant import source for many of Bangladesh's essential commodities.

Total production of Aus and Aman rice in FY 2007 was estimated to be 12.41 million metric tonnes against 12.55 million metric tonnes in FY2006. Department of Agricultural Extension (DAE) has stated that the area under Boro paddy has increased to 4.429 million hectares (ha) in FY2007, against actual area under Boro of 4.067 million ha in FY2006. According to the DAE, 1.2 per cent of the Boro rice area in FY2007 was affected by chita problem. In other words, Boro cultivation area, as per information of DAE has increased by 8.9 per cent. The target of Boro production for 2008 April-May season has been set at around 17 million tonnes. This, however, would need to be

confirmed by Bangladesh Space Research and Remote Sensing Organization (SPARRSO) and Bangladesh Bureau of Statistics (BBS). In the aftermath of consecutive floods and cyclone 'Sidr,' all hope is hinged on Boro production of 2008. Reliable estimates on Boro production is essential to decide on Boro rice procurement targets and commercial rice import by public sector.

The ongoing price hike of petroleum in the global market is likely to put further strain on food inflation in Bangladesh in the coming months. The government increased the energy prices in April 2007 in response to the soaring global prices. Prices of diesel and kerosene were increased by 21 per cent from the April 2007, only 10 months following previous adjustments. Higher fuel prices, especially the price of diesel, which is commonly used in irrigation pumps, have caused the production cost to rise.

As of February 2008, price of petroleum had increased further, crossing the psychological barrier of USD 100 per barrel. Price adjustment, under the circumstances, is not advisable at the moment. However, this will force the Government of Bangladesh (GoB) to incur huge expenditure in the form of subsidies and the government may again need to review the prices in near future. However, higher fuel prices could fuel the inflations further. Hard choices will need to be made.

Strict enforcement of law by the joint forces and the eviction of many roadside markets were also found to have adversely affected the food supply situation. Demolitions of local haats and bazaars have not helped either.

The Bangladesh Bank (BB) had set the inflation target for the second half of FY2007 at 6.85 - 6.95 per cent. The BB was hoping to keep the inflation rate within 7.0 per cent in FY2008. It can be assumed, based on current market trends, that the prospects of retail prices of essential commodities in Bangladesh coming down are very slim. In the above context, food inflation is expected to be hovering around double-digit in the months to come. Till the Boro crop is harvested, price of rice, a major determining factor in terms of food inflation, is not expected to come down.

### **8.3 Possible Strategies to Cope with the Inflation**

In view of the global production and price scenarios, regional inflationary trend and national macroeconomic correlates, it is reckoned that there is little prospect for the consumer price index (CPI) to come down perceptibly in the coming months. As the rate of inflation is the outcome of a complex



interplay of economic factors, hardly any unique solution exists to deal with the situation. As noted earlier, the present inflation is product/sector specific by nature, not so much of a macroeconomic nature. In view of this, CPD has not subscribed to any drastic shift in monetary policy in the form of raising the interest rate. Given the sound foreign exchange reserve and healthy Balance of Payment (BoP) situation, appreciation of Taka (particularly due to devaluation vis-à-vis Indian Rupee (INR) - India being a major source of import) may not be an effective exchange rate policy to stabilise inflation. However, the government may be well advised to focus in the short term on a set of price stabilisation policies targeting a basket of essential products. The government should take initiatives to increase imports both at public and private level to ensure adequate supply of essential commodities. Fiscal measures such as zero-duty on imports of selected essential items, needs to be continued. In the medium term, the government may focus on increasing domestic production of daily essentials, taking steps to bring down costs of production and improving crop productivity.

The measures proposed in this study could be grouped in three categories in terms of the level of: market based interventions, non-market measures and institutional reforms.

These policies are to be underpinned by strengthened macroeconomic measures geared towards improved revenue generation, prudent monetary growth and improved quality of public expenditure. Improved domestic resources will be necessary to underwrite incremental budgetary allocations targeted to mitigate the pressure of rising prices on low and fixed income groups, including producers and/or consumers. While managing monetary growth one needs to see that investment and production in the private sector does not get hampered due to credit constraint. The quality of public expenditure will acquire enhanced importance as the efficacy of the flanking measures will greatly depend on the capacity of the government to appropriately target and deliver subsidy and other transfer programmes.

#### **8.4 Overarching Policy Measures**

##### **8.4.1 Define "Essential Commodities," Enact "Supply and Regulation of Essential Commodities Ordinance" and "Consumer Protection Act"**

It was observed earlier that the government does not have in its arsenal any legislative instrument or appropriate mechanisms to intervene in the market to stabilise prices. In view of the liberal market-oriented policies pursued

and continued by this government, it also becomes conceptually difficult to single out products for interventions. However, it is widely recognised (and also expected) that the government has a duty to provide its citizens with strategic goods, particularly basic food stuff, at affordable prices. "*Essential Commodities Control Order (1981)*" provides some guidelines for trading in items mentioned in the schedule of the Order. However, on review, it appears that this order is not only inadequate to deal with the present situation, but also lacks an enforcement mechanism. It may be pointed out in this connection, that the Department of Prices and Market Intelligence (DPMI) under the Ministry of Commerce (MoC), which was entrusted with the task of enforcement of the regulatory order, has long since been abolished (in 1989).

#### *Recommendations*

- The government, in greater public interest, may officially identify certain food products as "essential commodities," and declare its intention to maintain price stability of such commodities through policy and institutional interventions.
- The government needs to reexamine the effectiveness of the "*Essential Commodities Control Order (1981)*," and explore the possibility of enacting a law which could be styled as "*Supply and Regulation of Essential Commodities Ordinance (2007)*," to provide a statutory basis to the government's targeted emergency measures for keeping prices of certain "essential commodities" within the purchasing capacity of common citizens.
- Government also needs to finalise "Consumer Protection Act" and ensure its effective enforcement.

#### **8.4.2 Strengthen Market Intelligence**

There is a serious dearth of information regarding demand, supply and prices of essential commodities (both domestically produced and imported). Relevant data and information are not collected, analysed and made available to the market agents in an accessible manner. The government has recently taken some initiatives to strengthen its market monitoring activities by way of establishing a temporary Price Monitoring Cell (PMC) under the MoC. The PMC monitors the value of letter of credits (L/Cs) opened for imports of a set of essential commodities as well as compiles information on retail prices of essential commodities, as observed in selected markets in Dhaka city. The current capacity of the PMC is inadequate to serve the

purpose of formulating an informed policy decision. On the other hand, the Department of Agricultural Marketing (DAM) under the Ministry of Agriculture (MoA) has a much more comprehensive market intelligence service which covers up to district level data on agricultural products. However, information collected and analysed by DAM does not have wide dissemination, including among the policymakers.

#### *Recommendations*

- Government may create a new agency styled as the "Department of Market Surveillance (DMS)," under the existing legal framework of the now-extinct DPPI for prudential supervision of the daily essential commodities markets. The proposed DMS will work in close collaboration with the DAM, Department of Agricultural Extension DAE, Directorate-General of Food, including Food Planning and Monitoring Unit (FPMU), and Trading Corporation of Bangladesh (TCB). The price monitoring unit of the TCB may be merged with proposed DMS. The DMS will particularly be responsible to collect data on global production and price situations, as well as make projections as regards availability of different essential commodities. The fact-based information as regards local production, demand and international market trends, as well as loss and damage of production due to various reasons, including climate change and upward trends of global food inflation (particularly in India) should be collected, analysed and widely disseminated. In this regard, information available with different agencies like National Board of Revenue (NBR), Policy Monitoring Unit (PMU) Ministry of Finance (MoF), BB, DAE and TCB need to be used in a coordinated manner. The DMS will provide suggestions to the TCB regarding import, based on its assessment of the local and global market. Export of essential items, if any, also needs to be clearly monitored in view of local availability.
- The DAM should be provided with adequate manpower and financial resources to convert it into a more effective organisation. The proposed DAM should be given the responsibility to estimate the region-wise demand and supply capacity with the help of other agencies and this information may be disseminated through the DMS.
- Training to improve human capital.

#### **8.4.3 Rationalise Import Duties of Essential Commodities**

As was noted earlier, Bangladesh is a net food importing country. Essential commodities that are imported include rice, wheat, onion, edible oil, full

cream milk powder and lentil. Apart from the rising price of essential commodities in the international market, other factors also did impact on domestic prices (e.g. high ad-valorem tariff, high L/C margin and high interest rates on trade finance, volatile exchange rate, and high godown or warehouse charge), which also contribute to increasing per unit import cost that are subsequently passed on to the consumers. It is to be borne in mind that revenue generated from the import of essential commodities is a major source of income for Bangladesh government. For example, according to the Operative Tariff Schedule FY2007, total tax incidence for milk and cream in powder forms (>1.5 per cent Fat) was set at 72.31 per cent; for onions (fresh or chilled) and dried lentils at 5.0 per cent and for crude soybean oil and palm oil at 20.75 per cent. The government earned a total of Tk. 2,030.08 crore as imported revenue in FY2006 from eight selected food items (i.e. rice, wheat, onion, crude palm oil, crude soybean oil, lentil and raw and refined sugar). A CPD exercise, based on operative tariff schedule and NBR data set, estimates that if the current tariff rates, all types including Value Added Tax (VAT), are replaced by Tk. 1,000/ton of duties for rice, wheat and onion, the government will generate an additional revenue of Tk. 11.93 crore compared to the revenue generated through ad-valorem tariff rates, which was Tk. 351.42 million. On the other hand, with this same rate of specific tariff (i.e. Tk. 1,000/ton) instead of the current in place tariff rates for crude palm oil, crude soybean oil, lentil and sugar (both raw and refined), the government would lose revenues worth Tk. 17,348.34 million, compared to revenue generated by the ad-valorem tariff rate which was Tk. 19,949.36 million.

#### *Recommendations*

- If possible, government should introduce zero tariffs for selected essential commodities (currently zero import tariff has been provided for rice and wheat), particularly for the ones of which import price is high (e.g. lentil).
- Ad-valorem tariff depends on the import prices. The government may consider replacing the existing ad-valorem tariff structure by introducing specific tariffs for essential items of consumption. The CPD analysis of NBR data indicates that there is a need to analyse the import data for essential commodities for the last few years and recommend a product-specific flat rate per tonnage replacing the existing tariff structure. It will give the importers protection against the highly fluctuating international price of essential commodities; it would also eliminate incentives for mis-invoicing on the part of the importers (for import tax evasion); thereby ensuring revenue generation interest of the government.

- Rationalisation of high Supplementary Duties (SD) is essential for certain products (taking into cognisance local production scenario), particularly for full cream milk powder. However, the government should negotiate with packaging and distributors of full cream milk powder (e.g. Nestle, Sanwara group) before implementing this removal/reduction, so that the benefit originating from such move is accrued to the consumers in the form of reduction in the existing market price.
- Importers urged the government to consider the possibility of revising of the duty structure of essential commodities as declared in the budget for FY2007-08 subject to overall national demand and supply situation of the country, and in view of any fluctuations in international prices. This kind of declaration was expected to give the importers business predictability.

#### **8.4.4 Increase Market Agents at Import Level**

It was found that the market share of most of the essential commodities was concentrated in the hands of only a limited number of importers. Initiatives need to be taken so that more players could come to the market making room for a fair amount of competition in the market.

#### *Recommendations*

- Government should encourage the commercial banks to facilitate formation of importers' groups consisting of small scale importers (in terms of capital). This was essential to encourage additional players to come and compete in the import market of essential commodities, so that they may take the benefit of economies of scale (bulk import). This will help new players enter the market and with the growing number of importers/traders, the popular perception and speculation about syndication could be removed. However, existence of such groups could give rise to queries such as what would be the legal identity of such groups? Will they place purchase orders using one of the member's business name/trade licenses or will they need to register themselves as different entities and use the information pertaining to that entity for banking and tax purposes? Will they be equally liable for the bank loans or will they be liable only for their proportion of the loan? Government has to think through these issues and amend the relevant rules and regulations, if necessary.
- The government should monitor international prices of imported essential products on a regular basis through its institutional mechanisms and

disseminate the information among concerned authorities and market agents to prevent price fixing and supply manipulation through syndication.

#### **8.4.5 Reduce the Production Cost of Agricultural Commodities**

One of the major reasons for the recent price hike of essential commodities relates to increasing cost of agricultural inputs such as seed, irrigation, fertiliser and pesticides. The irrigation system of Bangladesh is highly dependent on diesel. The study found that production cost of the essential commodities would increase further in the next season due to the price increase of diesel and kerosene (on 2 April 2007). The prices of diesel and kerosene were increased by 21 per cent to reach Tk. 40 per litre from the earlier price of Tk. 33. The use of electricity in the irrigation remained very low (17 per cent only) and regrettably a declining trend has been observed in recent times in the usage of power for irrigation. In FY2007 (July-February), 39.66 mega kilo wat hour (MKWh) was used in agricultural pumping which was 78.80 MKWh in FY2004. Electricity available for irrigation for FY 2007 (July-February) was only 50 per cent of the total electricity used for irrigation in FY2004.

#### *Recommendations*

- Power distribution to the agricultural sector should be increased with a view to reduce the use of diesel for irrigation, through load management. In this regard, the government must take steps to increase the local electricity generation capacity and may consider a wider application of solar power to generate electricity in rural areas with the help of Non-Government Organisations (NGOs). In the short run, import of power through rental basis could be a possible solution. The government should also explore the opportunity to import electricity from the neighbouring countries and may like to explore the establishment of a SAARC regional grid in the medium term.
- Government should consider providing more subsidies on the rate of power usage in agricultural sector which is currently Tk. 1.89 per KWh. More importantly, electricity supply for irrigation purposes has to be increased on a priority basis.
- The government needs to provide subsidy directly to the farmers' on petroleum usage for irrigation. Modalities for this subsidy should be developed with strict monitoring mechanism (so that only genuine

farmers may be benefited) and tight border security enforced to prevent smuggling. To this end, either issuance of Entitlement Card or use of the voter/National ID card could be considered.

- As the government and private entrepreneurs are currently meeting only 12.50 per cent of the total demand for seeds, initiatives should be taken to increase supply of quality seed by private sector and NGOs. Towards ensuring this, special support for production of breeders' seed and supply of those seed at subsidised rate to NGOs and private sector companies for production of quality seed is necessary. This will reduce their production cost and increase seed supply, and thereby positively impact production.

#### **8.4.6 Reduce Financial Charges and Exchange Rate for Trade in Essential Commodities**

The current relatively high financial charges (i.e. interest rates and L/C margins) and fluctuations in exchange rate for export and import prices has also contributed to the rise in import cost of essential commodities.

##### *Recommendations*

- In case of L/C, banks usually determine the margin on the basis of bank-client relationship. A higher margin could raise the price of foodgrains and urgently required items. In case of daily necessity items, L/C margins should be fixed at as low a level as possible.
- Bangladesh Bank may take initiative to encourage all commercial banks to lower the interest rate against loan for importing/domestically procuring essential commodities (e.g. Loan against True Receipts (LTR), Loan against Imported Merchandise (LIM), Cash Credit (CC) Pledge, CC-hypo). This may be fixed for a certain period of time and could be subsequently reviewed.
- The US Dollar (USD)-Bangladesh Taka (BDT) buy-sell exchange rate difference for importers and exporters is currently 2.23 per cent in Bangladesh. This is 1.30 per cent in India, 0.61 per cent in Pakistan and 1.47 per cent in Sri Lanka. This difference should be close to 1.0 per cent and banks should be encouraged to review this.

#### **8.4.7 Reduce Transportation Cost**

The agents in the value chain informed the CPD survey teams that due to recent price hike of the petroleum products and strict compliance with law



(e.g. tonnage restriction on Jamuna Bridge), transportation cost has gone up significantly. However, they confirmed that the cost of extortion (previously known as "road cost") no longer exists, or at least has declined to an insignificant level due to improvement in law and order situation, resulting a decrease in the transportation cost. Although the net impact of all these factors on transportation could not be estimated, the end effect of all this on per unit transportation cost turns out to be insignificant. The agents also complained regarding the existence of the unavoidable middlemen/brokers in transport sector, particularly at the loading points at Benapole, Hili and other land ports).

#### *Recommendations*

- Transport sector should be under strict vigilance; tonnage restrictions should be reviewed, and middlemen/brokers at the loading points should be eliminated. Distance-wise transportation cost could be decided through a tri-partite meeting between traders, transport owners and the government. River and railway networks should be adequately used for transporting essential items to various parts of the country at a relatively lower cost.

#### **8.4.8 Rejuvenate the Moribund TCB**

TCB is an autonomous state trading organisation under the MoC established in 1972. TCB's main functions include the task of acting as a watchdog to monitor the supply and price situation of essential goods, and engaging in trading and related activities as directed by the government. However, it is widely acknowledged that the TCB was not being able to perform its functions at a satisfactory level at present. In FY1972-73 import by TCB accounted for 25 per cent of the total import. In contrast, TCB's imports plummeted significantly following the introduction of import liberalisation policies in Bangladesh. Currently (as of 2007) TCB accounts for merely 0.3 per cent of the total import of the country. As a consequence of sequential downsizing of TCB, no new recruitment has been made since 1993-94; rather, the workforce has been downsized considerably. With no distributor of their own, TCB has to depend on the registered dealers under the Directorate-General of Food, creating serious problems in terms of coordination.

#### *Recommendation*

- The GoB should take necessary measures to rejuvenate the moribund TCB and turn it into a modern corporation, in line with the public procurement



regulations. Experts and professionals from related disciplines need to be recruited with the mandate of taking decisions on importing essential commodities as recommended by DMS, and acting as a watchdog to monitor the overall market situation. The relationship between TCB's operational procedures and the public procurement regulations needs to be examined carefully. TCB has already taken the welcome initiative to import edible oil and full milk powder, to stabilise the price of these commodities in the coming days, particularly in view of the sharp price rise of these essential items.

#### **8.4.9 Restore Business Confidence**

Traders (especially in Khatunganj, Chittagong) expressed their deep concern to the CPD survey team with regard to the panic syndrome that was prevailing among the business community due to the government's anti-corruption drive. As a result, a number of importers have cancelled their L/Cs and import orders in early 2007, fearing enquiries about their assets and income. There were also a number of incidents of godowns/warehouses being sealed-off, because of alleged hoarding and storing of poor quality goods. These steps have contributed negatively and resulted in reduction of the supply of goods in the market, which consequently led to rise in the price of essentials. On the other hand, reported moves by the government to monitor banking transactions beyond certain limit have also created fear among the businessmen and entrepreneurs. However, the situation has improved in recent times, thanks to the repeated declaration from the government that honest businessmen would not be harassed and they had nothing to fear. The government has also decided to reopen some of the sealed godowns/warehouses. However, during the survey, the CPD team observed an environment of anxiety and uncertainty and an attitude of wait-and-see. This had tangible impact on market expectation and behaviour of both suppliers and customers, starting from importers down to the retail market operators.

#### *Recommendations*

- The government should transmit the message clearly that the honest business persons and entrepreneurs have nothing to fear and be apprehensive about. A distinction between people who have breached public trust by abusing state power to amass personal wealth, and those who indulged in corrupt practices while conducting their business will need to be made. In case of the latter, the thrust will have to be on playing by the newly instituted rules of the game in future. Members of the law

enforcement agencies will need to play an important role in restoring business confidence in the country.

- CPD recommends measures to regulate the markets, strengthen institutional, tools and put in place monitoring mechanisms in order to tackle the price hike. However, it is not advisable that any initiative such as regulating market through Police, Bangladesh Rifles (BDR) or Rapid Action Battalion (RAB), as taken by the GoB. Because such measures lead to large dislocations in the market are taken by the GoB that would have negative impact on investment, money supply, inflation and business environment. Restoring business confidence ought to be given highest priority in this connection.

#### **8.4.10 Broad-base and Streamline OMS Initiatives**

Government has taken initiatives to control the recent price surge by organising sale of daily essentials through the BDR, TCB, Directorate-General of Food, Ansar and VDP. Among these initiatives, the BDR's Operation Dal-Bhat and establishment of Open Markets (toll-free markets) are the two most successful initiatives that have received attention and appreciation of the general masses.

The CPD study found that the BDR was buying essential items directly from the producers and selling those directly to the consumers by eliminating most of the middle agents. This had a positive impact on the retail price. However, the market impact of the BDR Dal-Bhat Operation was not very clear, as the CPD survey teams received diverse opinions from retailers and consumers: one retailer group stated that following the launch of the programme, price has stabilised in retail markets: while another group firmly maintained that this initiative has failed to create any impact on the overall state of the markets. There were retailers who pointed out that though BDR operation has not impacted on the price situation, their daily turnover has fallen significantly. It was observed during the field visits that most of the customers in these markets came from the low income or lower-middle income groups; buyers belonging to top level income groups were largely absent in these markets. It may be pointed out here that BDR markets were able to meet around 25 per cent of the demands of daily essentials of the Dhaka city through its 21 outlets. Long queues to purchase products from these sale centres speak of both lower prices at these outlets, and also the significant supply-demand gaps of essential items.

The government has also initiated Open Market Sale (OMS) of sugar and lentil through the TCB and that of rice through the Directorate-General of

Food to stabilise prices of these commodities. Interestingly, some private sector entities have also come forward to sell their products directly to the consumers at factory level price (e.g. the Partex Group, City Group, TK Group). However, because of the limited scale of their operation, these initiatives failed to make any significant impact in the market.

#### *Recommendations*

- The government should continue its OMS of essential commodities through TCB, Directorate-General of Food, BDR and Ansar and VDP till the food price inflation comes under control. Efforts should be made to extend OMS up to the district level. However, the government needs to have an estimate of the direct/indirect subsidy that would be required to provide through such programmes.
- The government may also encourage corporate actors to come forward with direct and scaled-up sale to consumers at reduced price. This could help create a sobering impact on the market. Such efforts could be particularly encouraged in the month of Ramadan.

#### **8.4.11 Make Mandatory Display of Maximum Retail Price (MRP) on Product**

The CPD survey came across highly volatile price behaviour at the retail level. In most of the cases for packaged products (e.g. wheat flour, edible oil, rice, full cream milk powder, salt, etc.), retailers take the advantage of the absence of specification of Maximum Retail Price (MRP) on the packet. These products are usually distributed by listed dealers who enjoy specific commission per packet and sell them directly to the retailers. Hence, the price at which retailers purchase these products should be the same for all agents, at least for the retailers of a particular region (not considering transport cost differentials). In many cases, it was found that there was no valid explanation for price variations for these products at the retail level. Yet, it was observed that there was significant price variation for some products even in markets in the same geographical areas. What was also of interest to note was that even the same distributor was charging different prices to different retailers. Moreover, even in rare cases, when the MRP was mentioned on the packet, it was not properly enforced at the retail level.

#### *Recommendations*

- In this context, CPD would like to strongly recommend that producers/ importers/ processors are asked to display the MRP on a mandatory

basis, along with the manufacturing and expiry dates of the product on the packet/container. A massive campaign should be conducted among retailers and consumers not to sell and buy these products above the specified MRP. However, the MRP may be modified from time to time to match the production/import cost which must be subject to prior public notification. The government may introduce an executive order for strict implementation of its directive in this regard, which would ensure that MRPs are mandatorily enforced at all retail levels, at least for selected essential items.

#### **8.4.12 Promote "Producers' Marketing Association"**

The CPD survey found that farmers often sell their produces to the farias or beparis at low prices and had no idea about the price that the farias/beparis were receiving from the next agent. It has also been noted that the number of market intermediaries in the supply chains was more than what was required for efficient functioning of the market. This was mainly due to information gap often leading to collusive market behaviour. These middlemen or the so called facilitators tended to earn super normal profit by taking advantages of the substantial difference between the farm-gate price and the retail price. While syndicates could actually exist in various phases of a value chain, the survey did not look into this possibility. One particular phase that connects producers to the wholesale markets of Dhaka city (or other big markets for that matter), was found to be vulnerable to syndication, particularly in case of domestically produced products (more prevalent in case of seasonal vegetables). Though beparis usually make business individually, often the capital of all beparis in a local haat/bazaar was pooled together to form a monopsony fund, leaving the farmers with no choice but to accept the price offered by this 'single' monopsonic buyer in the market. While this was found to exist at one end, local respondents believed that this was also happening when the beparis were dealing with the retailers at the other end, compelling the retailers to buy from them at a higher price than would have been the case had there been a competitive environment in the market. However, aratdars and beparis protested against such allegations with regard to syndication and maintained that they formed syndicates only when they were unable to make a reasonable profit due to lower sales price offered at the wholesale levels.

#### *Recommendations*

- For domestically produced items, the best option is to remove the existing market imperfections and inefficiencies in the value chain. By establishing

producers' cooperative and marketing organisation and by creating direct link between producers and consumers it would be possible to have a positive impact on the retail price of essential commodities. This would also be a mechanism to provide reasonable (fair) price to producers. The government could encourage the existing NGO networks/private sectors to take a more proactive interest in this segment of the supply chain, i.e. in the area of marketing of agricultural commodities.

- The government must urgently identify some suitable locations within and around Dhaka and other big cities to establish new arats so that more options will be available for both producers and retailers. This is expected to reduce the monopoly power of the vested interest groups in existing arats by infusing more competition at this level of the market structure.
- A model titled '*Agro Growth and Marketing Centre (AGMC)*' has been proposed in this study. The objective is to remove the existing market imperfection and inefficiency in the supply chains for domestically produced products. It will be a producers' cooperative and marketing organisation which will create a more direct link between producer and consumer and will help the government offer consumers a significantly reduced price of daily essentials (see Annex 8.1 for further details).

#### **8.4.13 A National Storage Policy**

A national storage policy is required for two principal reasons. Firstly, non-existence of such policy allows the private entrepreneurs to set usage fees at their own discretion. Since no specific guidance or regulations exists in this respect, no control can be exercised with respect to prices. A national storage policy would provide specific and appropriate guidelines and also could be used as a regulatory framework to monitor the storage sector. Secondly, storage owners need not, and hence do not, take cognisance of health related issues associated with storage facilities. The proposed national storage policy would specifically mention the standards that the store owners were expected to maintain, and will enforce compliance with such standards. License for doing business will be cancelled in case of failure.

#### *Recommendations*

- Government needs to formulate a comprehensive National Storage Policy for both public and private sectors. One important consideration in this connection should be public health concerns. Food items and non-food

items such as chemical products should be stored separately. Besides, government should allow the private entrepreneurs to use public storage facility and provide adequate subsidy for storing daily essential commodities. Government of India (GoI) is providing a subsidy of 25 per cent for such services which was enjoyed by all agricultural commodities. This was expected to reduce storage cost, and thereby help reduce retail prices of these commodities. In the proposed national policy, storage time should also be fixed for essential commodities considering both health and supply considerations that take cognisance of the recently proposed Anti-hoarding Act of GoB.

#### **8.4.14 Establishment of an Advanced Agri-Portal**

In National Agricultural Policy (NAP) 1999, an arrangement to develop reliable database for the crop sector at the district level has been proposed. As of now, Bangladesh does not have any national agricultural database, nor are there any reliable estimates of regional demand and supply of agro-commodities. On the other hand, lack of inter-departmental coordination among the different organisations involved (e.g. DAE, BBS, DAM, TCB, Directorate-General of Food), and also because of application of different methodologies by different organisations, estimates of various agencies do not match and create confusion among policymakers and researchers.

##### *Recommendations*

- In this context, CPD recommends that initiatives be taken to establish an integrated national Agri-Portal, which could be titled "Bangladesh Agricultural Information Network Centre (BAINC)" under the Department of Agriculture Information Service (AIS), MoA. All relevant agencies are to provide information to AIS to create and update this portal. The information co-generated will be available publicly. This portal would provide, region-wise national demand, supply and price information for major essential commodities. Global production and price information collected by the proposed DMS will also be integrated in this database. The BAINC can follow the initiatives taken by the Indian Agricultural Portal-AGMARKNET which covers market, price, infrastructure and promotion related information for efficient marketing (Annex 8.2). Information can also include grades, labelling, sanitary and phyto-sanitary requirement, physical infrastructure of storage and warehousing, marketing laws, fees payable, etc. At a later stage, this portal could consider inclusion of other agro-commodities as well.

#### **8.4.15 Take Preparation in view of Upcoming Ramadan**

The rise in prices of a set of items which are in high demand (e.g. brinjal, lentil, onion, chick peas, chick pea flour, oil, sugar, potato, meat, green chilli, parched rice (chira), dates and puffed rice (muri), during the month of Ramadan is a well known phenomenon in Bangladesh. For example, in 2006 in the month of Ramadan, the price of green chilli, brinjal, onion and garlic increased by 211 per cent, 186 per cent, 25 per cent and 75 per cent, respectively. Taking note of the previous trends and the emerging market situation, there is a strong possibility of a price hike of essentials during the upcoming month of Ramadan (September-October 2007). The CTG needs to take steps in recognition of this possibility.

##### *Recommendations*

- The government needs to assess demand, domestic supply and import as well as price situation of essentials, for which prices generally tend to rise substantially during the month of Ramadan. This is necessary to avoid any possible supply shortage and the resultant abrupt price surges. Preparation should be there to launch OMS at an expanded scale during this particular period, for these items. Outlets run by the BDR, Ansar and VDP need to be kept operational during that period and such items should be sold at these outlets.

#### **8.4.16 Strengthen Flanking Measures**

The present inflation scenario tends to suggest that inflation, particularly food inflation, was not going to come down in the near future. Inflation is leaving adverse impact on the real income of the poorer sections of the population, especially those in the rural areas. People with fixed income are also being adversely affected. Government employees, for example, had suffered a 15.8 per cent reduction in their real income since the last salary readjustment in 2005 with March 2007 being the reference period.

##### *Recommendations*

- Social safety net programmes such as "Food for Work (FFW)" should be expanded to support the worst affected sections of the populace in view of the ongoing price hike. It is to be noted that in the budget of FY2006-07, a total of 1,057 thousand metric tonnes of foodgrains (including 849,000 metric tonnes of rice and 208,000 thousand metric tonnes of wheat) was proposed to be distributed under the non-monetised food distribution



programme (FFW, Vulnerable Group Development (VGD), Test Relief (TR), Gratuitous Relief (GR), etc.). The allocation for foodgrains under these safety net programmes should be increased significantly in the upcoming budget for FY2008.

- The government may also consider providing dearness allowance to government employees and employees of statutory bodies. The allowances could be fashioned in three tiers with 15 per cent for the lower, 10 per cent for the middle and 5.0 per cent for the higher scale employees (the three tiers could be worked out taking cognisance of relative justice, proportion of the income going for food and fiscal burden of the proposed measure).

## **8.5 Product-Specific Issues**

### **8.5.1 Rice**

The survey team found at least eight different marketing chains for rice with the longest identified chain consisting of seven nodal points. Major contributing factors to consumer expenditure for rice could be attributed to either production cost (42.05 per cent) or import cost (85.20 per cent). Apart from producers or importers, millers, wholesalers and retailers were found to be receiving significant part of consumer expenditure. Millers and trustees were identified as the most powerful players in the entire supply chain for rice. High and increasing price of rice in Bangladesh in FY2007 was mainly due to inadequate production of Aus and Aman rice (combined), lower import of rice and the high price prevailing in the international market. Total production of Aus and Aman rice in FY2007 was estimated at 12.41 million metric tonnes, against 12.55 million metric tonnes in FY2006. Boro rice was being harvested by farmers in mid 2007, and no estimates by the concerned agencies were available as regards the likely level of its production. Production of Boro rice in FY2006 was 13.97 million metric tonnes. Total import of rice (public and private) during July-February of FY2007 was 256,000 metric tonnes compared to 375,000 metric tonnes for comparable months of FY2006 and 941,000 metric tonnes in FY2005 (comparable months). The main reason behind lower level of rice import in FY2007 was the high price of rice in the international market. Food and Agricultural Organization (FAO) has made a forecast that the global production would be less in 2006-07 period (420.9 million tonnes) than the 2005-06 period. FAO projections were that global prices were likely to increase. Considering high price of rice in international market, private sector may not be interested to import more rice unless the price goes down. The government will need to take appropriate actions in anticipation of this.



*Recommendations*

- Concerned government agencies (BBS, DAE and SPARRSO) should jointly come up with a reliable estimate about Boro production in FY2007.
- Based on the estimated production level, government has to decide how much to procure through the ongoing rice procurement programme, and whether the government should make any commercial import, and if so, to what extent.
- If the estimates show that Boro production in FY2007 was higher than last year, then the government will need to procure more rice, so that there is no sudden dip in the price and farmers are not negatively affected. On the other hand, if Boro production is less than that of the last year and there is no significant reduction in the rice price at the farm level, then government should lay emphasis on public commercial import.
- To make sure that lower income people are less affected by high price of rice, the government needs to continue OMS by BDR, Directorate-General of Food and the TCB. The government should also ensure that targeted distribution of foodgrains under VGD, Valnerable Group Feeding (VGF), FFW programme— are implemented properly.
- The shortage of rice (30 lakh tonnes) can be tackled through an agricultural rehabilitation package for the farmers which could include loans for tilling equipment, low-lift pumps for irrigation, agricultural loans, adequate and timely supply of seeds and fertiliser. Agricultural rehabilitation programme will generate employment and increase food production to minimise the effect of rising food prices and household level food insecurity. In this regard, coordinated efforts by NGOs, private sector and the government are required
- Import of the 5 lakh tonnes of rice from India needs to be speeded up.

**8.5.2 Wheat Flour**

CPD field survey revealed at least four different marketing chains for wheat flour, and eight nodal points in these chains. Major shares of the consumers' expenditure are attributed to production (48.67 per cent) or import (47.41 per cent) costs. Wholesalers (10.8 per cent), traders (6.52 per cent) and retailers (4.45 per cent) were also receiving significant shares of the consumer expenditure for both domestically produced and imported wheat flour. Wheat production has been gradually declining in Bangladesh since

2000-01. Wheat production in FY2006 was 0.74 million metric tonnes. DAE has set a target of 0.834 million metric tonnes for FY2007 which was 12.7 per cent higher than the actual production in FY2006. Considering the production trends it is unlikely that the target will be achieved. Total import of wheat (public and private) during July-February of FY2007 was 1.307 million metric tonnes, against 1.374 million metric tonnes for comparable months of FY2006. FAO has projected that the global production was likely to increase in FY2006-07, and hence, global prices of wheat could come down in 2008.

#### *Recommendations*

- Considering the production possibilities and import situation, the government may go for commercial import of wheat and also explore the possibility of increased food aid (wheat) by the donor countries. If the government is able to get more food aid (wheat), it will be enable them to provide greater food security for the marginalised people through FFW, VGD, VGF and other safety net programmes.
- The government needs to encourage higher private sector imports by continuing with the policy of zero tariff import of wheat; reduced L/C margin for wheat import should also be maintained. Comfortable forex reserves should be helpful in this context.

#### **8.5.3 Lentil**

The survey team identified four major marketing chains and seven market intermediaries in these chains for domestically produced and imported lentil. Major portions of the consumers' expenditure are attributed to production (22.20 per cent) costs and producers' margin (34.58 per cent). Large shares of the consumers' expenditure on lentil are also accrued to retailers (11.13 per cent) and paikers (10.79 per cent). FAO predicted that the prices of lentil will increase in response to rising demand and downsized supplies during 2006-07 period. It was found that the share of top five importers was 30.55 per cent of the total import of lentil in 2006-07.

#### *Recommendations*

- Due to global production loss and increase in international price, an acute supply shortage of lentil was predicted for the first quarter of FY2007-08. The government should consider providing zero tariff facilities for the import of lentil. TCB should also import lentil and initiate OMS to

stabilise the market, in view of the expected market scenario. BDR should continue selling of lentil through its Fair Price Shops.

- From medium term perspective, the government should promote pulse production in the country (chick pea in the Barendra region, lentils throughout the country) by delivering high quality seed at a subsidised price.
- The budget for the FY2007-08 had proposed withdrawal of the 4.0 per cent infrastructure development surcharge on import and customs duty (CD) on lentil to keep the market price within tolerable limits. This was a helpful initiative.
- Bangladesh government needs to negotiate with the Indian and Pakistani governments to withdraw temporary restriction on export of lentil.

#### **8.5.4 Potato**

The survey team identified six major marketing chains and six market intermediaries in these chains. Production cost accounted for major portion of the consumers' expenditure for both the dominant and longest chain. Producers, retailers and beparis are the other top three agents for the dominant chain in terms of shares in total consumers' expenditure. However, for the longest chain, the top three positions went to producers, cold storage owners and retailers.

#### *Recommendations*

- The government should take initiatives to increase potato production by encouraging availability of potato seeds which will reduce the demand for potato as seed (which is substantial).
- The government needs to encourage establishment of more cold storages in the major production zones (e.g. Munshiganj, Bogra and Comilla), both by the public and private sector, by providing loans and incentives in the forms of tax holiday and tax exemption for investments in large scale cold storage facilities that are suitable for potato and vegetable storage.

#### **8.5.5 Edible Oil**

There are at least three major marketing chains and five main types of market intermediaries. Major part of the consumers' expenditure is

attributed to production/import (59.93 per cent to 63.36 per cent) costs. Wholesalers (6.77 per cent) and retailers (4.0 per cent) are receiving significant shares of the consumers' expenditure for edible oil. Global production of soybean oil was expected to increase in FY2006-07. The share of top five importers of crude soybean oil was 67.3 per cent of the total imports in FY2006-07, which was 58.2 in FY2005-06. Corresponding figures for crude palm oil was 60.1 per cent in FY2006-07 and 61.7 per cent in FY2005-06. Given this market structure, collusive behaviour and possibilities of syndication could not be ruled out (although it was not possible to evince reliable information on this, and whatever intelligence was gathered was only anecdotal).

#### *Recommendations*

- Government needs to encourage production of oilseeds and reduce import duty (tariffs and para-tariffs) for oilseeds and crude oil.
- The budget for the FY2007-08 proposed withdrawal of the 4.0 per cent infrastructure development surcharge on import and CD on edible oil, which was expected to have favourable impact on market prices.

#### **8.5.6 Onion**

There are at least four marketing chains and eight types of market intermediaries for onion. Major part of the consumers' expenditure is attributed to production (36.02 per cent) costs. Producers receive highest share of the consumers' expenditure (20.63 per cent) at the retail level. However, the shares of bepari (16.78 per cent) and retailers (21.05 per cent) were found to be quite significant. The GoI has restricted export of onion by increasing the Minimum Exporting Price (MEP) to stabilise the soaring domestic price of onion in India. As India is one of the major exporters of onion in the world, the global supply has decreased significantly in view of this. As a result, global price for onion was showing an upward trend.

#### *Recommendations*

- Harvesting season of domestically produced onion was already on; in view of this, price of onion was expected to come down with increase in the supply of local onion. Appropriate measures should be taken to preserve the surplus produce for future, particularly for the month of Ramadan.

- Import of onion need to be encouraged. However, India has suspended import of onion through Benapole border from 1 October 2007. According to the local importers, GoI stopped the export of onions following a price hike there. The government should, therefore, explore whether or not India could show some flexibility in case of Bangladesh.

#### **8.5.7 Full Cream Milk Powder**

Full cream milk powder is a predominantly imported item. The survey team identified three different value chains for this product. Milk production in Australia was expected to decline 4.0 per cent in 2007, whereas milk production in New Zealand was projected to increase 1.0 per cent. According to FAO Global Food Outlook 2007, the global export of milk powder has decreased up to 2.8 per cent till the end of November. An upward trend in the international price of the full cream milk powder was observed during the first quarter of 2007. However, no comprehensive analysis could be produced as the major powder milk companies (major importers of powder milk) did not cooperate with the study team.

##### *Recommendations*

- In view of continuing rise of projected demand for milk in near future, efforts should be taken to raise local production. Prices are likely to escalate in near future in view of lower production projections in major milk producing countries (e.g. Australia and New Zealand). Fiscal, financial and institutional incentives should be put in place to stimulate local production.

#### **8.5.8 Vegetables**

As brinjal and green chilli are both perishable items, and have similar supply chains, they have been put together under the heading 'vegetables'. The survey team identified six different marketing chains for both brinjal and green chilli. Major part of consumers' expenditure for these vegetables are attributed to production costs. Retailers are receiving the highest share of consumers' expenditure. Arottdars and beparis are also getting large shares of consumers' expenditure.

##### *Recommendations*

- Open markets managed by BDR has reduced retail price of vegetables in these markets without any negative impact on farmers, BDR should

- continue operating these open markets.
- Both public and private sector entrepreneurs need to increase processing and storage facilities, especially during the harvesting season.
  - More arats or distribution centres can be established in the urban areas, both through public and private initiatives. For example, in the Dhaka city, new arats for vegetables could be established in Tongi and/or Mirpur areas to reduce the current dependence on the few existing arats. Participation of more new players at this stage will also enhance competition among agents, which is likely to positively impact on prices.
  - Following the Indian example, terminal markets for perishable products, e.g. vegetables and fruits should be established. This will operate on a 'hub-and-spoke' format. This will help to maintain links between the primary collection centres (the spokes) to be conveniently located at the production zone, and the terminal markets (the hub).
  - The GoB should review cash incentive programme for vegetable export which is currently 20 per cent of the Cost, Insurance and Freight (CIF) value. Due to the supply shortage of vegetables in the domestic market, this cash incentive programme should be reviewed and current rate of 20 per cent should be increased.
  - The government needs to encourage vegetable production by providing subsidy for breeders' seed production and reducing import duty for vegetable seed.

### 8.5.9 Egg

At least four different marketing chains for egg and four nodal points in these chains were observed during field level investigation. Major part of the consumers' expenditure was attributed to production cost. However, the recent outbreak of Avian Influenza (bird flu) had adversely affected the shares in consumers' expenditure for all agents involved in the value chain. Though retailers, aratdars and local arotdars were still getting a share of consumers' expenditure, farmers were incurring substantial losses due to lower demand and lower prices. The coincidental increase of poultry feed price had made the situation even worse for the farmers. Another interesting aspect of the poultry market is that the aratdars at Tejgaon bazaar had the dominant say in determining the prices of egg. No one could explain the criteria based on which these prices were set.

*Recommendations*

- Encourage poultry feed production by providing better supply of shrimp heads and increased maize production.
- The government has so far been able to address the issue of containing widespread outbreak of bird flu adequately. There is a need to provide appropriate technical assistance to poultry farmers to help prevent spread of bird flu. Though the GoB has taken several measures, the problem, unfortunately continues to persist. The GoB needs to further strengthen these measures and concerned agencies should also be asked to consult foreign experts with wide experience in dealing such situations.

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### Chronology of Initiatives by Government and Proposals Published in the Newspapers

1 March 2007 to 28 June 2007

Date

**March 7**

#### **Initiatives**

At a meeting with high level officials of the Bangladesh Bank and the armed forces, Chief Advisor Fakhruddin Ahmed discusses ways to restrain spiralling prices of essentials. The government takes the following decisions:

- Cut import duties on a number of essential commodities including rice, lentils and salt.
- Intensifies the import of essentials through the state-run trading agency, Trading Corporation of Bangladesh (TCB), in order to reduce the prices of essentials.
- Asks the law enforcers to coordinate their drives against hoarding and corrupt businesses and to take assistance for the drives from concerned government departments, i.e. National Board of Revenue (NBR), Anti-Corruption Commission (ACC) and Bangladesh Bank.

**March 8**

#### **Initiatives**

- To keep the price of essentials at a tolerable level, the government decides to reduce import duty to zero per cent, which was previously 5.0 per cent and government decides to directly import 1 lakh tonnes of wheat.
- The government decides to start selling rice and wheat in the open market from 18 March and Food for Work (FFW) programme from 15 March.

**March 9**

#### **Proposals**

Two steps that the government is contemplating to shore up the market supplies:

- First, the intensification of import by the state-run TCB; and
- Second, reduction of import duty on a number of essential items.



**March 11 Initiatives**

- Chief Advisor Fakhruddin Ahmed urges field level civil and military officials to take effective measures to hold prices of commodities at a desirable level, through ensuring adequate supply in the market.
- He directs the authorities to open the sealed godowns/warehouses across the country, so that the stored goods can be sold in the market, emphasising that holding commodities in sealed godowns will not bring any benefit.
- He also asks government officials to be careful, so that no slums or haats and bazaars, which are not causing any problems, are unnecessarily evicted.

The caretaker government (CTG) decides not to pursue the cases against hoarders, in a desperate attempt to rein in the price hike of essentials. It is decided to give 'final report' on all the cases filed against businessmen accused of hoarding huge quantities of rotten wheat and rice, sources said. Final report terminates a case.

- An inter-ministerial meeting arranged by the Ministry of Commerce (MoC), drafts a proposal defining the amount and period for hoarding of nine essential items including paddy, rice, wheat, lentil, sugar, edible oil, onion, milk powder and baby food. The draft proposal is sent to different business bodies for opinion by 14 March.
- The MoC draft divides hoarding into three levels -- import, wholesale and retail -- and proposes maximum permissible one month storage amounts of each item at every level.
  - A trader will be allowed to store 5,000 tonnes of imported paddy and rice for a maximum of one month, but wholesale traders will be allowed to hoard a maximum of 500 tonnes of paddy and rice, and retailers 10 tonnes of same items for a maximum of one month.
  - A trader will be authorised to hoard a maximum of 6,000 tonnes of imported wheat while at other levels; the period and amount for hoarding will be the same as that of paddy and rice.
  - A trader will be authorised to store a maximum of 1,000 tonnes of sugar and edible oil at import level, while the amount will be 100 tonnes and 5 tonnes at the wholesale and retail levels.

- In case of onion and lentil, the importers will be allowed to hoard a maximum of 100 tonnes, which will be at highest 30 tonnes and 5 tonnes for the wholesale traders and retailers.
- The importers will be allowed to store a maximum of 50 tonnes of milk powder and baby food, while wholesale traders will be permitted a maximum of 20 tonnes and retailers 2 tonnes.

Meeting reviews the *Special Powers Act 1974, East Bengal Food Stuffs, Price Control and Anti-hoarding Order 1953* and *Essential Commodities Control Order 1981* before defining hoarding in view of the 'present context.'

**March 12 Initiatives**

The Bangladesh Bank asks the commercial banks to encourage large-scale and mid-scale importers to import more essential commodities to counter the ongoing price hike. The Bangladesh Bank asks commercial banks to keep the letter of credit (L/C) margin at a tolerable level for essential imports, as its recent study revealed that some banks require up to 100 per cent cash deposit.

**March 15 Initiatives**

- As part of the government's initiatives to check the price hike of essentials, the members of Bangladesh Rifles (BDR) install 17 makeshift open markets in the capital.
- A large number of people throng the markets as the paramilitary troops start selling essentials like pulses, potatoes, onions, garlic and ginger at fair prices by setting up makeshift stalls under canopies in open fields, like Eidgah Maidans.

**March 18 Initiatives**

- As a part of its action to keep prices of essential commodities within the purchasing power of the common people, the government decides to set up a separate enforcement agency.
- The agency will monitor the prices of essentials on a day-to-day basis. It will also examine the local and international prices of the commodities and will take necessary actions against businessmen, if their selling price is abnormal compared to international prices.
- To check food adulteration, the agency will collect samples

of items from the market to examine their quality and purity.

- Earlier, the MoC formed a Price Monitoring Cell (PMC) headed by a Deputy Secretary to rein in the spiralling prices, which will report to the Ministry of Finance (MoF), if it finds anything over priced in the market.
- 32 dealers begin to sell rice at fair price under the open market sale (OMS) programme at 19 points in the city and 90 points in 9 upazilas of the district.

### **March 23 Proposals (Editorial)**

- The measures taken by the CTG must be sustained to correct the erratic market system, and should not go soft on cartels.
- The CTG must possess effective tools for market intervention and create a monitoring system, that deters syndicates and cartels from market manipulation.
- There are misgivings that the government cannot intervene in the free market. In fact, a free market also provides the government much scope to intervene in, and regulate the market in public interest.
- The government is also required to promote the operation of sound market economics so that market mechanisms can be effective.

#### **Initiatives**

BDR sets up "free markets" at 25 places in the capital, as a part of the government's efforts to stabilise the soaring prices of essentials. The "free markets" sell essential commodities at fair prices to help the lower and middle income groups facing hardships due to the price spiralling.

### **March 24 Proposals (Editorial)**

- Depending on the diagnosis of the market's ills, the government should devise long term policies along the following lines as deemed appropriate (some of these may already be underway):
  - Introduce a price and income policy to free price and wage increases.
  - Eliminate sources of market imperfections such as price colluders (price fixers) and cartels (syndicates).
  - Make certain that farm products are transported to their destination without delay, and free of toll collections.

- Develop a policy that will abet the appreciation of the domestic currency.
- Reduce indirect taxation, as this stands in the way of entrepreneurs who want to invest in the production of daily essentials.
- Encourage entrepreneurs to invest in substitute goods and thus promote competition.
- Import capital goods and technology which assures efficient production of goods chronically in shortage.
- Monitoring and disseminating of domestic prices of essentials on a day-to-day basis, vis-à-vis international prices of the corresponding commodities are important for consumers and businesses to purge rumours and misinformation.
- If the price spirals of daily essentials are diagnosed as a monetary phenomenon, then the monetary authority should implement demand contraction policies.
- With growing population, the number of consumers also increases -- so does the demand for goods. Unless increasing demand is constantly satisfied with concomitant increases in productions and supply, the economy will be forced to endure chronic price shocks.
- Authorities must desist from arbitrary interference with price signals, since this adds another bar against achieving economic efficiency potentially leading to shortages, while requiring large bureaucratic networks for their enforcement.

**March 26 Initiatives**

- Barisal district administration orders shops to hang price and stock lists of commodities to check hoarding and profiteering, following a meeting with the businessmen at the office of the Deputy Commissioner (DC), attended by the leaders of the Barisal Chamber of Commerce and Industries, businessmen and high civil and military officials.
- The administration also calls on the businessmen to pay their taxes and other revenues duly and keep the documents up-to-date.

**March 27 Suggestions**

- Business leaders at a meeting urge the government to withdraw import and supplementary duties (SD) on some essential commodities to keep prices within the purchasing

power of common people. They request the removal of the 5.0 per cent import duty on lentil, onion, garlic and ginger as it had already done successfully with rice and wheat.

- They also suggest a specific import duty to be introduced on products such as soybean, palm oil and powdered milk.
- They also suggest toll-free transportation of agricultural produce, encouraging cooperatives among small farmers, removing middlemen and allowing trucks to increase the load they can carry over the Jamuna Bridge to 15 tonnes from the current 12 tonnes.
- They urge the government to expand its sales outlets of rice and lentil at fair prices to district level towns and also recommend the amendment of the Hoarding Act, and implementation of the Consumer Protection Act.
- There should be a separate organisation to monitor and control prices on a day-to-day basis. It would examine the local and international prices of the commodities and take necessary steps against abnormal selling price compared to international prices. To check food adulteration, the agency will collect samples of items from the market to examine their quality and purity.
- Government should maintain a secured supply chain of essentials.

#### **April 4**

##### **Initiatives**

- The government plans to impose specific duty on bulk imports of a number of essential commodities in response to suggestions of businessmen to contain the price hike of imported food items.
- They refer to the fixed duty of Tk. 5,000 per ton of sugar introduced in the current budget to tame the unusual price hike of the sweetener.
- The NBR Chairman also assures the business community of his consideration of their suggestion to raise the ceiling for tax free individual incomes.

##### **Suggestions**

- Bangladesh Bank requests that the MoF to impose restrictions on the import of vegetables and agricultural products like potato, meat, fish and processed food to keep the price level within tolerable limits.

**April 16 Initiatives**

TCB floats a tender for importing 3,000 tonnes of refined soybean oil to lessen the upward trend of the edible oil's price. TCB also decides to launch the open market sale (OMS) of the imported soybean oil through its dealers.

- A number of private companies open fair price shops in different parts of the country. Some 22 companies including Partex Group and Abul Khair Group sell essential commodities through their fair price outlets with cooperation from BDR. The other companies include Meghna Group, PHP, Imam Group, Masud and Brothers, Alam and Brothers, S Alam, Mostafa Group and Mabco.
- The Bangladesh Bank initiates an investigation into the allegations of smuggling out USD 7.5 million by opening L/C with different banks under the guise of importing essential commodities from India. Following the allegation, the government orders the banks not to open L/Cs for 346 export-import firms in Rangpur, Bogra, Naogaon, Joypurhat and Nilphamari.

**April 18 Proposals**

- BDR asks the government to reduce the duty on staple food in order to stabilise the upward trends of the price of essentials.
- They also recommend that the government transfers the management and monitoring of fertiliser to BDR or joint forces, to ensure the proper management of fertiliser.
- The Trade and Commerce Monitoring Cell (TCMC) in their recommendation also asks the government to form monitoring committee comprising high officials of concerned Ministries to look after the price of essentials and to take measures in this regard. This committee will monitor the supply of foods all over the country.

**May 7 Initiatives**

- The Port authorities at a meeting decide to introduce a single-point operation system at the Chittagong Port, replacing the old fashioned stevedoring system.
- At the inaugural session of the first-ever International Investors' Conference in Dhaka, speakers urge foreign institutional investors to take advantage of the opportunities available in Bangladesh.

- Bangladeshi exporters obtain spot orders of more than one million dollars and also receive queries that could eventually lead to additional millions of dollars' worth of orders from Australian importers at the conference.

**May 31****Initiatives**

- The government announces a three-year Export Policy for FY2007 to FY2009, setting targets to diversify the export basket, create employment and alleviate poverty.

**June 9****Initiatives**

- The NBR completes draft rules to protect local industries by imposing a 'safeguard tax' on the import of products that could pose threat to the country's export items.
- The NBR decides to impose 5.0 per cent import duty, instead of the 10 per cent outlined in the budget on some types of capital machinery used in leather, textile and pharmaceuticals industries.

**June 12****Suggestions**

- The Bangladesh Bank asks all commercial banks to increase credit flow as growth in private sector credit shrunk by 3.3 percentage point during the first four months of the 2007 calendar year.

**June 24****Initiatives**

- Government decides to raise the price of per ton of urea fertiliser by 51 per cent in a bid to minimise the losses of government-run fertiliser factories and to stop smuggling of fertiliser to neighbouring countries.
- The Planning Ministry launches a project titled '*Formulation of Outline Participatory Perspective Plan (OPPP)*' at the auditorium of the National Economic Council (NEC) as part of the preparation of '*Vision Paper 2030*'. The project puts special emphasis on reducing poverty and sets a target to ensure power supply to every household by 2030.

**June 28****Initiatives**

- President Iajuddin Ahmed approves the budget for fiscal year 2007-08. Proposals for imposition of duties on computer accessories, mobile phone sets, and export oriented capital machinery in the budget are withdrawn for FY2007-08.

*Annex 4.2*  
**BDR's Interventions  
to Bring Down  
Prices of Essential Commodities**

When the prices of essential commodities started to go out of reach of the common people in the beginning of 2007, at the initiative of the caretaker government (CTG), the Bangladesh Rifles (BDR) got involved in efforts to bring down prices of essentials in the kitchen markets of Dhaka city. BDR started to sell essential items at lower than the prevailing market price, targeting mainly the poor and the ultra poor. Prices tended to be lower in the BDR shops, because BDR was buying directly from growers/wholesalers, thus eliminating some of the intermediaries. Even when both BDR and retailers in kitchen markets were buying the same produce from wholesalers (e.g. Karwan Bazaar), BDR could still afford to sell those same items at a lower price, because it was buying directly from the bazaar, while retailers had to buy through sales agents who would sell at a profit. The BDR shops became popular when the prices of essentials were rising at a fast pace, and in view of the resulting erosion of purchasing power, many low-income people started to come to BDR shops.

**Annex Table 4.1: Summary of BDR's Marketing Activities: 15 March 2007 to 15 March 2008**

Activities	Amount Sold in Quantity (MT)	Amount Sold in Value ( Crore Tk.)	No. of Buyers (Million)
BDR outlet in Dhaka city	78660	212.30	17.10
BDR outlet in other districts	42750	36.21	0.30
Outlets operated by business organisations	15500	12.15	0.96
Open markets	124545	196.36	0.19
BDR shops	9350	26.25	0.75
OMS activities	56762	116.29	15.20
<b>Total</b>	<b>327571</b>	<b>599.56</b>	<b>56.11</b>

**Source:** Bangladesh Rifles (BDR).

Among the various initiatives of the BDR, Operation Dal-Bhat, Unmukta Bazaar (Open Market) and Open Market Sale (OMS) programmes were the most notable. From mid March 2007 onwards, BDR carried out "Operation Dal-Bhat," through 75 temporary markets in 21 spots located in Dhaka city,



offering lower than market price for a number of essential items (Annex Table 4.2). In the month of Ramadan (September-October) of 2007, the number of BDR shops in Dhaka and other locations were increased to 110, in view of rising demand. Later, in November 2007, the number was reduced to 40, and again increased to 75 by April 2008. Similarly, BDR also helped set up fair price shops in Dhaka city. Initially, 25 such fair price shops were established in March 2007, later increasing to 122 by March 2008.

**Annex Table 4.2: Comparison of Price between the BDR Markets and Other Retail Markets**

Product	BDR Price (Tk./Kg)	Retail Market Price (Tk./Kg)
Rice	25.00	31.00
Edible Oil (Soyabean) (2 litres)	184.00	212.00
Lentil (Deshi)	70.00	83.00
Lentil(Turkey)	62.00	80.00
Onion (Deshi)	-	17.83
Onion (Indian)	-	16.94
Flour	35.00	44.00

Source: Department of Agricultural Marketing (DAM) and Bangladesh Rifles (BDR), March 2008.

Until February 2008, BDR had sold 65,395 metric tonnes (15.50 per cent of the total distribution) of rice under the OMS programme in Dhaka and other cities in the country. However, the sale was brought to an end, when BDR was compelled to sell rice at Tk. 30 per kg (instead of the earlier Tk. 25 per kg) in view of the withdrawal of subsidies by the government.

BDR's activities were reduced sharply by the period March–July, 2008; market monitoring by BDR (i.e. monitoring price lists in the markets) was also less prominent than before. The presence of BDR's taskforce, which used to monitor the markets in the capital, also gradually waned, although no official announcement was made about the discontinuation of their vigilance activities.

BDR suspended rice selling in its fair price outlets in the capital in mid June 2008, until the time when the government's rice procurement programme across the country wrapped up. The decision to suspend the selling of rice came following instructions from the government, since BDR was forced to procure rice from local markets for Tk. 28.50 to Tk. 29.50 per kg, which was higher than the government-fixed procurement price of Tk. 28.00. Under such circumstances BDR's operation became untenable.

BDR resumed the sale of essentials, including rice, at its 100 fair price outlets in the capital from 15 August 2008. This was important given the need for

further arresting price rises in the month of Ramadan. Rice was selling at Tk. 30 per kg at these shops. BDR, which previously ran 65 fair price outlets in the capital, added 35 more outlets to its tally ahead of the Ramadan. BDR sources report that a total of 210 fair price outlets are in operation at present across the country, where each person is allowed to buy 3 kgs of rice at a time. Since 18 August 2008, BDR has begun to sell essential commodities at subsidised prices at 28 fair price shops in Chittagong, and on 20 August announced their intention to launch an additional 10 fair price shops in the city. In addition, BDR also began sale of rice under the government's OMS programme in August 2008. BDR also launched 3 fair price shops in Cox's Bazaar, 3 in Teknaf and 2 in Bandarban on 26 September 2008. The eight essential commodities being sold at these shops at subsidised prices are: lentils, yellow peas, flour, sugar, tea, ruhi fish, beef and soybean oil. A few other more items popular during Ramadan like chickpeas, dates, some spices and gram flour were also made available at these shops.

BDR also established 10 Mega Shops which are known as BDR shops. BDR officials believe the monitoring mechanisms of the BDR built Mega Shops in Dhaka and other cities should be in BDR's hands. This way, BDR would not be involved in the selling activities on a day-to-day basis any more, and their task would be limited to one of monitoring daily markets and price levels.

During the Ramadan, BDR established 5 monitoring cells in the 5 wholesale markets of Dhaka City. These cells exercised vigilance with regard to prices of essential items, particularly vegetable items. BDR officials believe that setting the price chart of commodities in both retail and wholesale shops and their continued monitoring could help stabilise market price and curtail the activities of market intermediaries like *farias*. Maintaining buffer stocks and an enhanced role of the TCB could be other possible avenues for greater market interventions by the government. BDR's own involvement would depend on how the government would like to get BDR involved in tasks outside of its core mandate and general call of duty.

It is understandable that BDR's involvement in the selling of essential items was an urgent measure in an extraordinary situation. Very recently, BDR has announced that it will close its fair price outlets across the country from 29 September 2008, after having operated these shops for over one and a half years. BDR officials said that low volume of sales at the outlets and the need to maintain border security and law and order ahead of the elections have prompted the authorities to decide to withdraw BDR personnel from market related activities.

A visit to a number of outlets in the capital by the CPD team found that the number of people visiting BDR shops was on the decline—the quality of products, including rice, being sold in most outlets was deemed to be not of high standard by the consumers. Prices of items in BDR shops were comparable to those in the general shops, except for rice whose price was relatively lower in BDR shops (Tk. 28/kg, as against Tk. 33-34/kg in general shops). Also, the supply of items had come down substantially in these shops over the last few months. As prices began to stabilise (albeit continuing to remain at higher levels), the need for BDR's involvement was not perceived to be essential anymore.

*Source: Interviews with BDR Officials.*

#### Annex 4.3

#### Projected Inflation in Asian Countries: 2008 and 2009

(in Per cent Per Year)

Sub-region/ Economy	2005	2006	2007	2008		2009	
				ADO 2008	Update	ADO 2008	Update
<b>Central Asia</b>	<b>7.9</b>	<b>9.1</b>	<b>11.3</b>	<b>14.4</b>	<b>15.4</b>	<b>10.2</b>	<b>11.4</b>
Armenia	0.6	2.9	4.4	5.5	6.2	5.0	5.5
Azerbaijan	9.6	8.3	16.7	13.0	16.0	12.0	18.0
Georgia	8.3	9.2	9.2	9.5	-	7.0	-
Kazakhstan	7.6	8.6	10.8	17.4	17.4	10.7	10.7
Kyrgyz Republic	4.4	5.6	10.2	12.0	18.8	10.0	10.2
Tajikistan	7.3	10.1	13.1	17.0	18.5	10.0	10.5
Turkmenistan	10.7	8.2	6.4	9.0	9.0	9.0	9.0
Uzbekistan	10.2	14.3	12.3	10.9	11.0	10.5	10.5
<b>East Asia</b>	<b>2.0</b>	<b>1.6</b>	<b>3.9</b>	<b>4.7</b>	<b>6.1</b>	<b>4.2</b>	<b>4.8</b>
China, People's Rep. of	1.8	1.5	4.8	5.5	7.0	5.0	5.5
Hong Kong, China	1.0	2.0	2.0	3.4	4.3	2.8	4.5
Korea, Rep. of	2.8	2.2	2.5	3.4	4.7	3.0	3.8
Mongolia	12.7	5.1	9.0	10.5	25.0	9.5	12.0
Taipei, China	2.3	0.6	1.8	2.3	3.8	1.6	2.5
<b>South Asia</b>	<b>5.3</b>	<b>5.9</b>	<b>5.5</b>	<b>5.5</b>	<b>11.8</b>	<b>5.6</b>	<b>9.2</b>
Afghanistan	12.3	5.1	13.0	10.2	24.0	7.2	9.5
Bangladesh	6.5	7.2	7.2	9.0	9.9	8.0	9.0
Bhutan	4.8	4.9	5.2	4.5	10.0	4.5	7.0
India	4.4	5.4	4.7	4.5	11.5	5.0	7.5
Maldives	3.3	3.5	7.4	6.0	11.0	6.0	6.0
Nepal	4.5	8.0	6.4	7.0	7.9	6.5	8.5

(Annex 4.3 contd.)

(Annex 4.3 contd.)

(in Per cent Per Year)

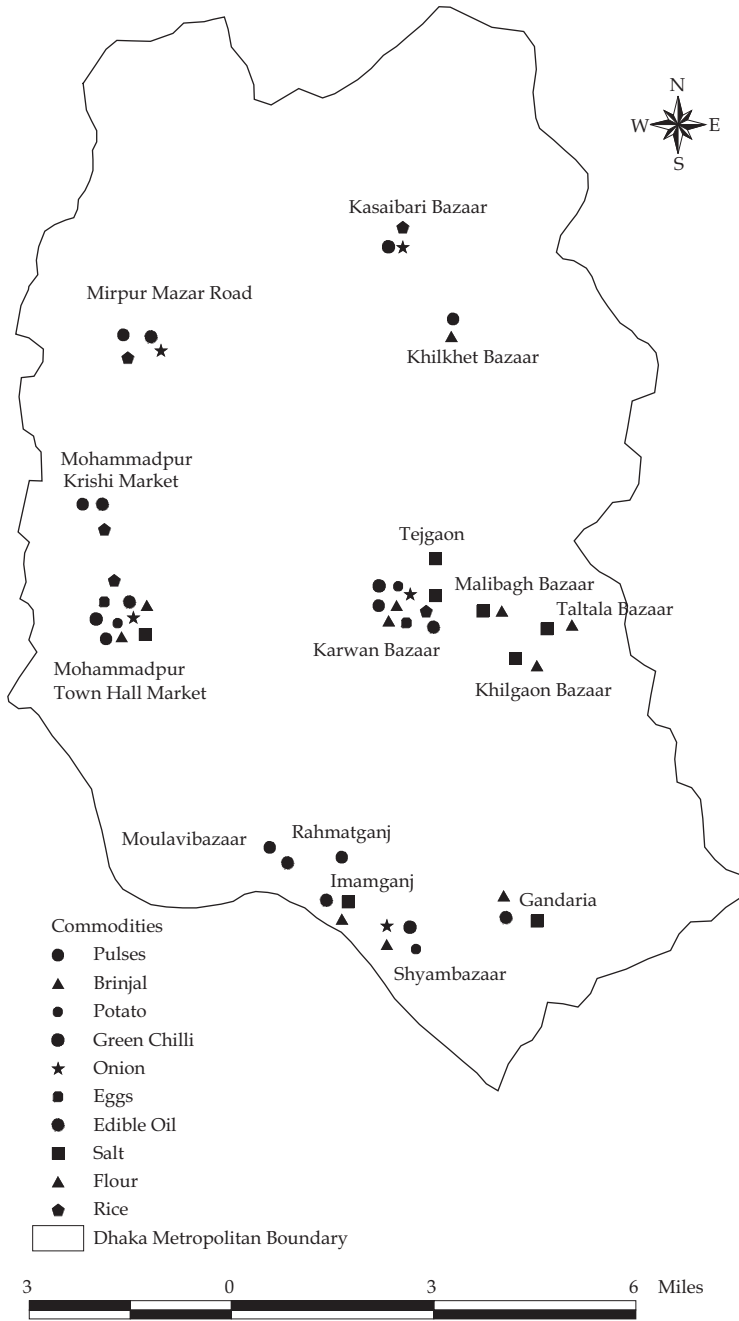
Sub-region/ Economy	2005	2006	2007	2008		2009	
				ADO 2008	Update	ADO 2008	Update
Pakistan	9.3	7.9	7.8	8.0	12.0	6.5	20.0
Sri Lanka	11.0	10.0	15.8	16.2	24.0	14.0	18.0
<b>Southeast Asia</b>	<b>6.3</b>	<b>7.1</b>	<b>4.0</b>	<b>5.7</b>	<b>9.4</b>	<b>4.7</b>	<b>6.9</b>
Cambodia	5.9	4.7	5.9	5.5	25.0	5.0	15.0
Indonesia	10.5	13.1	6.4	6.8	10.2	6.5	7.5
Lao People's Dem. Rep.	7.2	6.9	4.5	5.0	10.1	6.0	11.8
Malaysia	3.1	3.6	2.0	2.7	5.6	2.5	4.2
Myanmar	10.7	25.7	36.9	-	-	-	-
Philippines	7.6	6.2	2.8	4.0	10.5	3.6	8.0
Singapore	0.5	1.0	2.1	5.0	6.5	3.3	4.0
Thailand	4.5	4.6	2.3	4.0	7.0	3.5	5.5
Vietnam	8.3	7.5	8.3	18.3	25.0	10.2	17.5
<b>The Pacific</b>	<b>2.4</b>	<b>3.0</b>	<b>3.3</b>	<b>5.0</b>	<b>8.7</b>	<b>4.0</b>	<b>6.4</b>
Cook Islands	2.5	3.4	2.4	3.0	4.4	2.8	3.6
Fiji Islands	2.4	2.5	4.8	4.6	7.7	3.7	4.6
Kiribati	-0.3	-1.5	3.8	3.5	5.3	3.1	3.9
Marshall Islands, Rep. of	4.4	4.3	3.1	3.4	22.8	2.8	12.5
Micronesia, Fed. States of	4.2	4.7	3.2	3.5	5.3	2.8	3.7
Nauru	2.7	3.5	2.3	3.0	4.5	2.9	4.0
Palau, Rep. of	3.9	4.5	3.2	3.5	5.3	2.8	3.7
Papua New Guinea	1.8	2.4	0.9	5.2	9.3	4.0	7.7
Samoa	1.9	3.8	5.5	5.1	6.5	4.1	5.2
Solomon Islands	7.3	8.4	7.6	7.0	15.0	4.9	8.0
Timor-Leste, Dem. Rep. of	1.8	4.0	8.7	7.0	9.0	6.6	7.8
Tonga	10.0	7.2	5.1	5.3	8.0	4.2	5.6
Tuvalu	3.2	3.8	3.3	3.5	5.3	3.1	3.9
Vanuatu	1.2	2.0	3.8	3.0	4.5	2.9	3.6
<b>Average</b>	<b>3.4</b>	<b>3.3</b>	<b>4.3</b>	<b>5.1</b>	<b>7.8</b>	<b>4.6</b>	<b>6.0</b>

Note: - = data not available.

Source: ADB (2008). Asian Development Outlook 2008 Update. Table A2.

# ANNEX 5

## Annex 5.1 Location of the Pilot Survey in Dhaka City



*Annex 5.2*  
**The Checklist Prepared for the  
Full Scale Survey**

Based on the feedback of pilot survey, a comprehensive checklist covering most of the agents involved with various product value chains has been prepared as the survey instrument.

**Product Name:**

**Producer/Farmer**

1. Name and location:
2. Ownership and amount of land:
3. Production cost (including labour, fertiliser, irrigation, transport/per unit):
4. Time of harvesting:
5. Selling price (Tk./unit):
6. Who buys the product/products:
7. Marketing cost (disaggregated):
8. Scale of operation:
9. Comparison between government foodgrain procurement and local market:
10. Level of satisfaction (regarding price):
11. Perception regarding price determiner:
12. Existing problems (if any):
13. Recommendations (if any):

**Bepari/Faria**

1. Name and location:
2. Source of buying:
3. Buying price (Tk./unit):
4. Availability of commodity:
5. Source of finance (self-investment/loan):
6. Transportation cost and mode of transportation:
7. Storing cost, duration and mode of storing:
8. Marketing cost (disaggregated):

9. Who buys the product:
10. Selling price (Tk./unit):
11. Level of satisfaction (regarding price):
12. Expected profit (Tk./unit):
13. Scale of operation:
14. Perception regarding price determiner:
15. Existing problems (if any):
16. Recommendations (if any):

**Miller (where applicable)**

1. Name and location:
2. Source of buying:
3. Buying price (Tk./unit):
4. Source of finance (special reference to CCP/CC Hypo):
5. Availability of commodity:
6. Processing cost:
7. Transportation cost and mode of transport:
8. Storing cost, duration and mode of storage:
9. Marketing cost (disaggregated):
10. Who buys the product:
11. Selling price (Tk./unit):
12. Level of satisfaction:
13. Expected profit (Tk./unit):
14. Scale of operation:
15. Perception regarding price determiner:
16. Existing problems (if any):
17. Recommendations (if any):

**Aratdar**

1. Name and location:
2. Source of buying:
3. Buying price (Tk./unit):
4. Availability of commodity:
5. Transportation cost and mode of transport (if any):
6. Storage cost, duration and mode of storage (if any):
7. Other operational costs:
8. Who buys the product/products:
9. Selling price (Tk./unit):
10. Level of satisfaction:
11. Expected profit (Tk./unit):

12. Scale of operation:
13. Perception regarding price determiner:
14. Existing problems (if any):
15. Recommendations (if any):

**Wholesaler/ Distributor/Dealer**

1. Name and location:
2. Name of the trading agent:
3. Source of buying:
4. Buying price (Tk./unit):
5. Availability of commodity:
6. Transportation cost and mode of transport:
7. Storage cost, duration and mode of storage (if any):
8. Storage cost (Tk./unit):
9. Marketing cost (disaggregated):
10. Who buys the product/products:
11. Selling price (Tk./unit):
12. Level of satisfaction (regarding price):
13. Expected profit (Tk./unit):
14. Scale of operation:
15. Perception regarding price determiner:
16. Existing problems (if any):
17. Recommendations (if any):

**Retailer**

1. Name and location:
2. Source of buying:
3. Buying price (Tk./unit):
4. Availability of commodity:
5. Transportation cost and mode of transport:
6. Marketing cost (disaggregated):
7. Selling price (Tk./unit):
8. Level of satisfaction (regarding price):
9. Expected profit (Tk./unit):
10. Scale of operation:
11. Perception regarding price determiner:
12. Impact of BDR's OMS on the price:
13. Existing problems (if any):
14. Recommendations (if any):



**BDR's OMS**

1. Name and location:
2. Source of buying:
3. Buying price (Tk./unit):
4. Transportation cost and mode of transport:
5. Marketing cost (if any):
6. Selling price (Tk./unit):
7. Level of satisfaction (regarding price):
8. Expected profit (Tk./unit):
9. No. of BDR personnel engaged in each centre:
10. Is there any civilian engaged:
11. If Yes, how many and in which capacity:

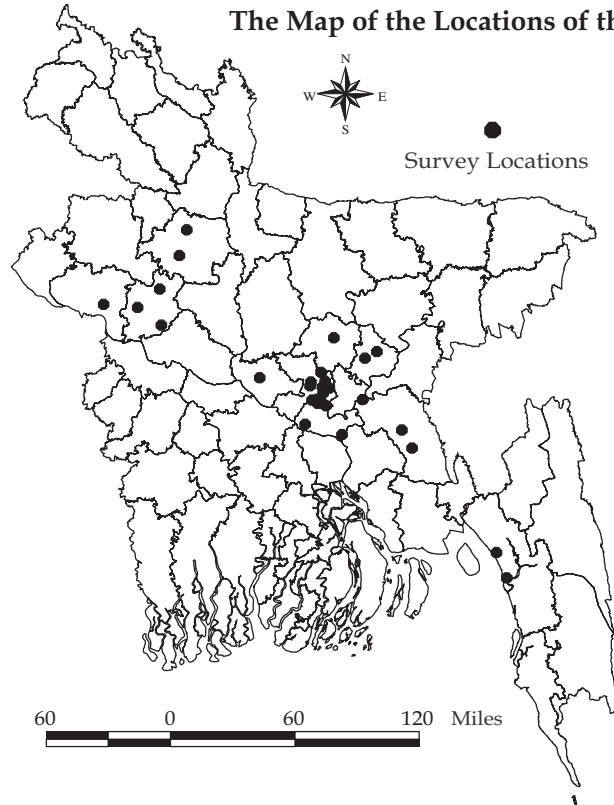
**For Imported Commodities Only**

**Importer**

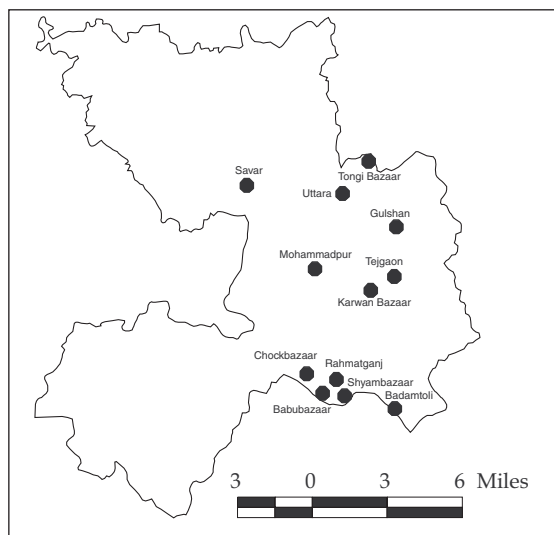
1. Name of the trading agent:
2. Importing country:
3. Import price (Tk./unit):
4. Transportation cost and mode of transport:
5. Comments on duty structure:
6. Storage cost, duration and mode of storage (if any):
7. Marketing cost (Tk./unit):
8. Existing problems (if any):
9. Recommendations (if any):

Annex 5.3

### The Map of the Locations of the Full Scale Survey



### Survey Locations in Dhaka District



*Annex 5.4*

**Definition of the Intermediaries**

**Farmers/Producers**

They constitute the primary link to the marketing chain. Farmers usually do not sell their products directly to the market. They sell their products in a small quantity to the rural consumers in the local primary market. Beparis are the major buyers of farmers' products. Occasionally, farias and wholesalers also buy products from farmers at the local market.

**Farias**

In the value chain of commodities, this agent has been found to perform diversified activities. Generally, farias are petty traders whose volume of business are small in comparison to other intermediaries and possess small capital. They generally buy small quantity of products from producers in the village or at the local primary market, and then sell to the beparis/aratdars. Sometimes, they work as the agent of aratdars (where two type of aratdars exist, especially in the rice market) to buy from the farmers on a commission basis. They also buy from millers or beparis and sell to wholesalers or retailers.

**Beparis**

They are professional traders who purchase a large quantity of the production from farmers or farias at the local market, and sell directly or through aratdars. They operate in primary and secondary markets.

**Aratdars**

They are generally self-financed, as they require minimum capital for operating the business like the other intermediaries. In our survey, two types of aratdars were found, local aratdars and commission agents. Usually aratdars serve as the commission agents, who have their own fixed establishment in their market and operate among farias, beparis and wholesalers. In case of a few products, such as rice and egg, local aratdars buy products mainly from small farmers or farias (here farias get some

commission), and sell directly to the aratdars in big cities. In such cases, local aratdars bear the transportation cost of products from the farms to their shops.

### **Trustees**

Trustees are found only in the rice market. They work as a guarantor between miller/importer and aratdar, without any collateral. It is his market reputation which works as the guarantee and he keeps a commission on the transacted rice amount.

### **Paikers**

Paikers are found only in the lentil market. They are licensed traders, possessing fixed business premises in the wholesale market. During the survey, existence of small and big paikers was confirmed. Small paikers buy from millers and big paikers, and sell to retailers. Big paikers, on the other hand, buy from millers and importers and sell to small paikers and retailers.

### **Millers**

Millers possess husking mill through which the grain can be de-husked and cleaned. By taking a service charge per unit of products, they process the grain for consumers. In most of the cases, it is observed that the millers perform the functions of wholesales and processors, i.e. purchase wholegrain from the market, process it and sell to other traders.

### **Importers**

Importers are the individuals, firms or legal entities, whose businesses involve bringing goods from outside the country into a customs territory. In Bangladesh, rice, edible oil, wheat, full cream milk powder, lentil and onion are predominantly imported, where domestic production is insufficient to meet the national demand.

### **Wholesalers**

Wholesalers are licensed trader, having fixed business premises in the wholesale market. Their performances vary according to the volume of transactions. They purchase from farmers and beparis, and generally sell to the retailers.

### **Retailers**

Retailers, the last marketing channel, buy products from producers through beparis and wholesalers, and sell to the consumers in open market places. Their volume of business is small and they possess small capital. In spite of being self-financed, they often borrow money from non-institutional sources, in response to their needs.

## Product Specific Value Chain

An Analysis of CPD Field Survey

Nine commodities have been discussed separately in nine different sub-Annexes. These Annexes report the findings of the survey conducted by the CPD team in 2007. Overall, the structure for each product is as follows: (a) briefly mentioning the sampling method; (b) identifying the pertinent supply chains; (c) distribution of consumers' expenditure among agents; (d) distribution of return; and (e) distribution of gross and net returns over working capital (GRWC and NRWC).

### Annex 6.1: Rice

The sample for the field survey consisted of thirteen farmers, two farias, two millers, two importers, two local aratdars and two urban aratdars from four different districts. The field survey was conducted in Natore (Noldanga, Noldanga haat, Mominpur bazaar, Bonpara and Chackor), Naogaon (Par Naoga, Sapahar, Patnitola), Bogra (Mirjapur, Dupchachiya) and Dhaka (Babubazaar and Badamtoli), during 2-9 April 2007. Ten types of agents have been identified and interviewed during the field survey—producer, faria, local aratdar, bepari, miller, trustee, importer, urban aratdar, wholesaler and retailer. The team initially considered three types of rice namely, BR-28, BR-29 and Gutti Swarna (Swarna) during the field survey. However, only Swarna was considered in the analysis to avoid complexity and to keep the tractability.

### Findings

#### *Supply Chains*

- Chain 1: Producer→Faria→Bepari→Miller→Urban Aratdar→Wholesaler→Consumer.
- Chain 2: Producer→Faria→Bepari→Miller→Urban Aratdar→Retailer→Consumer.
- Chain 3: Producer→Faria→Aratdar-1→Miller→Urban Aratdar→Wholesaler→Consumer.
- Chain 4: Producer→Faria→Aratdar-1→Miller→Urban Aratdar→Retailer→Consumer.
- Chain 5: Producer→Miller→Urban Aratdar→Wholesaler→Consumer.
- Chain 6: Producer→Miller→Urban Aratdar→Retailer→Consumer.
- Chain 7: Importer→Urban Aratdar→Wholesaler→Consumer.
- Chain 8: Importer→Urban Aratdar→Retailer→Consumer.

Rice has a complex value chain due to different supply channels. A single agent (other than producers) acquires paddy or rice through different channels. The collection procedure of these agents varies with location and season (time). The value chain analysis becomes multifaceted as most of the market players play the roles of more than one agent. Chain 2 has been identified as the dominant supply chain, and has been considered in this value chain analysis.

Farmers sell paddy to farias after harvesting the crop. Available farias usually work as an agent of the rice miller or the aratdar. The millers collect the paddy and process it before selling it as rice. There is a tri-partite understanding among millers, farias and aratdars, to support each other on the face of falling price season. Aratdars and farias sometimes sell their paddy only to one miller as they prefer to maintain long lasting partnerships. Millers are the most influential players of the chain. Aratdars maintain close liaison with the millers in order to ensure sufficient rice supply. An invisible agent, known as 'trustee' or 'party', often gets involved in between these two agents who is a risk taker and uses his reputation in the market to influence both the parties regarding price and payment of goods. The study team was unable to interview any trustee because of the secretive nature of their business.

Apart from the local production, Bangladesh also imports rice mainly from India through its land ports in Benapole and Hilli. Importers, who are usually big millers as well, import rice directly from different parts of India and transport them directly to their mills or storages. Then they sell the rice to wholesalers and retailers with the help of the trustee and the urban aratdar.

#### *Distribution of Consumers' Expenditure*

Annex Table 6.1 highlights the distribution of consumers' expenditure among various agents in the supply chain. It can be observed that millers attain the highest portion of the gross margin (22.9 per cent), while farias and urban aratdars obtain the lowest share (0.7 per cent). Producers acquire considerable portion of the consumers' expenditure as gross margin (19.2 per cent), but at the same time, they incur the highest production cost. Consumers contribute a significant percentage to the production costs at 42 per cent.

**Annex Table 6.1 Distribution of Consumers' Expenditure among Agents**

Agent	Particulars	Tk./Kg	Per cent
Producer	Production cost *	9.62	42.00
	Gross margin	4.40	19.20
	Marketing cost	0.53	
	Net margin	3.87	
Faria	Gross margin	0.16	0.70
	Marketing cost	0.11	
	Net margin	0.05	
Miller	Gross margin	5.24	22.90
	Processing cost	0.53	2.30
	Net margin	4.72	
Urban Aratdar	Gross margin	0.16	0.70
	Marketing cost	0.00	
	Net margin	0.16	
Retailer	Gross margin	2.79	12.20
	Marketing cost	0.24	
	Net margin	2.55	
Consumer		22.90	100.00

**Notes:** \*Production cost is estimated excluding land and labour cost. Gross Margin = Selling Price-Buying Price. Net Margin = Gross Margin - Marketing Cost. Per cent (%) = Actual Gross Margin x 100/Consumer Price.

**Source:** Estimated from CPD Field Survey, 2007.

### *Distribution of Return*

From Annex Table 6.2, it can be observed that millers acquire the highest share of total net margin (41.59 per cent) bearing only minimum amount (4.81 per cent) of the total cost. The producers also get a considerable share of the net margin, but caution should be taken as the analysis excludes land cost to the farmers. The inclusion of land cost may result in very negligible net margin to the farmers. The retailers, with an average share of 22.47 per cent of the total net margin, is also found to be a large gainer among other market agents. But it should also be noted that the cost of the retailer only includes the transportation cost, not the operational cost.

In case of imported rice, import price accounts for the main cost. Importers bear the cost of transportation from the border to their storage facility and from the storage facility to the urban aratdars. The largest margin is absorbed by wholesalers/retailers, but it should also be borne in mind that the cost of the retailer only includes transportation, and not their operational costs.



*Distribution of Return***Annex Table 6.39: Distribution of Gross and Net Margin among Market Intermediaries: Red Egg (Before Bird Flu)**

Agent	Production/ Buying Cost Tk./100 Eggs	Selling Price Tk./100 Eggs	Gross Margin		Marketing Cost		Net Margin	
			Tk./ 100 Eggs	Per cent of Total	Tk./ 100 Eggs	Per cent of Total	Tk./ 100 Eggs	Per cent of Total
Poultry farmer	372.50	395.00	22.50	29.03	0.00	0.00	22.50	35.51
Local aratdar	395.00	400.00	5.00	6.45	4.00	28.29	1.00	1.58
Aratdar -cum- wholesaler	400.00	420.00	20.00	25.81	7.14	50.50	12.86	20.30
Retailer	420.00	450.00	30.00	38.71	3.00	21.22	27.00	42.61
Total			77.50	100.00	14.14	100.00	63.36	100.00

Source: Estimated from CPD Field Survey, 2007.

**Annex Table 6.40: Distribution of Gross and Net Margin among Market Intermediaries: White Egg (Before Bird Flu)**

Agent	Production/ Buying Cost Tk./100 Eggs	Selling Price Tk. Tk./100 Eggs	Gross Margin		Marketing Cost		Net Margin	
			Tk./ 100 Eggs	Per cent of Total	Tk./ 100 Eggs	Per cent of Total	Tk./ 100 Eggs	Per cent of Total
Poultry farmer	372.50	385.00	12.50	18.52	0.00	0.00	12.50	23.43
Local aratdar	385.00	390.00	5.00	7.41	4.00	28.29	1.00	1.87
Aratdar -cum- wholesaler	390.00	410.00	20.00	29.63	7.14	50.50	12.86	24.10
Retailer	410.00	440.00	30.00	44.00	3.00	21.22	27.00	50.60
Total			67.50	100.00	14.14	100.00	53.36	100.00

Source: Estimated from CPD Field Survey, 2007.

Annex Table 6.39 highlights the distribution of gross and net margins among different agents for red eggs before the outbreak of bird flu. Retailers acquired the highest percentage (42.61 per cent) of the net margin before the outbreak of bird flu, followed by farmers (35.51 per cent) and aratdars-cum-

wholesalers (20.30 per cent). Local aratdars obtained the lowest share of the total net margin (1.58 per cent).

Annex Table 6.40 shows the distribution of gross and net margins among different agents for white eggs before the outbreak of bird flu. The interpretation for this Table is similar to that of the previous Table (Annex Table 6.39).

#### *Current Scenario*

Annex Table 6.41 shows the distribution of gross and net margins among different agents for red eggs at present. Farmers are suffering severely as a result of their gross margin at (-)129.63 per cent and net margin (-)107.18 per cent. Similar to the farmers, all the other agents have also incurred huge losses and this sector needs particular attention from the government.

**Annex Table 6.41: Distribution of Gross and Net Margins among Market Intermediaries: Red Egg (At Present)**

Agent	Production/ Buying Cost Tk./100 Eggs	Selling Price Tk./100 Eggs	Gross Margin		Marketing Cost		Net Margin	
			Tk./ 100 Eggs	Per cent of Total	Tk./ 100 Eggs	Per cent of Total	Tk./ 100 Eggs	Per cent of Total
Poultry farmer	372.50	285.00	-87.50	-129.63	0.00	0.00	-87.5	-107.18
Local aratdar	285.00	290.00	5.00	7.41	4.00	28.29	1.00	1.22
Aratdar -cum- wholesaler	290.00	295.00	5.00	7.41	7.14	50.50	-2.14	-2.62
Retailer	295.00	300.00	5.00	7.41	3.00	21.22	2.00	2.45
Total			-67.50	-100.00	14.14	100.00	-81.64	-100.00

Source: Estimated from CPD Field Survey, 2007.

Annex Table 6.42 shows the distribution of different margins for white eggs at present. Unlike red eggs, farmers producing white eggs are better-off than their counterparts. With a gross and net margin over 100 per cent, (125.81 per cent and 106.39 per cent respectively), farmers are better-off during this bird flu epidemic. However, this is not to state that the egg markets are striving, but to emphasise on how these farmers are attempting to offset their losses by selling a portion of their egg-laying hens.

**Annex Table 6.42: Distribution of Gross and Net Margins among Market Intermediaries: White Egg (At Present)**

Agent	Production/ Buying Cost Tk./100 Eggs	Selling Price Tk./ 100 Eggs	Gross Margin		Marketing Cost		Net Margin	
			Tk./ 100 Eggs	Per cent of Total	Tk./ 100 Eggs	Per cent of Total	Tk./ 100 Eggs	Per cent of Total
Poultry farmer	372.50	275.00	-97.50	125.81	0.00	0.00	-97.50	106.39
Local aratdar	275.00	280.00	5.00	-6.45	4.00	28.29	1.00	-1.09
Aratdar -cum- wholesaler	280.00	285.00	5.00	-6.45	7.14	50.50	-2.14	2.34
Retailer	285.00	290.00	5.00	-6.45	3.00	21.22	2.00	-2.18
Total			-77.50	100.00	14.14	100.00	-91.64	100.00

Source: Estimated from CPD Field Survey, 2007.

Although aratdars are incurring loss, their losses can be minimised by switching to commission agents. As commission agents, they can determine their commissions based on the prevailing market prices and their marketing costs. The market survey team actually found the aratdars trying out this alternative. The farmers, unfortunately, do not have any such alternatives.

**Annex Table 6.43: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Red Egg**

(in Per cent)

Agent	Before Bird Flu		At Present	
	GRWC	NRWC	GRWC	NRWC
Local aratdar	1.25	0.25	1.73	0.35
Aratdar-cum-wholesaler	4.91	3.16	1.68	-0.72
Retailer	7.09	6.38	1.68	0.67

Note: For the calculation, please see note attached with Annex Table 6.3.

Source: Estimated from CPD Field Survey, 2007.

Retailers of red eggs acquired the highest gross return 7.09 per cent, followed by the aratdars 4.91 per cent before the outbreak of bird flu. Only local aratdars are better off in the present scenario, acquiring 0.35 per cent NRWC at present, compared with 0.25 per cent NRWC before the bird flu epidemic broke out (Annex Table 6.43). The GRWC and NRWC for poultry

farmers could not be calculated due to insufficient data. Nevertheless, it can be anticipated based on the previous Tables and explanations, that the figure would be negative for the current scenario.

The following Table (Annex Table 6.44) shows the GRWC and NRWC for white egg. Retailers are worse off at present, while local aratdars experience an increase in both their GRWC and NRWC.

**Annex Table 6.44: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): White Egg** *(in Per cent)*

Agent	Before Bird Flu		At Present	
	GRWC	NRWC	GRWC	NRWC
Local aratdar	1.29	0.26	1.79	0.36
Aratdar-cum-wholesaler	5.04	3.24	1.74	-0.75
Retailer	7.26	6.54	1.74	0.69

**Note:** For the calculation, please see note attached with Annex Table 6.3.

**Source:** Estimated from CPD Field Survey, 2007.

## Annex 7

### Annex 7.1

#### Extent and Distribution of Chita Affected Land and Farmers in Boro Production

Annex Table 7.1 shows that according to Department of Agricultural Extension (DAE), 54,000 hectares of cultivated land for Boro production in 18 districts have been affected by chita. The affected number of farmers is estimated as 100,600; or 3.2 per cent of total Boro cultivated land of those districts. The most affected variety is BR-28. Besides, the extent of chita attack varies from district to district. Kishoreganj and Brahmanbaria are the two most adversely chita-hit areas, with 16 per cent and 14 per cent chita affected land (of the total cultivable land), respectively.

**Annex Table 7.1: Area-wise Distribution of Chita Affected Land and Farmers**

District	Total	Chita Affected Land (Hectares)							Affected Farmer
	Cultivated Land	BR-28	BR-29	BR-14	Hybrid	Indian and Others	Local	Total Affected Land	Number
Kishoreganj	160,260 (100.00)	12,750 (7.96)	5,980 (3.73)	448 (0.28)	5,390 (3.36)	0 (0.00)	375 (0.23)	24,943 (15.56)	44,465
Brahmanbaria	105,862 (100.00)	10,390 (9.81)	3,975 (3.75)	0 (0.00)	135 (0.13)	235 (0.22)	0 (0.00)	14,735 (13.92)	29,470
Netrokona	156,670 (100.00)	2,963 (1.89)	4,030 (2.57)	490 (0.31)	275 (0.18)	0 (0.00)	985 (0.63)	8,743 (5.58)	10,500
Dhaka	51,095 (100.00)	1,052 (2.06)	181 (0.35)	0 (0.00)	1 (0.00)	0 (0.00)	0 (0.00)	1,234 (2.42)	2,525
Hobiganj	98,250 (100.00)	815 (0.83)	0 (0.00)	0 (0.00)	110 (0.11)	0 (0.00)	0 (0.00)	925 (0.94)	2,500
Madaripur	42,300 (100.00)	240 (0.57)	0 (0.00)	320 (0.76)	0 (0.00)	0 (0.00)	360 (0.85)	920 (2.17)	3,500
Narshingdi	55,565 (100.00)	420 (0.76)	233 (0.42)	2 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	655 (1.18)	2,190
Sunamganj	178,455 (100.00)	500 (0.28)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	500 (0.28)	1,000

(Annex Table 7.1 contd.)

(Annex Table 7.1 contd.)

District	Total	Chita Affected Land (Hectares)							Affected Farmer
	Cultivated Land	BR-28	BR-29	BR-14	Hybrid	Indian and Others	Local	Total Affected Land	Number
Jessore	138,180 (100.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	288 (0.21)	0 (0.00)	288 (0.21)	465
Gazipur	57,592 (100.00)	80 (0.14)	2 (0.00)	175 (0.30)	0 (0.00)	0 (0.00)	0 (0.00)	257 (0.45)	1,241
Narayanganj	32,026 (100.00)	103 (0.32)	62 (0.19)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	165 (0.52)	1,015
Tangail	160,343 (100.00)	66 (0.04)	72 (0.04)	8 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	146 (0.09)	584
Barisal	61,750 (100.00)	3 (0.00)	48 (0.08)	8 (0.01)	0 (0.00)	46 (0.07)	0 (0.00)	105 (0.17)	325
Comilla	159,780 (100.00)	15 (0.01)	23 (0.01)	12 (0.01)	0 (0.00)	20 (0.01)	0 (0.00)	70 (0.04)	470
Natore	65,275 (100.00)	0 (0.00)	2 (0.00)	0 (0.00)	28 (0.04)	0 (0.00)	0 (0.00)	30 (0.05)	36
Narail	31,760 (100.00)	13 (0.04)	0 (0.00)	0 (0.00)	4 (0.01)	5 (0.02)	0 (0.00)	22 (0.07)	246
Rajshahi	75,900 (100.00)	9 (0.01)	0 (0.00)	0 (0.00)	1 (0.00)	1 (0.00)	0 (0.00)	11 (0.01)	17
Bagerhat	32,690 (100.00)	3 (0.01)	0 (0.00)	0 (0.00)	2 (0.01)	0 (0.00)	0 (0.00)	5 (0.02)	15
Total	166,3753 (100.00)	29,422 (1.77)	14,608 (0.88)	1,463 (0.09)	5,946 (0.36)	595 (0.04)	1,720 (0.10)	53,754 (3.23)	100,564

**Note:** Figures in the parenthesis represent the share of chita affected land as a per cent of total cultivated land.

**Source:** Authors' estimation based on DAE data.

## Annex 7.2

### BDR's Dal-Bhat Programme and Open Market Initiative

Sole intention of the operation being the supply of food items at a relatively lower price in Dhaka city, the Bangladesh Rifles (BDR) identified the middle agents as the ones responsible for the price hike, from a very low primary (farm-gate) price. It is not the farmers but middlemen, who capture most of the gains and to resolve this issue, the BDR is buying products directly from farmers, eliminating all mid agents, and enabling them to keep prices low.

**Annex Table 6.2: Distribution of Net Margin and Cost among Market Intermediaries: Domestically Produced Rice**

Agent	Cost		Net Margin	
	Tk./Kg	Per cent of Total Cost	Tk./Kg	Per cent of Total Net Margin
Producer	10.15	92.02	3.87	34.10
Faria	0.11	1.00	0.05	0.44
Miller	0.53	4.81	4.72	41.59
Urban Aratdar	na	na	0.16	1.41
Retailer	0.24	2.18	2.55	22.47
Total	11.03	100.00	11.35	100.00

Source: Estimated from CPD Field Survey, 2007.

**Annex Table 6.3: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC)**

Agent	Production/ Buying Cost	Marketing Cost Tk./Kg	Total Cost (Buying Price and Marketing Cost)	Gross Margin Tk./Kg	Net Margin Tk./Kg	GRWC (%)	NRWC (%)
Producer	9.62	0.53	10.15	4.4	3.87	43.35	38.13
Faria	14.01	0.11	14.12	0.16	0.05	1.13	0.35
Miller	14.18	0.53	14.71	5.24	4.72	35.63	32.10
Urban Aratdar	19.95	na	19.95	0.16	0.16	0.80	0.80
Retailer	20.11	0.24	20.35	2.79	2.55	13.71	12.53

Note: GRWC and NRWC = {Gross (Net) Margin x 100 / (Purchase Price + Marketing Cost)}.

Source: Estimated from CPD Field Survey, 2007.

Annex Table 6.3 indicates that the highest rate of return as estimated by GRWC and NRWC is observed in case of producers (43.35 and 38.13 per cent respectively), followed by millers (35.63 and 32.10 per cent respectively). Again, it is to be remembered that land cost was not included for farmers. Farmers opined that a lower cost of irrigation and stable supply of electricity or oil (diesel) could ensure a lower production cost of paddy. Lower cost and availability of electricity and diesel for irrigation, as well as other agricultural inputs, will secure the cost effectiveness, and their availability in irrigation season would guarantee higher production.

## Annex 6.2: Wheat

The sample for the field survey consisted of two farmers, two farias, one trader, two millers, two wholesalers and three retailers from four different districts. The field survey was conducted in Natore (Bonpara), Narayanganj, Chittagong (Khatunganj) and Dhaka districts during 2-10 April in 2007. Eight types of agents have been identified during the field survey producer, importer, trading agent, faria, bepari, miller, wholesaler and retailer.

### Findings

#### *Supply Chains*

Chain 1:

Importer → Trading Agent → Miller → Wholesaler → Retailer → Consumer.

Chain 2:

Importer → Trading Agent → Miller → Godi (Agency) → Wholesaler → Retailer → Consumer.

Chain 3:

Producer → Faria → Bepari → Miller → Wholesaler → Retailer → Consumer.

Chain 4:

Producer → Bepari → Miller → Wholesaler → Retailer → Consumer.

Wheat is both domestically produced and imported. The study identified Chains 1 and 3 as the dominant supply chains, and they have been considered in this value chain analysis. Farmers produce wheat either on their own land or on the land of rich farmers (borga system). Under this system, farmers allocate one-third of their produces to the land owner, and they retain a portion of their produces for their own consumption and sell the rest to either beparis or farias at the local market. Farmers also have to bear transportation cost and farias act as a commission agent only, to facilitate the transaction between producers and beparis. Beparis bring wheat from the local markets to their godowns or warehouses incurring the transportation cost, and sell to the flour millers who process the wheat and sell flour to the wholesalers, while retailers buy from wholesalers and sell it to consumers.

Bangladesh imports wheat mainly from the United States of America (USA), Australia and Canada. However, wheat is being increasingly imported from the United Kingdom (UK), Argentina, Turkey, Russia and Pakistan at present, due to soaring prices in other exporting countries. Trading agents from different districts buy wheat from Chittagong and the major portion is transported to Narayanganj through its traders, where importers bear the transportation cost. Traders then sell it to flour millers, and in this scenario,



traders bear transport cost. Though importers often sell wheat directly to millers, they prefer to sell through traders since they buy comparatively larger quantities than flour millers. According to the latter agents, importers are the most influential agent in the supply chain as they play a key role in determining the price. The flour millers make flour (atta) and sell it to wholesalers at their own loading cost. Wholesalers bear the transport and unloading costs, and sell atta to retailers, bakeries and hotels.

#### *Distribution of Consumers' Expenditure*

**Annex Table 6.4: Distribution of Consumers' Expenditure among Agents: Imported**

Agent	Particulars	Tk./Kg	Per cent
Importer	Buying price	12.80	47.41
	Gross margin	0.73	2.70
	Marketing cost	0.23	
	Net margin	0.50	
Trader	Gross margin	1.76	6.52
	Marketing cost	0.26	
	Net margin	1.50	
Flour Miller	Processing cost	8.51	31.52
	Gross margin	0.93	3.44
	Marketing cost	0.18	
	Net margin	0.75	
Wholesaler	Gross margin	0.95	3.52
	Marketing cost	0.28	
	Net margin	0.67	
Retailer	Gross margin	1.32	4.89
	Marketing cost	0.16	
	Net margin	1.16	
Consumer		27 .00	100.00

**Note:** Gross Margin = Selling Price-Buying Price. Net Margin = Gross Margin-Marketing Cost. Per cent (%) = Actual Gross Margin x 100/Consumer Price.

**Source:** Estimated from CPD Field Survey, 2007.

The distribution of consumers' expenditure among the market agents has been depicted in the Annex Tables 6.4 and 6.5. The Annex Table 6.4 for imported wheat shows that the highest share (6.52 per cent) goes to traders, whereas the importers acquire the lowest share (2.70 per cent). It is worth mentioning that initial purchase price of wheat and processing cost of miller absorb significant portions of consumers' expenditure (47.41 per cent and 31.52 per cent respectively). According to the Annex Table 6.5, for domestically produced wheat, producers obtain the highest share (14.78 per cent) of consumers' expenditure, while farmers receive the lowest share (1.37 per cent).

**Annex Table 6.5: Distribution of Consumers' Expenditure among Agents: Domestic Production**

Agent	Particulars	Tk./Kg	Per cent
Producer	Production cost*	14.44	49.52
	Gross margin	4.31	14.78
	Marketing cost	0.23	
	Net margin	4.08	
Faria	Gross margin	0.40	1.37
	Marketing cost	0.00	
	Net margin	0.40	
Bepari	Gross margin	0.94	3.22
	Marketing cost	0.27	
	Net margin	0.67	
Miller	Processing cost	6.00	20.58
	Gross margin	0.80	2.74
	Marketing cost	0.22	
Wholesaler	Net margin	0.58	
	Gross margin	0.96	3.29
	Marketing cost	0.28	
	Net margin	0.68	
Retailer	Gross margin	1.31	4.49
	Marketing cost	0.16	
	Net margin	1.15	
Consumer		29.16	100.00

**Note:** For the calculation, please see notes attached with Annex Table 6.1.

**Source:** Estimated from CPD Field Survey, 2007.

#### *Distribution of Return*

**Annex Table 6.6: Distribution of Gross and Net Margin among Market Intermediaries: Imported Wheat**

Agent	Buying Price Tk./Kg	Selling Price Tk./Kg	Gross Margin		Marketing Cost Tk./Kg	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
			Importer	12.80		13.53	0.73
Trader	13.53	15.29	1.76	30.93	0.26	1.5	32.75
Miller	23.80	24.73	0.93	16.34	0.18	0.75	16.38
Wholesaler	24.73	25.68	0.95	16.70	0.28	0.67	14.63
Retailer	25.68	27	1.32	23.20	0.16	1.16	25.33
<b>Total</b>			5.69	100.00		4.58	100.00

**Source:** Estimated from CPD Field Survey, 2007.

Annex Table 6.6 reveals that traders acquire the highest gross margin (30.93 per cent), followed by retailers and wholesalers (23.20 per cent and 16.70 per cent). Traders also capture the highest net margin (32.75 per cent), followed by retailers and millers (25.33 per cent and 16.38 per cent). The distribution of returns changes for domestically produced wheat flour (Annex Table 6.7), where the highest share of net margin goes to farmers (53.96 per cent), followed by retailers, wholesalers and beparis (15.17 per cent, 8.97 per cent and 8.97 per cent, respectively).

**Annex Table 6.7: Distribution of Gross and Net Margin among Market Intermediaries: Domestic Production**

Agent	Production/ Buying Price Tk./Kg	Selling Price Tk./Kg	Gross Margin		Marketing Cost Tk./Kg	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Producer	14.44	18.75	4.31	49.43	0.23	4.09	53.96
Faria			0.40	4.59		0.40	5.28
Bapari	19.15	20.09	0.94	10.78	0.27	0.68	8.97
Miller	20.09	25.68	0.80	9.17	0.22	0.58	7.65
Wholesaler	26.89	27.85	0.96	11.01	0.28	0.68	8.97
Retailer	27.85	29.16	1.31	15.02	0.16	1.15	15.17
Total			8.72	100.00		7.58	100.00

Source: Estimated from CPD Field Survey, 2007.

**Table 6.8: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Imported Wheat**

Agent	Buying Price Tk./Kg	Marketing Cost Tk./Kg	Total Cost Tk./Kg	Gross Margin Tk./Kg	Net Margin Tk./Kg	GRWC (%)	NRWC (%)
Importer	12.80	0.23	13.03	0.73	0.50	5.60	3.84
Trader	13.53	0.26	13.79	1.76	1.5	12.76	10.88
Miller	23.80	0.18	23.98	0.93	0.75	3.88	3.13
Wholesaler	24.73	0.28	25.01	0.95	0.67	3.80	2.68
Retailer	25.68	0.16	25.84	1.32	1.16	5.11	4.49

Note: For the calculation of GRWC and NRWC, please see note attached with Annex Table 6.3.

Source: Estimated from CPD Field Survey, 2007.

Annex Table 6.8 reveals that highest GRWC and NRWC are acquired by traders, followed by retailers, importers and millers. Wholesalers acquire the lowest portion of the NRWC (2.68 per cent), while importers and retailers receive more or less the same amount 3.9 to 4.5 per cent.

### **Annex 6.3: Lentil**

The sample for the field survey consisted of three producers, three farias, two millers, two paikers and three retailers, from two different districts. The field survey was conducted in Natore (Mominpur and Banneshore bazaar) and Dhaka (Rahmatganj, Moulavibazaar and several other retail markets) districts, during 2-10 April 2007. Six types of agents have been identified during the field survey—producer, faria, miller, paiker, wholesaler and retailer.

#### **Findings**

##### *Supply Chains*

Chain 1: Producer→Miller→Paiker→Retailer→Consumer.

Chain 2: Producer→Faria→Miller→Paiker→Retailer→Consumer.

Chain 3: Producer→Faria→Miller→Paiker→Wholesaler→Retailer→Consumer.

Chain 4: Importer→Paiker→Wholesaler→Retailer→Consumer.

During the survey, four different supply chains had been identified. Chain 2 has been assessed in this value chain analysis, although there is a possibility of an existing tri-partite relationship among farias, millers and paikers. The producers incur a production cost of Tk. 15.61 and sell it to farias for Tk. 39.93, acquiring the highest percentage of net margin (Annex Table 6.9). Interestingly, it was revealed in the course of the CPD survey that millers and paikers, residing especially in the latter part of Dhaka, were the most influential players in fixing the market price.

##### *Distribution of Consumers' Expenditure*

The distribution of consumers' expenditure among the market agents is depicted in the Annex Table 6.9. The Table illustrates that producers acquire the highest share of consumer expenditure (34.58 per cent), followed by retailers (11.13 per cent) and paikers (10.79 per cent).

##### *Distribution of Return*

Annex Table 6.10 reveals that producers obtain the highest gross margin (56.60 per cent), followed by retailers and paikers (18.22 per cent and 17.66 per cent). Paikers, the third largest recipient of gross margin, play a significant role in the lentil market, as they are capable of influencing the market price. Similar breakdown of distribution is observed when net

margin is considered. Producers get the highest gross margin, followed by the retailers and paikers. Farias get the lowest net margin, (1.72 per cent) of the total net margin.

**Annex Table 6.9: Distribution of Consumers' Expenditure among Agents**

Agent	Particulars	Tk./Kg	Per cent
Producer	Production cost*	15.61	22.20
	Gross margin	24.32	34.58
	Marketing cost	0.49	
	Net margin	23.83	
Faria	Gross margin	0.75	1.07
	Marketing cost	0.06	
	Net margin	0.69	
Miller	Processing cost	11.76	16.72
	Gross margin	2.49	3.54
	Marketing cost	1.07	
	Net margin	1.42	
Paiker	Gross margin	7.59	10.79
	Marketing cost	0.90	
	Net margin	6.69	
Retailer	Gross margin	7.83	11.13
	Marketing cost	0.39	
	Net margin	7.44	
Consumer		70.33	100.00

**Note:** \* Production cost is estimated excluding land and labour cost. Gross Margin = Selling Price - Buying Price. Net Margin = Gross Margin - Marketing Cost. Per cent (%) = Actual Gross Margin x 100/ Consumer Price.

**Source:** Estimated from CPD Field Survey, 2007.

**Annex Table 6.10: Distribution of Gross and Net Margin among Market Intermediaries**

Agent	Production Cost Tk./Kg	Selling Price Tk./Kg	Gross Margin		Marketing Cost Tk./Kg	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Producer	15.61	39.93	24.32	56.60	0.49	23.83	59.47
Faria	39.93	40.67	0.74	1.72	0.06	0.69	1.72
Miller	52.42	54.91	2.49	5.79	1.07	1.42	3.54
Paiker	54.91	62.50	7.59	17.66	0.90	6.69	16.70
Retailer	62.50	70.33	7.83	18.22	0.39	7.44	18.57
Total			42.97	100.00	2.91	40.07	100.00

**Source:** Estimated from CPD Field Survey, 2007.

Annex Table 6.11 reveals that paikers capture the highest portion of GRWC and NRWC. Again the GRWC and NRWC for producers should be interpreted with caution as these do not include the land and labour cost for producers. Nevertheless, retailers attain almost the same proportion of the NRWC. Compare to paiker and retailer, millers' portion of return is much low. Farias attain the lowest portion of GRWC and NRWC which are 1.85 per cent and 1.73 per cent accordingly.

**Annex Table 6.11: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC)**

Agent	Purchase Price (Tk./Kg)	Marketing Cost (Tk./Kg)	Gross Return	Net Return	GRWC (%)	NRWC (%)
Producer	15.61	0.49	24.32	23.83	151.05	148.01
Faria	39.93	0.06	0.74	0.69	1.85	1.73
Miller	52.42	1.07	2.49	1.42	4.48	2.56
Paiker	54.91	0.90	7.59	6.69	13.60	11.99
Retailer	62.50	0.39	7.83	7.44	12.45	11.83

**Note:** For the calculation of GRWC and NRWC, please see note attached with Annex Table 6.3.

**Source:** Estimated from CPD Field Survey, 2007.

#### Annex 6.4: Potato

The sample for the field survey consisted of five producers, three beparis, one cold storage authority, three employees of arats, two farias, and seven retailers from two different districts. The field survey was conducted in Munshiganj and Dhaka (several retail and wholesale (arat) markets). Six types of agents have been identified during the field survey—producer, bepari, aratdar, faria, cold storage (owners) and retailer.

#### Findings

##### *Supply Chains*

The survey team could identify the following six chains:

Chain 1:

Aratdar

Producer → Bepari → Retailer.

Chain 2:

CS Owner → Aratdar

Producer → Bepari → Retailer.

Chain 3:

Producer → Bepari  $\xrightarrow{\text{Aratdar}}$  Faria → Retailer.

Chain 4:

Producer → Bepari  $\xrightarrow{\text{CS Owner} \rightarrow \text{Aratdar}}$  Faria → Retailer.

Chain 5:

Producer  $\xrightarrow{\text{CS Owner}}$  Bepari  $\xrightarrow{\text{Aratdar}}$  Retailer.

Chain 6:

Producer  $\xrightarrow{\text{CS Owner}}$  Bepari  $\xrightarrow{\text{Aratdar}}$  Faria → Retailer.

Chain 1 was identified as the dominant supply chain, while Chains 4 and 6 were the longest ones. All these three supply chains have been considered in this value chain analysis, and it is evident from the study that longer chains lead to higher prices of essential commodities.

Farmers usually sell a portion of the produces at the time of harvesting, but the major portion of the produce is stored (for approximately nine months), at the cold storages for selling at a later period. Beparis either collect potato from the farmers' fields or purchase it directly out of the cold storages. Occasionally, there are brokers (locally known as "dalal"), playing their role between farmers and beparis, when the latter comes from distant localities to collect the commodity. Beparis sell to retailers or farias, while aratdar acts an indirect agent for the beparis and they retain a certain commission. Farias buy from the bepari (via aratdar), and again wholesale it at a nearby spot and the cost involved (other than purchasing price) is minimal (they have to pay only the "kaely" and no rent for the land as the farmers). Retailers buy their potato mostly from the beparis via aratdars and occasionally from the farias.

#### *Distribution of Consumers' Expenditure*

The distribution of consumers' expenditure among the market agents has been illustrated in the Annex Tables 6.12 and 6.13 (dominant and longest supply chains). The Table for dominant chain (Annex Table 6.12) shows that the highest share (16.50 per cent) goes to the producers, followed by retailers (10.00 per cent) and beparis (8.0 per cent); aratdars obtain the lowest share (4.38 per cent). According to the Annex Table 6.13, for longest chain, producers get, the highest share (14.27 per cent), while farias receive

the lowest share (2.59 per cent). Cold storage owners capture the second highest gross margin of consumers' expenditure (10.16 per cent).

**Annex Table 6.12: Distribution of Consumers' Expenditure among Agents: Dominant Chain**

Agent	Particulars	Tk./Kg	Per cent
Producer	Production cost *	9.78	61.12
	Gross margin	2.64	16.50
	Marketing cost	0.34	
	Net margin	2.30	
Bepari	Gross margin	1.28	8.00
	Marketing cost	0.95	
	Net margin	0.33	
Aratdar	Gross margin	0.70	4.38
	Marketing cost	0.00	
	Net margin	0.70	
Retailer	Gross margin	1.60	10.00
	Marketing cost	1.12	
	Net margin	0.48	
Consumer		16.00	100.00

**Note:** For the calculation, please see notes attached with Annex Table 6.1.

**Source:** Estimated from CPD Field Survey, 2007.

**Table 6.13: Distribution of Consumers' Expenditure among Agents: Longest Chain**

Agent	Particulars	Tk./Kg	Per cent
Producer	Production cost *	9.78	52.86
	Gross margin	2.64	14.27
	Marketing cost	0.34	
	Net margin	2.30	
Cold Storage Owner	Gross margin	1.88	10.16
	Marketing cost	0.00	
	Net margin	1.88	
Bepari	Gross margin	1.20	6.49
	Marketing cost	0.95	
	Net margin	0.25	
Aratdar	Gross margin	0.70	3.78
	Marketing cost	0.00	
	Net margin	0.70	
Faria	Gross margin	0.48	2.59
	Marketing cost	0.00	
	Net margin	0.48	
Retailer	Gross margin	1.82	9.84
	Marketing cost	1.12	
	Net margin	0.70	
Consumer		18.50	

**Note:** For the calculation, please see notes attached with Annex Table 6.1.

**Source:** Estimated from CPD Field Survey, 2007.



*Distribution of Return*

Annex Table 6.14 reveals that farmers bag the highest gross margin (42.44 per cent), followed by retailers (25.72 per cent) and beparis (20.58 per cent). However, the order changes when net margin is considered. The highest share of net margin still goes to producers (60.36 per cent), followed by the aratdars (18.37 per cent) and retailers (12.60 per cent).

**Annex Table 6.14: Distribution of Gross and Net Margin among Market Intermediaries: Dominant Chain**

Agent	Production/ Buying Cost	Selling Price	Gross Margin		Operating / Marketing Cost	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Producer	9.78	12.42	2.64	42.44	0.34	2.30	60.36
Bepari	12.42	13.70	1.28	20.58	0.95	0.33	8.66
Aratdar	-	-	0.70	11.25	0.00	0.70	18.37
Retailer	14.40	16.00	1.60	25.72	1.12	0.48	12.60
Consumer	16.00						

**Source:** Estimated from CPD Field Survey, 2007.

**Annex Table 6.15: Distribution of Gross and Net Margin among Market Intermediaries: Longest Chain**

Agent	Production/ Buying Cost	Selling Price	Gross Margin		Operating / Marketing Cost	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Producer	9.78	12.42	2.64	30.3	0.34	2.30	36.45
CS Owner	-	-	1.88	21.6	0.00	1.88	29.80
Bepari	14.30	15.50	1.20	13.8	0.95	0.25	3.96
Aratdar	-	-	0.70	8.0	0.00	0.70	11.09
Faria	16.20	16.68	0.48	5.5	0.00	0.48	7.61
Retailer	16.68	18.50	1.82	20.9	1.12	0.70	11.09
Consumer	18.50						

**Note:** CS indicates Cold Storage.

**Source:** Estimated from CPD Field Survey, 2007.

The distribution of gross and net returns alters for the longest chain. Annex Table 6.15 depicted that the highest share of gross return goes to producers (30.3 per cent), followed by cold storage owners (21.6 per cent) and retailers (20.9 per cent). The highest share of net margin is once again captured by producers (36.45 per cent), followed by cold storage owners (29.80 per cent), and aratdars and retailers (11.09 per cent each).

**Annex Table 6.16: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Dominant Chain**

Agent	Purchase Cost	Gross Return	Net Return	GRWC (%)	NRWC (%)
Producer	9.78	2.64	2.30	26.08	22.72
Bepari	12.42	1.28	0.33	9.57	2.47
Aratdar	-	0.70	0.70	-	-
Retailer	14.40	1.60	0.48	10.31	3.09

**Note:** For the calculation of GRWC and NRWC, please see note attached with Annex Table 6.3.

**Source:** Estimated from CPD Field Survey, 2007.

**Annex Table 6.17: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Longest Chain**

Agent	Purchase Cost	Gross Return	Net Return	GRWC (%)	NRWC (%)
Producer	9.78	2.64	2.30	26.08	22.72
CS Owner	-	1.88	1.88	-	-
Bepari	14.30	1.20	0.25	7.87	1.64
Aratdar	-	0.70	0.70	-	-
Faria	16.20	0.48	0.48	2.96	2.96
Retailer	16.68	1.82	0.70	10.22	3.93

**Note:** For the calculation of GRWC and NRWC, please see note attached with Annex Table 6.3.

**Source:** Estimated from CPD Field Survey, 2007.

Annex Tables 6.16 and 6.17 highlight GRWC and NRWC for different agents. According to Annex Table 6.16, the highest gross and net return accrues to the producers, followed by retailers and beparis. When the longest chain is considered (Annex Table 6.17), similar pattern is found for the producers, while beparis' GRWC and NRWC decrease to 7.87 per cent and 1.64 per cent, from 9.57 per cent and 2.47 per cent of the dominant chain respectively. This may be due to existence of farias in the longest chain.

### Annex 6.5: Edible Oil

The sample for the field survey consisted of eleven importer/traders, three beparis, three employees of agents and threes retailers. The field survey was conducted in Dhaka (Meghnaghat and several retail markets) district between 2-10 April 2007. Five types of agents have been identified during the field survey importer, refinery, agents, wholesaler and retailer.

## Findings

### *Supply Chains*

Chain 1: Importer→Refinery→Agents →Wholesaler→Retailer→Consumer.  
 Chain 2: Importer→Refinery→Agents→Wholesaler→Retailer→Consumer.  
 Chain 3: Importer→Refinery→Local office→Agents→Wholesaler→Retailer  
 →Consumer.

Chain 2 is the dominant supply chain and has been considered in this value chain analysis. Two types of edible oil are imported in Bangladesh, soybean oil and palm oil. Soybean is imported from Argentina, Brazil, alongside North American countries, while palm oil is imported mainly from Indonesia and Malaysia. The imported oil is taken directly to the refinery and the refined oil is sold from there, either in loose or packed form. The refined packed oil is mainly sold through the importers' agents to wholesalers at a price fixed by importers. However, information on importers' marketing cost was not available during the survey, therefore their NRWC could not be estimated. From the wholesaler, oil reaches to consumers via retailers.

### *Distribution of Consumers' Expenditure*

**Annex Table 6.18: Distribution of Consumers' Expenditure among Agents: Packed Soybean Oil**

Agent	Particulars	Tk./Kg	Per cent
Importer	Import price	44.35	63.36
	Gross margin	21.45	30.64
	Marketing cost	0.00	
	Net margin	21.45	
Trading Agent	Gross margin	1.00	1.43
	Marketing cost	0.12	
	Net margin	0.88	
Wholesaler	Gross margin	0.40	0.57
	Marketing cost	0.00	
	Net margin	0.40	
Retailer	Gross margin	2.80	4.00
	Marketing cost	1.20	
	Net margin	1.60	
Consumer		70.00	100.00

**Note:** For the calculation, please see notes attached with Annex Table 6.4.

**Source:** Estimated from CPD Field Survey, 2007.

**Annex Table 6.19: Distribution of Consumers' Expenditure among Agent: Loose Soybean Oil**

Agent	Particulars	Tk./Kg	Per cent
Importer	Import price	44.35	59.93
	Gross margin	21.45	28.99
	Marketing cost	0.00	
	Net margin	21.45	
Trading Agents	Gross margin	1.19	1.61
	Marketing cost	0.00	
	Net margin	1.19	
Wholesaler	Gross margin	5.01	6.77
	Marketing cost	0.42	
	Net margin	4.59	
Retailer	Gross margin	2.00	2.70
	Marketing cost	0.88	
	Net margin	1.13	
Consumer		74.00	100.00

**Note:** For the calculation, please see notes attached with Annex Table 6.4.

**Source:** Estimated from CPD Field Survey, 2007.

The Table for loose soybean oil (Annex Table 6.19) shows that the highest share (28.99 per cent) goes to importers, and trading agents acquire the lowest share (1.61 per cent). Wholesalers obtain almost 7.0 per cent of the consumers' expenditure, but in the case of packed soybean oil (Annex Table 6.18), they acquire only 0.57 per cent. It is evident in both cases that major portion of consumers' expenditure contribute towards import price.

#### *Distribution of Return*

**Annex Table 6.20: Distribution of Gross and Net Margin among Market Intermediaries: Packed Soybean Oil**

Agent	Buying Cost	Selling Price	Gross Margin		Operating / Marketing Cost	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Importer	44.35	65.80	21.45	83.62	0.00	21.45	88.16
Trading Agent	65.80	66.80	1.00	3.90	0.13	0.88	3.62
Wholesaler	66.80	67.20	0.40	1.56	0.00	0.40	1.64
Retailer	67.20	70.00	2.80	10.92	1.20	1.60	6.58
Consumer	70.00			100.00			100.00

**Source:** Estimated from CPD Field Survey, 2007.

**Annex Table 6.21: Distribution of Gross and Net Margin among Market Intermediaries: Loose Soybean Oil**

Agent	Buying Cost	Selling Price	Gross Margin		Operating / Marketing Cost	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Importer	44.35	65.80	21.45	72.10	0.00	21.45	75.64
Trading Agent	65.80	66.99	1.19	4.00	0.00	1.19	4.20
Wholesaler	66.99	72.00	5.01	16.10	0.42	4.59	16.19
Retailer	72.00	74.00	2.00	7.80	0.88	1.13	3.97
Consumer	74.00			100.00			100.00

Source: Estimated from CPD Field Survey, 2007.

Annex Table 6.20 reveals that importers capture the highest gross margin (83.62 per cent) followed by retailers (10.92 per cent) and trading agents (3.90 per cent). Similar order of highest share recipients is observed when net margin is considered. The highest share of net margin goes to the importers (88.16 per cent), followed by retailers (6.58 per cent) and the trading agents (3.62 per cent). The distribution of gross and net returns switches the ranking of retailers and wholesalers, for loose soybean oil (Annex Table 6.21). The highest share of gross return goes to the importers (72.10 per cent), followed by wholesalers (16.10 per cent) and retailers (7.80 per cent). The highest share of net margin is captured by importers (75.64 per cent), followed by wholesalers (16.19 per cent) and trading agents (4.20 per cent).

**Annex Table 6.22: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC)**

Agent	Gross Margin Tk./Kg	Net Margin Tk./Kg	GRWC (%)	NRWC (%)
Importer	21.45	21.45	48.37	48.37
Trading Agent	1.19	1.19	1.81	1.81
Wholesaler	5.01	4.59	7.43	6.81
Retailer	2.00	1.13	2.74	1.54

Note: For the calculation of GRWC and NRWC, please see note attached with Annex Table 6.3.

Source: Estimated from CPD Field Survey, 2007.

Annex Table 6.22 shows that the highest GRWC and NRWC accrue to the importers, followed by wholesalers and retailers. International price of edible oil has increased significantly during the past few months. Along with smaller

number of letter of credit (L/C) opening figure for edible oil, the increase in world price has led to a supply side shortage in the edible oil market of Bangladesh.

### **Annex 6.6: Onion**

The sample for the field survey consisted of three farmers, two local aratdars, two beparis, two aratdars and five retailers from two different districts. The field survey was conducted in Natore (Mominpur and Banneshore bazaar) and Dhaka (Karwan Bazaar, Shyambazaar and several retail markets) between 2-10 April 2007. Five types of agents have been identified during the field survey—farmers, local aratdars, beparis, wholesalers and retailers.

### **Findings**

#### *Supply Chains*

Chain 1: Producer→Consumer.

Chain 2: Producer→Faria→Local Aratdar →Bepari →Aratdar/Wholesaler →Consumer.

Chain 3: Producer→Bepari→Urban Aratdar→Retailer→Consumer.

Chain 4: Importer→Aratdar→Wholesaler→Retailer→Consumer.

Farmers either sell directly to rural consumers, or to farias in small quantities in the local market. Local aratdars act as commission agents with fixed establishments in the market and operate through farias and beparis. They help the beparis to buy onion from farias and farmers. In the study area, two types of beparis have been identified local and outsider beparis. Local beparis buy onion from farias and sell to urban aratdars, while outsider beparis buy onion with the help of local aratdars, and sell to urban aratdars. Aratdars have godowns/warehouses for onion storage and with the help of beparis and importing agencies, they sell onion directly to retailers and wholesalers all over the country. Retailers buy onion from urban aratdars and sell to the consumers in open market places.

#### *Distribution of Consumers' Expenditure*

The distribution of consumers' expenditure among the market agents has been depicted in the Annex Table 6.23. It shows that the highest share (21.05 per cent) goes to the retailers whereas urban aratdars obtain the lowest portion (1.50 per cent). It is worth mentioning that production cost absorbs significant chunk of consumers' expenditure (36.02 per cent).

**Annex Table 6.23: Distribution of Consumers' Expenditure among Agents**

Agent	Particulars	Tk./Kg	Per cent
Producer	Production cost *	5.99	36.02
	Gross margin	3.43	20.63
	Marketing cost	0.22	
	Net margin	3.21	
Faria	Gross margin	0.34	2.04
	Marketing cost	0.06	
	Net margin	0.28	
Local Aratdar	Gross margin	0.33	1.98
	Marketing cost	0.06	
	Net margin	0.27	
Bepari	Gross margin	2.79	16.78
	Marketing cost	2.38	
	Net margin	0.41	
Urban Aratdar	Gross margin	0.25	1.50
	Marketing cost	0.00	
	Net margin	0.25	
Retailer	Gross margin	3.50	21.05
	Marketing cost	0.86	
	Net margin	2.64	
Consumer		16.63	100.00

**Note:** For the calculation, please see notes attached with Annex Table 6.1.

**Source:** Estimated from CPD Field Survey, 2007.

#### *Distribution of Return*

Annex Table 6.24 reveals that retailers acquire the highest gross margin, almost 33 per cent, followed by producers 32.24 per cent, and beparis (26.22 per cent). Same order follows when net margin is considered. The highest share goes to producers (45.47 per cent), followed by retailers (37.39 per cent) and beparis (5.81 per cent).

Annex Table 6.25 reveals that the highest NRWC is pocketed by producers (51.56 per cent), followed by retailers (18.87 per cent), beparis (3.29 per cent), and farias (2.95 per cent). However, it is to be noted that producers' GRWC and NRWC have been calculated excluding land and labour cost and it would be substantially lower if those costs are included in the analysis.

**Annex Table 6.24: Distribution of Gross and Net Margin among Market Intermediaries**

Agent	Production/ Buying Cost	Selling Price	Gross Margin		Operating / Marketing Cost	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Producer	5.99	9.42	3.43	32.24	0.22	3.21	45.47
Faria	9.42	9.76	0.34	3.20	0.06	0.28	3.97
Local							
aratdar	9.76	10.09	0.33	3.10	0.06	0.27	3.82
Bepari	10.09	12.88	2.79	26.22	2.38	0.41	5.81
Urban							
aratdar	0.00	0.00	0.25	2.35	0.00	0.25	3.54
Retailer	13.13	16.63	3.50	32.89	0.86	2.64	37.39
Total			10.64	100.00	3.58	7.06	100.00

Source: Estimated from CPD Field Survey, 2007.

**Annex Table 6.25: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC)**

Agent	Purchase Price	Marketing Cost	Gross Return	Net Return	GRWC (%)	NRWC (%)
Producer	5.99	0.22	3.43	3.21	55.23	51.56
Faria	9.42	0.06	0.34	0.28	3.59	2.95
local						
aratdar	9.76	0.06	0.33	0.27	3.36	2.75
Bepari	10.09	2.38	2.79	0.41	22.37	3.29
Retailer	13.13	0.86	3.50	2.64	25.02	18.87

Note: For the calculation of GRWC and NRWC, please see note attached with Annex Table 6.3.

Source: Estimated from CPD Field Survey, 2007.

### Annex 6.7: Full Cream Milk Powder

Regrettably, it has not been possible to estimate the distribution of consumers' expenditure and returns for full cream milk powder, as sufficient data was unavailable and the major market agents were not willing to cooperate.

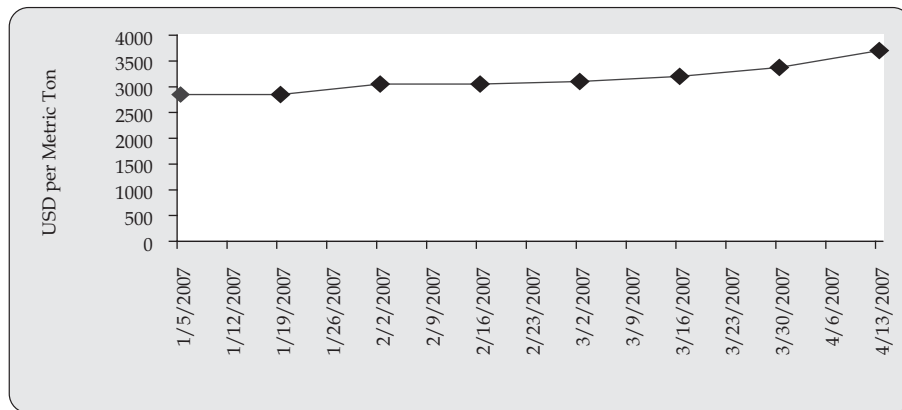
Bangladesh is dependent on imports to meet its total local demand of FCMP and the main importing nations are Australia and New Zealand. According to the calculation of the World Food Outlook of 2006,<sup>17</sup> New Zealand exports

<sup>17</sup> Source: <http://www.fao.org/docrep/009/j7927e/j7927e03.htm>



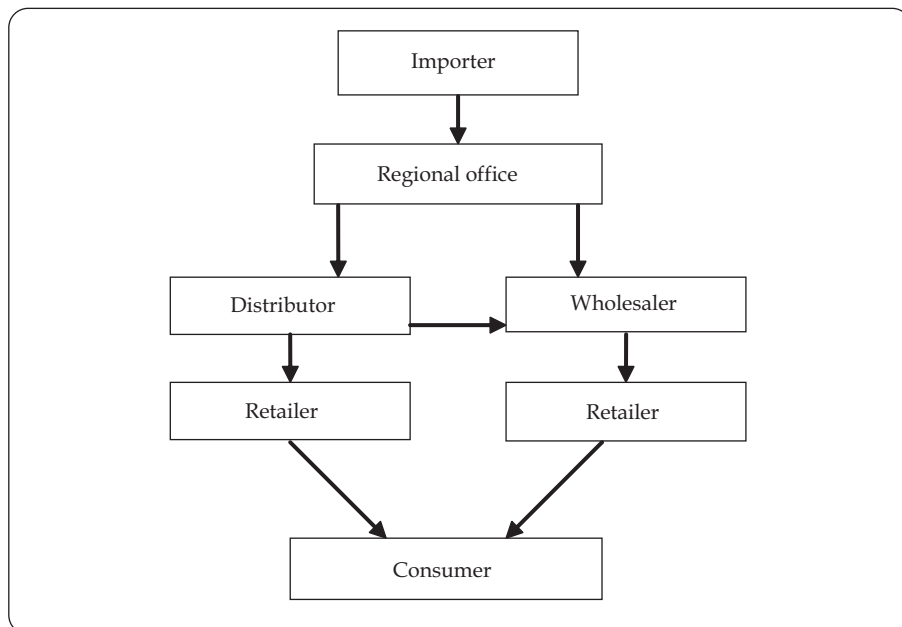
more than 37 per cent and Australia exports 7.3 per cent of the world's total export of milk powder. Being major exporters, prices in these two countries play a central role in determining the world price of full cream milk powder. Recently, prices in these two nations (jointly known as Oceania) have been showing an increasing trend, as illustrated in Annex Figure 6.1.

**Annex Figure 6.1: International Export Price of Dairy Products in the Oceania: 26 Per cent Full Cream Milk Powder**



Source: <http://www.ams.usda.gov/dairy/mncs/international/dy20070412bintprytd.pdf>

**Annex Figure 6.2: Marketing Chain for the Full Cream Milk Powder**



The price of the full cream milk powder has shown an upward trend between 5 January and 13 April 2007. As a result, the price of the item in Bangladesh has also increased.

Importers bring in the unpacked full cream milk powder in bulk quantities and transfer it to their processing plants. Most of the processing plants are located near rivers and the imported unpacked powder milk is transported through the river routes. The imported raw full cream milk powder is processed in the plants and the packaged powder milk is then sent either to distributors or wholesalers. Distributors are actually salaried employees of the importers and they supply the packed full cream milk powder to the wholesalers or retailers directly. Retailers can buy either from distributors or wholesalers.

### **Annex 6.8: Brinjal**

The sample for the field survey consisted of ten farmers, twelve beparis, three aratdars, five farias and ten retailers from two different districts. The field survey was conducted in Narshingdi (Gangpar, Narayanpur and Baraincha) and Dhaka (Karwan Bazaar, Shyambazaar and retail markets in Mirpur 1, Mohammadpur, Palashi, Khilgaon, Tongi, Gandaria and Mukdapara) districts, during 2-9 April 2007. Seven types of agents were identified during the field survey – producer, broker, bepari, faria, aratdar, exporter, wholesaler and retailer.

### **Findings**

#### *Supply Chains*

Chain 1: Producer →(Broker) →Bepari→(Aratdar)→Faria→Retailer→Consumer.

Chain 2: Producer→(Broker)→Bepari→(Aratdar)→Faria→Consumer.

Chain 3: Producer→Bepari→(Aratdar)→Faria→Retailer→Consumer.

Chain 4: Producer→(Broker)→Bepari→(Aratdar)→Retailer→Consumer.

Chain 5: Producer→Bepari→(Aratdar)→Retailer→Consumer.

Chain 6: Producer→(Broker)→Bepari→Exporter→Consumer (abroad).

**\*Note:** Agents in bracket () do not directly buy or sell; they are just commission agents.

Chain 4 is the dominant supply chain, while Chain 1 is the longest. Both of these chains have been considered in this value chain analysis. Farmers encounter varying costs during the production phase and a major portion is

incurred for preparation of the land and sowing, when farmers have no yield. The core harvesting period ranges from 2.5 to 3 months, but yield continues for 4 to 4.5 months.

Farmers do not record their costs, however, the list that they provided offers a broad picture according to which, Tk. 10,215 is spent for 15 decimal of land, i.e. Tk. 681 per decimal. They cannot influence the price of brinjal as it is a highly perishable product, coupled with information asymmetry, a significant feature of the essential goods' market. Due to this factor, beparis provide false idea about market condition in Dhaka, and consequently, selling price varies highly from Tk. 120 to Tk. 180 per mound, at the same market on the same day. Beparis buy from the local market, transfer it to the wholesale markets in Dhaka at midnight and sell till 7-8 am in the morning.

There exists another agent called brokers (locally known as dalal), who act in between farmers and beparis. They are responsible for negotiating the price in favour of beparis and enjoy some commission. Aratdars hire a space (arat) to deposit the product from beparis and receive commission from the latter, alongside retailers or farias, who buy from the beparis at the arat. They receive a commission (koiali) of Tk. 15/mound from the beparis and Tk. 2–5/kg (palla) from the farias. Retailers market varies significantly depending on location, distance and volume of operation.

#### *Distribution of Consumers' Expenditure*

From Annex Tables 6.26 and 6.27, it is evident that retailers put into the bag the highest gross margin in both dominant and longest supply chains (43.16 and 25.00 per cent, respectively). Farias put into their pocket the second highest portion of the gross margin in the longest supply chain (21 per cent), while beparis obtain the highest portion in the dominant chain. Farmers/producers receive a small portion of consumers' expenditure as gross margins in both the dominant and longest supply chains (2.63 and 2.50 per cent) respectively. The only agent acquiring lower gross margin than the producers are brokers (dalal), 0.21 per cent in the dominant and 0.20 per cent in the longest supply chain.

**Annex Table 6.26: Distribution of Consumers' Expenditure among Agents: Dominant Chain**

Agent	Particulars	Tk./Kg	Per cent
Producer	Production cost *	2.97	31.26
	Gross margin	0.25	2.63
	Marketing cost	0.00	
	Net margin	0.25	
Broker (Dalal)	Gross margin	0.02	0.21
	Marketing cost	0.00	
	Net margin	0.02	
Bepari	Gross margin	1.36	14.32
	Marketing cost	0.53	
	Net margin	0.83	
Aratdar (Indirect)	Gross margin	0.80	8.42
	Marketing cost	0.25	
	Net margin	0.55	
Retailer	Gross margin	4.10	43.16
	Marketing cost	1.50	
	Net margin	2.60	
Consumer		9.50	100.00

**Note:** For the calculation, please see notes attached with Annex Table 6.1.

**Source:** Estimated from CPD Field Survey, 2007.

**Annex Table 6.27: Distribution of Consumers' Expenditure among Agents: Longest Chain**

Agents	Particulars	Tk./Kg	Per cent
Producer	Production cost *	2.97	29.70
	Gross margin	0.25	2.50
	Marketing cost	0.00	
	Net margin	0.25	
Broker (Dalal)	Gross margin	0.02	0.20
	Marketing cost	0.00	
	Net margin	0.02	
Bepari	Gross margin	1.36	13.60
	Marketing cost	0.53	
	Net margin	0.83	
Aratdar (Indirect)	Gross margin	0.80	8.00
	Marketing cost	0.20	
	Net margin	0.60	
Faria	Gross margin	2.10	21.00
	Marketing cost	0.50	
	Net margin	1.60	
Retailer	Gross margin	2.50	25.00
	Marketing cost	1.58	
	Net margin	0.93	
Consumer		10.00	100.00

**Note:** For the calculation, please see notes attached with Annex Table 6.1.

**Source:** Estimated from CPD Field Survey, 2007.

*Distribution of Return***Annex Table 6.28: Distribution of Gross and Net Margin among Market Intermediaries: Dominant Chain**

Agent	Production/ Buying Cost	Selling Price	Gross Margin		Operating / Marketing Cost	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Producer	2.97	3.22	0.25	3.83	0.00	0.25	5.88
Broker (Dalal)	-	-	0.02	0.30	0.00	0.02	0.47
Bepari	3.24	4.60	1.36	20.83	0.53	0.83	19.60
Aratdar (Indirect)	-	-	0.80	12.25	0.25	0.55	12.93
Retailer	5.40	9.50	4.10	62.79	1.50	2.60	61.12

Source: Estimated from CPD Field Survey, 2007.

**Annex Table 6.29: Distribution of Gross and Net Margin among Market Intermediaries: Longest Chain**

Agent	Production/ Buying Cost	Selling Price	Gross Margin		Operating / Marketing Cost	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Producer	2.97	3.22	0.25	3.56	0.00	0.25	5.65
Broker (Dalal)	-	-	0.02	0.28	0.00	0.02	0.45
Bepari	3.24	4.60	1.36	19.35	0.53	0.83	18.85
Aratdar (Indirect)	-	-	0.80	11.38	0.20	0.55	12.44
Faria	5.40	7.50	2.10	29.87	0.50	1.60	29.82
Retailer	7.50	10.00	2.50	35.56	1.58	0.93	32.79

Source: Estimated from CPD Field Survey, 2007.

Once again, Annex Table 6.28 and 6.29 show that retailers acquire the highest gross and net margin in both the dominant and the longest supply chains. In the dominant supply chain, they obtain 62.79 per cent of the gross margin and 61.12 per cent as net margin. This is almost 20 times and 12 times more than what the producers obtain in the dominant chain, 3.83 per cent gross margin and 5.88 per cent net margin. Retailers are followed by farias in the longest chain.

**Annex Table 6.30: Distribution of Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Dominant Chain***(in Per cent)*

Agent	GRWC	NRWC
Producer	8.42	8.42
Broker (Dalal)	-	-
Bepari	36.11	22.13
Aratdar (Indirect)	320.00	220.00
Retailer	59.42	37.68

**Note:** For the calculation, please see notes attached with Annex Table 6.3.

**Source:** Estimated from CPD Field Survey, 2007.

An estimate of GRWC and NRWC presented in Annex Table 6.30 shows that both these returns are much higher for aratdars, compared to beparis and retailers. Although beparis and retailers receive 20.83 per cent and 62.79 per cent respectively of the gross margin in the dominant chain, considering the size of operation it is found that their volume of total margin is very low compared to beparis, aratdars, and even farias. It should be noted here that producers margin fluctuates over the harvesting season as price adjusts significantly during this period. Each of the agent charges a price marking up their purchasing price by a standard amount all over the season, except producers.

### Annex 6.9: Green Chilli

The sample for the field survey consisted of six farmers, ten beparis, three aratdars, five farias and twelve retailers from two different districts. The field survey was conducted in Narshingdi (Narayanpur) and Dhaka (Karwan Bazaar and Shyambazaar, Malibagh, Mirpur 1, Mohammadpur, Palashi, Khilgaon, Tongi, Gandaria and Mukdapara) districts between 2-9 April 2007. Six types of agents have been identified during the field survey—producer, broker, bepari, faria, wholesaler and retailer.

### Findings

#### *Supply Chains*

Chain 1: Producer →(Broker)→Bepari→(Aratdar)→Faria→Retailer →Consumer.

Chain 2: Producer→(Broker)→Bepari→(Aratdar)→Faria→Consumer.

Chain 3: Producer→Bepari→(Aratdar)→Faria→Retailer→Consumer.

Chain 4: Producer→(Broker)→Bepari →(Aratdar)→Retailer→Consumer.

Chain 5: Producer→Bepari→(Aratdar)→Retailer→Consumer.

Chain 6: Producer→(Broker)→Bepari→Exporter→Consumer (abroad).

**Note:** Agents in bracket () do not directly buy or sell; they are just commission agents.

Chain 4 is the dominant supply chain and Chain 1 is the longest. At the initial stage of harvesting, yield rate remains limited in between 60-70 kg on a 16 decimal sized-land. Around 220-250 kg of chilli is grown during the first quarter of harvesting season within a total period of 4-5 months. Producers, once again, are incapable of price determination. Beparis are the central players in price determination. Aratdars are another cardinal agent of the chain, and like brokers, they are commission recipients without being directly involved in the buying-selling process. They rent the space (arat) to store product brought by beparis. In return to this non-negotiable facility, they enjoy Tk. 20-25/mound from beparis, and Tk. 2-5/kg (palla) from the farias commonly termed as 'koiali.'

Retailers mainly purchase from beparis at the wholesale market, for instance, Karwan Bazaar, Shyambazaar at late night or in the early morning. While purchasing, retailers pay a commission (koiali) of Tk. 2-5/kg (palla) to aratdars. They purchase green chilli and keep it in a space outside the arat, locally known as "ford." They have to pay a charge for using this space.

#### *Distribution of Consumers' Expenditure*

**Annex Table 6.31: Distribution of Consumers' Expenditure among Agents: Dominant Chain**

Agents	Particulars	Tk./Kg	Per cent
Producer	Production cost *	9.49	43.12
	Gross margin	1.51	6.88
	Marketing cost	0.00	
	Net margin	1.51	
Broker (Dalal)	Gross margin	0.02	0.09
	Marketing cost	0.00	
	Net margin	0.02	
Bepari	Gross margin	4.00	18.18
	Marketing cost	1.07	
	Net margin	2.93	
Aratdar (Indirect)	Gross margin	0.88	4.00
	Marketing cost	0.20	
	Net margin	0.68	
Retailer	Gross margin	6.10	27.73
	Marketing cost	2.29	
	Net margin	3.82	
Consumer		22.00	100.00

**Note:** For the calculation, please see notes attached with Annex Table 6.1.

**Source:** Estimated from CPD Field Survey, 2007.

**Annex Table 6.32: Distribution of Consumers' Expenditure among Agents: Longest Chain**

Agents	Particulars	Tk./Kg	Per cent
Producer	Production cost *	9.49	41.24
	Gross margin	1.51	6.58
	Marketing cost	0.00	
	Net margin	1.51	
Broker (Dalal)	Gross margin	0.02	0.09
	Marketing cost	0.00	
	Net margin	0.02	
Bepari	Gross margin	4.00	17.39
	Marketing cost	1.07	
	Net margin	2.93	
Aratdar (Indirect)	Gross margin	0.88	3.83
	Marketing cost	0.20	
	Net margin	0.68	
Faria	Gross margin	1.60	6.96
	Marketing cost	0.50	
	Net margin	1.10	
Retailer	Gross margin	5.50	23.91
	Marketing cost	1.58	
	Net margin	3.93	
Consumer		23.00	100.00

Note: For the calculation, please see notes attached with Annex Table 6.1.

Source: Estimated from CPD Field Survey, 2007.

In both supply chains (Annex Tables 6.31 and 6.32), retailers acquire the highest consumers' expenditure as their gross margin, 27.73 per cent and 23.91 per cent respectively. They are followed by beparis in both the dominant and longest supply chains. Producers receive more or less the same amount of gross margins in both the supply chains, 6.88 per cent in the dominant supply chain and 6.58 per cent in the longest supply chain. Farias are an add-on agent in the longest supply chain, who obtain a significant portion of the consumers' expenditure as their gross margins, almost 7.0 per cent.

#### *Distribution of Return*

Annex Table 6.33 shows that in the dominant supply chain, retailers put into their bag almost half of the total gross margin, which is estimated to be (48.75 per cent). Beparis and aratdars receive 31.96 per cent and 7.03 per cent, respectively. When net margin is considered, producers' share is (16.90 per cent) while that of beparis and aratdars are 32.70 per cent and 7.59 per cent, respectively. In the longest supply chain, farias acquire a significant portion of both gross and net margins, i.e. 11.84 per cent and 10.82 per cent, respectively (Annex Table 6.34). Similar pattern was observed in the longest chain with retailers acquiring the highest portion of gross and net margins,



e.g. 40.70 per cent and 38.60 per cent. Beparis suffer a loss in the longest supply chain with their gross and net margins percentage decreasing to 29.60 per cent and 28.80 per cent, respectively.

**Annex Table 6.33: Distribution of Gross and Net Margin among Market Intermediaries: Dominant Chain**

Agent	Production/ Buying Cost	Selling Price	Gross Margin		Operating / Marketing Cost	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Producer	9.49	11.00	1.51	12.10	0.00	1.51	16.90
Broker (Dalal)	-	-	0.02	0.16	0.00	0.02	0.22
Bepari	11.02	15.02	4.00	31.96	1.07	2.93	32.70
Aratdar (Indirect)	-	-	0.88	7.03	0.20	0.68	7.59
Retailer	15.90	22.00	6.10	48.75	2.29	3.82	42.59

Source: Estimated from CPD Field Survey, 2007.

**Annex Table 6.34: Distribution of Gross and Net Margin among Market Intermediaries: Longest Chain**

Agent	Production/ Buying Cost	Selling Price	Gross Margin		Operating / Marketing Cost	Net Margin	
			Tk./Kg	Per cent of Total		Tk./Kg	Per cent of Total
Producer	9.49	11.00	1.51	11.20	0.00	1.51	14.89
Broker (Dalal)	-	-	0.02	0.15	0.00	0.02	0.20
Bepari	11.02	15.02	4.00	29.60	1.07	2.93	28.80
Aratdar (Indirect)	-	-	0.88	6.51	0.20	0.68	6.69
Faria	15.90	17.50	1.60	11.84	0.50	1.10	10.82
Retailer	17.50	23.00	5.50	40.70	1.58	3.93	38.60

Source: Estimated from CPD Field Survey, 2007.

The estimation GRWC and NRWC shows that aratdars' returns are much higher compared to beparis and retailers (Annex Table 6.35 and 6.36). In case of the longest chain, farias capture almost 10 per cent of the gross return and 6.71 per cent of the net return.

**Annex Table 6.35: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Dominant Chain***(in Per cent)*

Agent	GRWC	NRWC
Producer	15.91	15.91
Broker (Dalal)	-	-
Bepari	33.08	24.22
Aratdar (Indirect)*	440.00	340.00
Retailer	33.54	20.98

**Note:** For the calculation, please see note attached with Annex Table 6.3.

\* Aratdar does not buy but have some fixed and some operational costs. For this estimation, only the operational cost is considered, as no data are available for fixed cost.

**Source:** Estimated from CPD Field Survey, 2007.

**Annex Table 6.36: Gross Return over Working Capital (GRWC) and Net Return over Working Capital (NRWC): Longest Chain***(in Per cent)*

Agent	GRWC	NRWC
Producer	15.91	15.91
Broker (Dalal)	-	-
Bepari	33.08	24.22
Aratdar (Indirect)	440.00	340.00
Faria	9.76	6.71
Retailer	28.83	20.58

**Note:** For the calculation of GRWC and NRWC, please see note attached with Annex Table 6.3.

**Source:** Estimated from CPD Field Survey, 2007.

### Annex 6.10: Egg

The sample for the field survey consisted of five poultry farmers, one local aratdar, four aratdars and three retailers from two different districts. The field survey was conducted in Gazipur and Dhaka (Karwan Bazaar and Tejgaon bazaar and Mohammadpur) district, during 2-9 April 2007. The majority of the poultry farms near Dhaka are located in the Gazipur region. These farms are the major suppliers of egg to Dhaka. Tejgaon is the main wholesale market in Dhaka. Four types of agents have been identified during the field survey—poultry farmer, local aratdar, aratdar-cum-wholesaler and retailer.

### Findings

#### *Supply Chains*

Chain 1: Poultry Farmer→Local Aratdar→Aratdar→Retailer→Consumer.

Chain 2: Poultry Farmer→Aratdar→Retailer→Consumer.

**Annex Table 6.37: Costs and Pricing: Poultry Farmers**

Production Cost (Per Month for 1,000 Hens)*						
	Food	Medicine	Rent	Labour	Others	Total
Average cost (in Tk.)	64,000	1,500	2,000	5,000	2,000	74,500
Per cent	85.0	2.0	3.0	7.0	3.0	100.0

**Note:** \* These figures are the average of the data set acquired from the five poultry farmers.

**Source:** Estimated from CPD Field Survey, 2007.

Only two supply chains were identified during the survey. Poultry farmers buy 1-day-old chicks at a price of Tk. 36-40 per piece, and these require further nourishing for up to 20 weeks, before they are able to start laying eggs. Each hen produces egg for almost 80-90 weeks, and once they stop laying eggs, they are sold for consumption as chicken. Approximately 85 per cent of the production cost is attributed to the food expenditure of the hens, and only 3.0 per cent and 7.0 per cent are rent and labour costs, respectively (Annex Table 6.37).

The selling price for eggs varies from time to time. In April 2007, the selling price was Tk. 285 per 100 eggs for red eggs, and Tk. 275 per 100 for white ones. The usual price range for red egg is Tk. 300-420 per 100 pieces, while white eggs are usually sold at a rate of Tk. 290-400 per 100 pieces. Prices are set by an authorised institution, the 'Tejgaon Dim Aratdar Samity' in Dhaka. Farmers' selling price is approximately Tk. 10 less than the price set by the Samity and the interviewed farmers confirmed the survey team that they made an average profit of Tk. 5 per 100 eggs during a normal business cycle.

Local aratdars incur two major costs—transportation and operational. They transport eggs from poultry farms by van and each trip costs Tk. 60, through which approximately 3,000 eggs can be transported. Other than the transportation cost, their operational costs include utility bills, employee salary, etc. The average operational cost of a local aratdar is approximately Tk. 6,500 per month.

Aratdars in Dhaka play a dual role: aratdar-cum-wholesaler. They set prices in the market and their operational costs are similar to that of local aratdars. They transport eggs from poultry farms or local aratdars by truck, where each trip costs Tk. 2,200, transporting approximately 80,000 eggs.

*Distribution of Consumers' Expenditure***Annex Table 6.38: Distribution of Consumers' Expenditure among Agents**

Red Egg		Before Bird Flu		At Present	
Agent	Particulars	Tk./100 Egg	Per cent	Tk./100 Egg	Per cent
Poultry farmer	Production cost *	372.50	82.78	372.50	124.17
	Gross margin	22.50	5.00	-87.50	-29.17
	Marketing cost	0.00		0.00	
	Net margin	22.50		-87.5	
Local aratdar	Gross margin	5.00	1.11	5.00	1.67
	Marketing cost	4.00		4.00	
	Net margin	1.00		1.00	
Aratdar-cum-wholesaler	Gross margin	20.00	4.44	5.00	1.67
	Marketing cost	7.14		7.14	
	Net margin	12.86		-2.14	
Retailer	Gross margin	30.00	6.67	5.00	1.67
	Marketing cost	3.00		3.00	
	Net margin	27.00		2.00	
Consumer		450.00	100.00	300.00	100.00

**Note:** For the calculation, please see notes attached with Annex Table 6.9.

**Source:** Estimated from CPD Field Survey, 2007.

Annex Table 6.38 shows the distribution of consumers' expenditure among the marketing agents in two different scenarios—prior to bird flu and current situation against the outbreak of avian influenza (bird flu). Retailers acquired the highest percentage (6.67 per cent) of the consumers' total expenditure prior to the outbreak of bird flu, whereas local aratdars obtained the smallest proportion (1.11 per cent). Poultry farmers attained a reasonable portion (5.00 per cent) of the consumers' expenditure; however, the corresponding percentage figures for poultry farmers at present are indicating an alarming picture. These figures demonstrate that farmers are spending more (124.17 per cent) than what the consumers are currently paying (100 per cent). This can be attributed to the combined impact of increased production cost and the market shock, due to the bird flu epidemic.

Even if the BDR and retailers buy the same produce in wholesale from Karwan Bazaar, the BDR would be able to sell those at a cheaper rate than retailers (Annex Table 7.2). This is because retailers sell product by adding their own profit margins to the cost. In the BDR markets, prices are determined by the BDR officials.

**Annex Table 7.2: The Comparative Prices of the BDR Markets and other Retail Markets: As of 29 March 2007**

Product	BDR Price (Tk./Kg)	Retail Market Price (Tk./Kg)
Rice	15.25	19.00
Edible Oil (2 litres)	128.00	130.00
Lentil (Deshi)	63.00	74.00
Lentil (Turkey)	48.00	46.00-50.00
Onion (Deshi)	12.00-13.00	15.00-18.00
Onion (Indian)	19.50	20.00
Flour	24.00	25.00-26.00

Source: CPD Field Survey, 2007.

An enquiry into the effect of these BDR markets revealed diverse opinions. According to some, price is still high and increasing in the retail markets. Another group mentioned a stabilising effect, that the price has not fluctuated but is remaining in a stable position. Retailers mentioned that due to the BDR initiative, consumers have diverted, to some extent, towards the BDR market. As a result, daily quantity sale of a general retailer has declined, for example, from 75 kg to 60 kg (20.0 per cent) for potato.

### *Annex 7.3*

#### **OMS under Trading Corporation of Bangladesh (TCB)**

To provide price support to the consumers, the Ministry of Food and Disaster Management operates the programmes of Open Market Sales (OMS) for rice through its wing in Directorate-General of Food. The Directorate-General of Food mainly operates these programmes before the harvesting period of Boro and Aman paddy (March to April and September to October), when shortage of paddy supply exists in the market. In 2006, they operated OMS during the month of Ramadan. In 2007, the Directorate-General of Food began the OMS of rice from 18 March, due to its high demand and to restrain the price surge of rice across the country. The government decided to extend the time limit of the OMS until 24 April because of the positive impact.

The OMS of rice is operating through the 15,000 selected dealers (approximately). These dealers are selected by the Deputy Commissioner (DC), Thana Nirbahi Officer (TNO) and local administrative officers based on some particular characteristics (e.g. they have to own grocery shop in the local market). For the current operation, the Directorate-General of Food has set the selling target of OMS for rice approximately at 2.5 lakh tonnes across the country. Under this programme, an individual will be allowed to buy 5.0 kgs of rice and each of the dealers will receive 1,020 kgs of rice every other day.

**Annex Table 7.3: Price Distribution for OMS of Rice**

(Tk./Kg)

Time of OMS	Actors	Buying Price	Selling Price
18 March 2007	Government	16.00	13.75
	Dealers	13.75	15.00
	Retailers	-	20.50
After 10 April 2007	Government	16.00	13.75
	Dealers	13.75	15.25
	Retailers	-	21.00

Source: Directorate-General of Food (Ministry of Food and Disaster Management), 2007.

Annex Table 7.3 shows that the government procurement price of rice was Tk. 16 per kg and selling price at Tk 13.75 per kg. The selected dealers bought rice for Tk. 13.75 per kg from the government in the OMS duration, and sold at the rate of Tk. 15.00 per kg. During the same time period, the retail market price varied from Tk. 20.50 per kg to Tk. 21 per kg. These prices are set by the Directorate-General of Food. Within the OMS time period, rice market price increased only by Tk. 0.50 per kg. Therefore, the intention of the Directorate-General of Food is perceived to be met partially by limiting the market price of rice. Then again, price in retail markets showed no downward shift, despite the OMS.

In the absence of bidding (inviting private tender), the government is buying paddy (10 per cent) and rice (90 per cent) domestically, with the support of local administrative committee from farmers and millers. Some positive and negative situations may exist in their stock policy. The positive side may be that farmers can get a "fairer" price by selling their paddy directly to government silo. But the policy of the Directorate-General of Food is to procure more rice than paddy, because paddy reduces the capacity of silo. Hence, mid agent millers are benefiting more than farmers. Likewise, brokers may exist among farmers, millers and government officials, where they are disturbing the procurement system. Thus, to

provide price support to the producers and consumers, and to ensure food security for the lower income groups of the people of Bangladesh, the Directorate-General of Food operates the OMS for rice and foodgrain stocks to stabilise market price.

#### *Annex 7.4*

### **Product Specific Global Productions and Price Scenario**

#### **Annex 7.4.1: Rice**

According to the Food and Agriculture Organization of the United Nations (FAO), the global rice production was forecasted at 420.9 million tonnes in 2006-07, compared to 421.9 million tonnes in 2005-06, about 1.0 million ton less in 2006 (FAO: *Crop Prospects and Food Situation*, 2007). Global production declined by 0.2 per cent (1.0 million ton) due to unfavourable weather conditions in the major rice producing countries during 2006-07. However, in February 2007, FAO published another report titled "*Crop Prospects and Food Situation*," where it made a forecast that rice production would improve only by 0.8 per cent. The forecast showed that global rice production in 2007 could grow marginally to 423 million tonnes (milled terms), about 3.0 million tonnes more compared to 2006. In 2007, projected world stock will also decrease by 0.6 per cent than that of the previous year. The major producers of rice are: India, Philippines, Vietnam, China and Thailand. Bangladesh mainly imports rice from India and Thailand, both are expected to have a surplus amount of rice production. Till January 2007, the world deficit was 2,714 metric tonnes.<sup>18</sup> This fall in current global stock will affect the rice stocks-to-utilisation ratio in a negative manner. Bangladesh's import fell by 100,000 metric tonnes to 600,000 metric tonnes in 2007, while total world import of rice increased to 28,910 metric tonnes in 2007, from 27,960 metric tonnes in 2006.

Annex Table 7.4 shows that world closing stocks at the end of the year 2007 would be 104.7 million tonnes, which is 0.6 per cent less than the previous year. According to FAO, fast consumption growth in Bangladesh will result in smaller reserves, despite rising imports. The anticipated fall in current global stock will negatively affect the rice stocks-to-utilisation ratio.

World rice import in 2007 was projected to be around 28.9 million tonnes, almost similar to that of the previous year's 27.7 million tonnes (Annex Table 7.5). FAO predicted that increased imports by African and South American countries may hamper consignments for Asian countries. The

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<sup>18</sup>USDA, 2007d.

total world import of rice is expected to be at 28,910 thousand metric tonnes during 2006-07, while Bangladesh's import is expected to fall by a 100,000 metric tonnes to 600,000 metric tonnes in 2006-07.

**Annex Table 7.4: World Rice Market at a Glance**

(in Million Tonnes)

Year	2004-05	2005-06 Estimate	2006-07 Forecast	Change 2006-07 over 2005-06 (%)
<b>World Balance (milled basis)</b>				
Production	406.9	421.9	420.9	-0.2
Trade	29.8	28.6	28.9	1.1
Total utilisation	413.8	416.4	420.6	1.0
Food	361.6	367.2	372.2	1.4
Ending stocks	99.2	105.3	104.7	-0.6
<b>Supply and Demand Indicators</b>				
Per capita food consumption: World Kg/Year	56.7	56.9	56.9	0.0
Low Income Food Deficit Country (LIFDC) Kg/Year	69.7	69.7	69.6	-0.1
World stock-to-use ratio (%)	23.8	25.0	24.6	-1.6
Major exporters' stock-to- disappearance ratio (%)	13.2	15.7	15.0	-4.5

Source: FAO Corporate Document Repository, "Food Outlook, Global Market Analysis," 2006.

**Annex Table 7.5: Quantity of Rice Import by Selected Countries**

('000 Metric Tonnes)

Country	2002-03	2003-04	2004-05	2005-06	2006-07 (December)	2006-07 (January)
Bangladesh	1,112	801	785	700	600	600
Indonesia	2,750	650	500	600	600	1,800
Malaysia	500	700	751	850	850	850
Philippines	1,300	1,100	1,890	1,900	1,650	1,850
World Total	27,575	27,184	29,009	27,691	27,960	28,910

Source: USDA, 2007d.

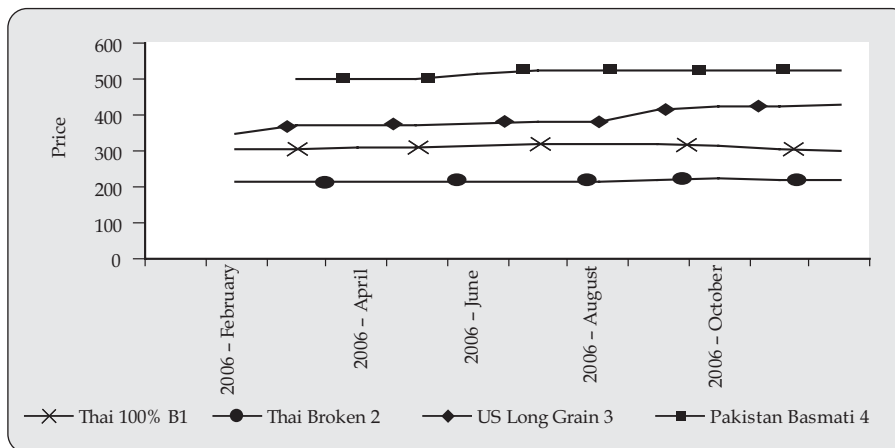
### Global Price

According to a global market analysis by FAO, prices of rice showed an upward trend in response to rising demand and tight supplies in 2006. World prices have increased by 10 per cent on an average and this upward trend is expected to continue in the following months with increasing global demand (Annex Figure 7.1). Export restrictions imposed by different rice



exporting countries also created impact on current price hike of daily essentials.

**Annex Figure 7.1: International Prices for Rice**



**Source:** FAO Corporate Document Repository, "Food Outlook, Global Market Analysis," 2006.

In December 2006, the world price of rice continued to follow the upward trend, due to the scarce supply of rice. Prices started to decline in Vietnam and India as a result of new harvest in the market. The OSIRIZ/Info Arroz index (IPO) rose to 135.5 points (basis 100 = January 2000), 137.3 points, 139.8 points respectively in January, February, and March in 2007.

Reasons behind price hike:

- Due to low production of the rice crop in 2006-07 in the major exporting countries and the world as a whole, the price of rice increased globally.
- In India, rice export prices have been rising due to strong local demand and stagnant output.
- In case of Pakistan, under supply of rice increased its price from USD 600 to USD 800 per ton in the international market.
- In Thailand, prices were likely to rise due to new demands from Iran, Indonesia and the Philippines. Thailand's parboiled 100 per cent sortexed was offered at USD 325 to USD 330 per metric ton (MT).
- In Vietnam, rice export prices were higher this year as state-owned companies bought several large contracts to sell to Indonesia and the Philippines, whereby their activities were accelerating the prices.

### Annex 7.4.2 : Wheat

It is true that a sharp drop in worldwide wheat production in 2006 was driven by lower outputs in nearly all major exporting countries. It resulted in one of the tightest periods for world supply and demand of wheat in more than two decades (Annex Table 7.6)

**Annex Table 7.6: World Wheat Market at a Glance**

(in Million Tonnes)

Year	2004-05	2005-06 Estimate	2006-07 Forecast	Change 2006-07 over 2005-06(%)
<b>World Balance (milled basis)</b>				
Production	632.0	624.5	591.8	-5.2
Trade	2110.8	110.1	110.0	-0.1
Total utilisation	618.8	623.2	621.7	-0.2
Food	437.7	442.4	445.6	0.7
Other uses	70.1	67.6	63.9	-5.6
Ending stocks	175.5	174.7	147.0	-15.8
<b>Supply and Demand Indicators</b>				
Per capita food consumption:				
World Kg/year	68.6	68.6	68.2	-0.5
LIFDC Kg/year	59.8	59.6	59.2	-0.7
World stock-to-use ratio %	28.2	28.1	23.2	-17.5
Major exporters' stock-to-disappearance ratio %	21.7	23.1	13.8	-40.1

Source: FAO Corporate Document Repository, "Food Outlook, Global Market Analysis," 2006.

**Annex Table 7.7: Quantity of Wheat Exported by Selected Countries**

('000 Metric Tonnes)

Country	2002-03	2003-04	2004-05	2005-06	2006-07 (March)
Australia	10,946	15,096	15,826	15,213	12,000
Canada	9,393	15,526	15,142	15,644	20,500
Russian Federation	12,621	3,114	7,951	10,664	10,000
Ukraine	6,569	66	4,351	6,461	2,800

Source: USDA, 2007d.

Among the main exporting countries, Canada's export quantity will increase as their production is likely to exceed 20 million tonnes in comparison to

2006. Bangladesh will also import less in 2007 compared to 2006. Ukraine's export will be very little for 2007, compared to other exporting countries, due to the policy changes of the Ukraine government (Annex Table 7.7).

#### *Global Price*

In November 2006, the United States wheat export price averaged USD 219 per ton, up over USD 52, or 31 per cent from the preceding year. By October 2006, concerns regarding the prospects of wheat crops in major producing countries located in the southern hemisphere (especially drought devastated Australia), added further steam to price spiral, coupled with the announcement by Ukraine to limit exports through quotas. By late November 2006, the Chicago Board of Trade (CBOT) resumed their upward trend and reached USD 191 per ton, up USD 73 per tonne, or 62 per cent from 2005 (FAO: Food Outlook, 2006).

Notwithstanding the current tight market situation, FAO is predicting international wheat prices to return to moderate levels. The sharp increase in winter plantings and good growing conditions has raised expectations for a strong rebound in 2007 harvests. Due to the upward trend in the production condition of wheat, especially in the major exporting countries, it is expected that global price will come to a moderate level by mid 2007. According to the FAO Food Outlook 2006, the price of US Hard Red Winter wheat in 2006 October was USD 218 per ton, followed by USD 196 for US Soft Red Winter, and USD 191 for Argentina Trigo Pan.

#### **Annex 7.4.3: Edible Oil**

##### *Global Production of Oilseeds*

The average price of soybean oil during January and February 2007 was USD 710 per ton, whereas it was USD 599 in 2006. In case of palm oil, the price was USD 478 per ton during 2006, which soared to USD 609, during January-February 2007 (Annex Tables 7.8 and 7.9).

**Annex Table 7.8: World Production of Soybean and Palm Kernels**

*(in Million Tonnes)*

Year	Soybeans	Palm Kernels
2004-05	216.1	8.9
2005-06 (estimated)	218.7	9.5
2006-07 (forecasted)	224.3	9.6

Source: FAO Corporate Document Repository (2006), "Food Outlook, Global market Analysis," 2006.

**Annex Table 7.9: Prices of Soybean Oil: 2006 and 2007***(in USD/Ton)*

Month (2006-07)	Price (USD/Ton)
October 2006	664.39
November 2006	740.48
December 2006	740.21
January 2007	750.12
February 2007	775.30
March 2007	796.73

Source: World Agricultural Outlook Board, 2007.

**Annex 7.4.4: Lentil**

One of the major reasons behind the reduction in lentil supply has been Canada's declining output (31 per cent in 2005-06 to 18 per cent in 2006-07) in world lentil production (Annex Table 7.10). Canada's lentil trade is

**Annex Table 7.10: World Lentil Supply and Disposition**

	2002-03	2003-04	2004-05	2005-06	2006-07 <sup>f</sup>
Harvested area (ha)	3,685	3,630	3,957	4,000	3,700
Average yield (t/ha)	0.78	0.86	0.95	1.04	0.94
.....Thousand tonnes.....					
Carry-in stocks	300	100	100	450	900
Production					
India	974	880	1,100	1,000	900
Canada	354	520	962	1,278	625
Turkey	565	540	540	560	600
United States	117	111	190	234	270
Australia	45	175	95	210	196
Syria	133	168	125	154	150
China	125	132	150	160	150
Nepal	148	150	159	161	145
Iran	117	120	125	125	125
Bangladesh	115	116	122	122	115
Others	197	194	199	165	184
<b>Total production</b>	<b>2,890</b>	<b>3,106</b>	<b>3,767</b>	<b>4,169</b>	<b>3,460</b>
<b>Total supply</b>	<b>3,190</b>	<b>3,206</b>	<b>3,867</b>	<b>4,619</b>	<b>4,360</b>
Total use	3,090	3,106	3,417	3,719	3,760
Carry-out stocks	100	100	450	900	600
Stocks-to-use ratio (per cent)	3	3	13	24	16

Note: f = forecast, AAFC, Pulse Australia and USDA.

Source: FAO, USDA, Statistics Canada and Pulse Australia, 2006.

expected to decline by 1.7 million acre crop and price of Canadian lentils has been projected between USD 275-305 per ton during 2006-07, and USD 300-330 per ton in 2007-08, whereas the price was only USD 120 per ton in 2005-06. Contradicting this figure, the Financial Express recently stated that according to a statement from Bangladesh Pulse Traders Association, price of lentil in the international market has increased to USD 900 per ton.

#### **Annex 7.4.5: Milk Powder**

##### *Overall Condition*

World production of milk in 2006 was expected to reach 657 million tonnes, 2.2 per cent more than 2005. With an increase exceeding 4.0 per cent, China, India and Pakistan, alongside countries in South America, largely account for the change in global output. Developed countries recorded near zero growth for 2006, with declining output in Australia and the European Union, but increasing production in New Zealand and the United States. In 2006, prices of feed grains increased, and it was expected that this increase would create an impact on milk powder production in 2007 (FAO Corporate Document Repository 2006).

##### *Australia and New Zealand's Condition*

New Zealand is the world's largest exporter of skimmed milk powder and second largest exporter of full cream milk powder (ABARE and MAF 2006). Australia and New Zealand together account for about one-third of total world trade. However, the 2005-06 production season in New Zealand ended with an estimated 3.0 per cent increase on the previous season, which was below the average of previous years (see Annex Table 7.11). Milk production for the 2006-07 season may reach a new record, as herd numbers are set to increase by 1.0 per cent and further productivity gains are expected from better farm management practices, alongside genetic improvements.

##### *Global Production Projection for 2007*

Drought conditions have returned, as evidenced by the lowest mean rainfall recorded in October 2006. Consequently, pasture conditions have deteriorated, key inputs have become scarce and irrigation supplies are low. In the European Union, world's largest producer of dairy products, milk production was estimated to be relatively flat in 2006-07 (despite increased milk quotas), due to poor seasonal conditions (heat and drought) in many dairying regions.

**Annex Table 7.11: Non-fat Dry Milk and Full Cream Milk Powder Production and Total Exports: Summary for Australia and New Zealand**

('000 Metric Tonnes)

Production (Non-fat Dry Milk)	2002	2003	2004	2005	2006	2007 (Dec)
Australia	261	215	203	206	221	213
New Zealand	255	289	274	225	247	249
Total exports (Non-fat Dry Milk)						
Australia	231	193	187	141	192	187
New Zealand	248	314	305	221	243	245
Production (Full Cream Milk Powder)						
Australia	239	170	187	189	160	154
New Zealand	540	619	628	585	651	664
Total exports (Full Cream Milk Powder)						
Australia	213	142	173	161	155	150
New Zealand	481	635	669	585	634	669

Source: United States Department of Agriculture (2007), "Dairy: World Markets and Trade," Foreign Agricultural Service, 2006.

### *Global Price*

International prices for traded dairy products softened over 2006, due to increased export supplies by Oceania (New Zealand and Australia). According to FAO, price of milk powder was down to 6.0 per cent in 2006, compared to the preceding year. However, in the last six months of 2006, global prices for non-fat dry milk (skimmed milk powder) have accelerated upwards, and the main reason behind this was the severe drought in Australia. Later in 2007, international price of full cream milk powder showed an increasing trend. Annex Figure 7.2 shows that price of the full cream milk powder has experienced an upward trend from January 2007 to April 2007.

*Annex 8.2*

**Indian Initiatives to Ensure  
Stable and Fair Price  
for Producers and Consumers**

In maintaining price stability of essential commodities and to establish a strong price monitoring mechanism, Indian government has taken some very effective initiatives. The objectives of these initiatives are not only to stabilise the consumer price, but also to ensure fair price to the producers, and to protect them against external price and supply shocks. GoB can learn from these Indian initiatives and combining with previous experiences, Bangladesh can chalk down her own plan.

### **8.2.1 Price Support Scheme**

Government of India (GoI) is conducting a scheme titled "*Price Support Scheme*" (PSS) to provide protection for agricultural producers, against any sharp drop in agro-farm prices. Every year, the Indian government announces the minimum support price (MSP), which is fixed after taking into account recommendations from the Commission for Agricultural Cost and Prices (CACP). National Agricultural Cooperative Marketing Federation (NAFED), the national level apex organisation of agricultural marketing cooperatives in India, is the central agency for procurement of goods under PSS scheme. NAFED undertakes procurement of oilseeds and pulses, when prices fall below the MSP level. Later, they sell these goods according to the market price, and it is a subsidised programme of the Indian government for the welfare of the farmers. If losses are incurred, GoI will reimburse the full amount; however if profit is earned, then it will credit to its account.

While PSS ensures a fair price for Indian farmers, it has raised market prices since there is a tendency among successive governments to set MSP in excess of the levels prescribed by the CACP (Virmani and Rajeev, 2001). In this way, to ensure farmers' welfare, the government has actually increased consumers' expenditure. Experts on '*Procurement Policy*' strongly demand the need for revisiting this approach. For example, Virmani and Rajeev (2001) suggested that the GoI should strictly adhere to the CACP

recommendations, which may itself need to be verified. The CACP should reconsider whether they will only be limited to the variable cost when they fix the price, or include the entire production cost of the farmer like. The latter is what they are doing now.

### **8.2.2 Market Intervention Scheme**

Another scheme inaugurated by GoI is "*Market Intervention Scheme (MIS)*". On the request of state government, horticultural commodities are purchased through the NAFED and the concerned state agencies under MIS, to the benefit of farmers, when prices of that particular horticultural commodity fall below economic level. This scheme was finalised and approved by the Department of Agriculture and Cooperation (DAC) of GoI, in consultation with the concerned state governments. However, to fix the MSPs, it follows the same strategy as the PSS. With assistance from government, it also offers some relief, i.e. the state government will bear 50 per cent of the likely losses incurred from the MIS programme.

### **8.2.3 Terminal Markets**

Another interesting marketing initiative by the GoI is the establishment of terminal markets. The Agricultural Department is promoting modern terminal markets for fruits, vegetables and other perishable commodities. These markets are established in the urban areas where electronic auction, cold chain and logistics facilities are available. Terminal markets maintain a link with the primary collection centres, conveniently located in producing areas where farmers have easy access. In reality, the terminal market operates on a 'hub-and-spoke' format, wherein the terminal market (the hub) is linked to a number of collection centres (the spokes). The terminal markets would be built, owned and operated by a corporate/private/cooperative entity, or through the adoption of an outsourcing model. It would charge a user for the services provided.

### **8.2.4 Agricultural Portal: AGMARKNET**

Department of Agriculture and Cooperation has also established a portal titled "*Marketing Research and Information Network (AGMARKNET)*," which covers market, price, infrastructure and promotion related information for efficient marketing. Information also includes grades, labelling, sanitary and phyto-sanitary requirements, physical infrastructure of storage and warehousing, marketing laws, fees, etc. Commodity profiles are also loaded here. Under this scheme, GoI has progressively established a link between three units:



- a. Important agricultural produce markets spread all over India;
- b. The State Agricultural Marketing Boards / Directorates; and
- c. The Directorate of Marketing and Inspection (DMI).

Government is planning to bring the markets under network and is going to take initiatives to develop regional portals, coupled with development of market on the Global Information Systems (GIS) platform. Through the AGMARKET portal, the daily wholesale prices and arrivals, in respect of 300 plus commodities and 200 varieties, are being disseminated. Using the national database, bulletins of weekly and monthly prices, alongside arrivals, are also generated.

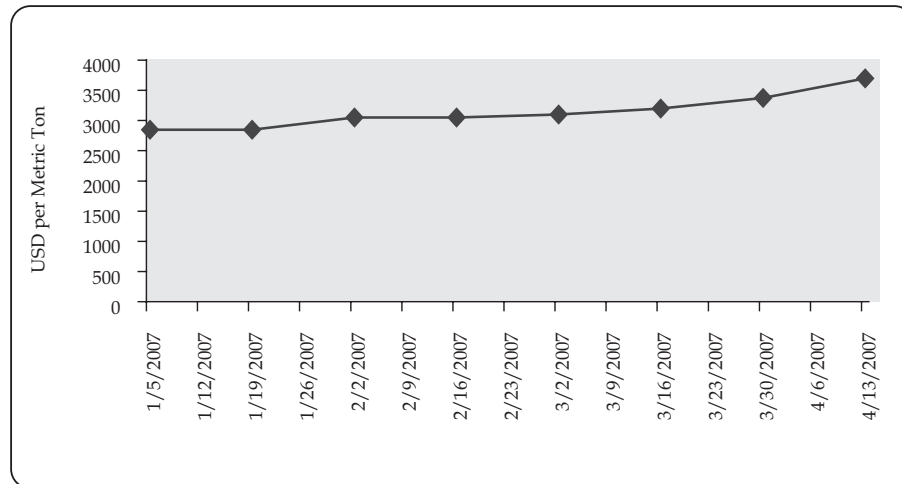
#### **8.2.5 Contractual Farming**

Contract farming refers to a system, whereby the agribusiness firms or exporting units purchase the produces of independent farmers, and the terms of these purchases are settled in advance through contracts. The terms of the contracts vary and usually specify the quantity that the contractors will buy and the price they will pay for that quantity. An important aspect of contract farming is the quality of the produces. The farmers have to ensure that their produces are of certain pre-agreed quality. Quality is one of the major determinants of the prices that they get. Therefore, both the parties monitor the quality of the produces strictly to protect their own interest. The contractors often provide credit inputs and technical advice.

Thailand has been one of the pioneers in contract farming in Asia. It has been practiced very intensively for different crops in Thailand. Thai sugar industry can be mentioned as an example. Contract farming under the centralised processing and marketing model has been practiced in the Thai sugar industry for nearly a decade now. Forty-six private sugar mills produced 40,80,000 tonnes of sugar in the 1997-98 season, and 57 per cent of this sugar was exported. More than 200,000 farmers grew sugar cane for these mills, on approximately 914,000 hectares of land. Besides, there were many farmers who grew crops for large scale farmers through agreements with intermediaries. The Thai government closely regulates the prices, issues quotas and monitors the operations of the private sugar milling companies. They introduced a net revenue sharing system, whereby the total net revenue is shared by the growers and the millers on 70:30 ratios. The government also promotes and manages technical research centres and encourages growers' associations.

The GoI also initiated contract farming in India. Punjab government launched a contract farming programme in October 2002. They are following the Thai model of contract farming. Punjab government is trying to mediate between the companies and the growers by agreeing to purchase the farm produces. However, Singh (2002) annotates that such role of the government may bring undesired results for them, as there are chances that the entire burden of risk and costs will have to be borne by the state, in case of the companies' reluctance to work with growers directly, to meet their raw material requirements.

Contract farming can be introduced in Bangladesh to foster the agricultural growth and development. However, considering Singh's criticism, AGMC should play the role of mediator instead of the government. Introduction of contract farming can enable the AGMCs to ensure sufficient supply of different commodities. Besides, it can also provide them the opportunity of exploring export potentials for those commodities.

**Annex Figure 7.2: International Export Price of Dairy Products in the Oceania: 26 Per cent Full Cream Milk Powder Price**

Source: <http://www.ams.usda.gov/dairy/mnccs/international/dy20070412bintprytd.pdf>.

#### Annex 7.4.6: Onion

According to the FAO, there are an estimated 6.7 million acres of land in the world, producing 105 billion pounds of onion each year. The world's top producer is China, contributing an average of 31.43 per cent to the world production, followed by India 10.22 per cent, the USA 6.38 per cent, Turkey 3.83 per cent, and Pakistan 2.97 per cent. In FY2005, India produced about 60 lakh metric tonnes of onion and between April 2006 to January 2007, onion export reached to 9.43 lakh metric tonnes against 7.7 lakh metric tonnes in FY2006. In 2006, Bangladesh imported 3.5 lakh metric tonnes of onions from India.<sup>19</sup>

Prices of onion, along with the other vegetables in India, are on an upward trend since mid December, 2006. According to the Reserve Bank of India (RBI), rising food prices have pushed the annual wholesale price inflation to more than 6.5 per cent. From January to mid February 2007, rate of price increase was 50 per cent. In 18 February 2007, retail price of onions in New Delhi touched Rs. 20 per kg, while in Mumbai it ranged between Rs. 18-20 per kg. The main reasons behind the price hike of onions are:

- Lower production of onion was mainly due to farmers switching their cultivation preferences, because of low prices of onion over the past few years.

<sup>19</sup>Maharashtra State Agricultural Marketing Board, India.

- 
- Booming export demand from the neighbouring countries. Indian farmers cashed in on an output shortfall in major onion producing countries, especially China and Pakistan, and exported a record 950,000 tonnes within less than a year, between April 2006 and January 2007.

## ANNEX 8

### *Annex 8.1*

#### **Proposal for the Establishment of Agro Growth and Marketing Centre (AGMC)\***

As is revealed from the extensive field investigation carried out in the course of the present study, one of the main reasons for the price hike of essentials that experience periodic spikes, is the extraction of rent between farm-gate price and retail price. In view of this, the proposal for the AGMC is being made to: (a) reduce this rent, and (b) distribute the benefits to the farmers and the consumers.

Agro Growth and Marketing Centre (AGMC) will simultaneously act as producers' cooperative and marketing organisation. It will be an association of stakeholders concerned with production of some selected essential agricultural products. The AGMC will have the representation of different stakeholders, such as farmers, government agencies, consumers, etc. AGMCs will operate within specific geographic locations and act as a nodal point of adjacent production zones. For example, an AGMC can be established for five unions, selected on the basis of producers' interests and possibility of transporting products to the AGMC by the farmers, to be decided through a cost-benefit assessment.

This concept can be initially introduced on a pilot basis in 4-5 locations around the country. If successful, the project, with appropriate modification and introduction of new ideas in modalities (based on the lessons learnt from pilot project), will provide rationale for introduction of the concept on a wider basis.

#### **8.1.1 Mission and Goals of AGMC**

The AGMC will operate as a fair entrepreneurial entity in the market on behalf of the producers.

The mission of AGMC will be to protect the interests of the producers by

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\*The idea of the AGMC Model in the context of Bangladesh has been developed by Wasel Bin Shadat, Senior Research Associate, CPD.

ensuring them fair price. However, representation of other stakeholders in the committee will ensure a proper balance between the interests of producers and that of other stakeholders.

The primary goal of AGMC will be to set up an alternative supply chain, with as few market agents as possible. This alternative supply chain will ensure increased net margin for farmers and help to reduce consumers' expenditure, thanks to elimination of most of the intermediaries between the producer and the end user. Presence of such an organisation will also influence the behaviour of the other players in the traditional supply chain, who are expected to co-exist along with AGMC.

In the long run, activities of AGMC will include processing and storing agro-products, networking between agro-based factories and producers (exploring the possibilities of contract farming), look into export opportunities, disseminating agricultural knowledge, and acquisition and adoption of modern technologies.

### **8.1.2 Proposed Structure of AGMC**

Each AGMC will consist of three major bodies: registered farmers, a monitoring (Trustee/Advisory) body, and a marketing, distributing and operating (MDO) unit.

#### *Registered Farmers*

AGMCs will introduce upstream vertical integration to the extent possible. As these will deal with domestically produced commodities, farmers remain the first agents in the supply chain. All farmers of the included production zones are eligible to become registered members of the AGMC; they will be automatically registered with their first consignments of produces to AGMC. However, being a registered member will not bind the producers to sell their produces only to the AGMCs. The farmers can choose buyers of their produces, based on their own preferences and needs (for example - prices, transportation costs, distance, liquidity preference, etc.).

#### *Monitoring/ Trustee/ Advisory Body*

The Advisory body is expected to play a key role for ensuring the AGMC's success. Apart from their major duty of monitoring the performance of the MDO unit, they will be responsible for campaigning and creating public awareness and support for this programme, alongside policymaking,

strategy formulation and assessment of the performance of the AGMC. They will not have to visit or participate in the market in person. This body will be formed by representatives from three broad stakeholder groups: registered farmers (main stakeholders); government representatives (particularly from Department of Agricultural Extension); and representatives from the local civil society (members of Union Parishad, local school Headmasters and other respected and competent persons in the locality). This body may be headed by the Upazila Agriculture Officer or a person, who is acceptable to the concerned parties. Membership in the Executive Committee is a voluntary and unpaid position. Government support will add to its prestige. Representation in the Advisory body will be considered to be a socially recognised honourable job. The committee will meet once/twice every month, although the Chair of the Advisory Committee or the ED of the MDO unit may call for a meeting whenever necessary. Apart from these representatives from the three stakeholder groups, the Executive Director (ED) of the MDO unit (see below) and one/two members of MDO unit nominated by the ED, will also be present at the monthly meeting.

Formation of this body is critically important and adequate representation from the stakeholders is a pre-requisite for achieving AGMC's goals. Few concrete recommendations are:

- Representation of all unions under coverage should be ensured.
- Registered farmers can vote to decide who will represent them in the Executive Committee.
- A certain percentage of members must come from the group of landless farmers or farmers owning less than 50 decimal of land, to ensure representation of marginal producers.
- The concept of rolling membership in the committee (particularly for big farmers), can be introduced to avoid disproportional influence by particular groups or potentially vested quarters. This could be achieved by fixing the tenure of the Committee for a certain period.

#### *Marketing, Distributing and Operating (MDO) Unit*

This unit will be the driving force of the AGMCs and will be formed by salaried professionals and experts from various fields, including agricultural economics, information technology (IT), management,

marketing and development studies. Professionals from local area and women will be given preference. These paid staffs will operate from a permanent office and they will monitor the supply chain on a continuous basis. There should also be arrangements for internship programme in the AGMCs for university students of relevant disciplines (as part of their degree requirements). Government would encourage university students to take part in these internship programmes. Based on experience and qualification, an executive from the MDO professionals will be nominated as the ED, who will be held accountable to the Advisory body, the Ministry of Commerce (MoC) and the Government of Bangladesh (GoB).

The MDO unit will run the AGMC with the ultimate objective of establishing the centre as a profit generating organisation, following the direction and policy guidelines provided by the Advisory Committee. It is very crucial to specifically assign job responsibilities of the MDO unit and to prioritise these duties. An outline of their job responsibilities is provided below:

### **Registration and procurement**

Farmers will be automatically registered when they deliver their first consignment. A database containing procurement information and payment history will be maintained by the MDO. Agro-products will be procured from farmers with down payments equal to the minimum sales price determined by the Agricultural Commission for Cost and Price Estimation (ACCPE), set up by the Ministry of Agriculture (MoA), GoB (see Annex Box 8.1 detailing recommendations for ACCPE).

### **Annex Box 8.1: Establishing an Agricultural Commission for Costs and Price Estimation (ACCPE)**

National Agricultural Policy (NAP) 1999 of Bangladesh has a provision to establish a separate institution called Agriculture Price Commission, with the objective to prepare adequate marketing programmes, offering proper guidelines and implementation of marketing activities, alongside strengthening of Department of Agricultural Marketing (DAM) (till now it has not been operationalised). In this context, the CPD recommends to establish and operationalise a commission titled Agricultural Commission for Costs and Price Estimation (ACCPE) under the DAM, MoA and GoB on an urgent basis. This commission will be comprised of government officials, representative from the Bangladesh Bureau of Statistics (BBS) and experts from relevant fields, such as agricultural economists, business professionals and development specialists.

*(Annex Box 8.1 contd.)*



*(Annex Box 8.1 contd.)*

Five producers for each product will be present in the price setting meeting of the ACCPE, in order to protect producers' interests. This committee will collect information from the field level, and will estimate production costs of selected commodities. Most of the tangible factors and all operational and fixed costs (excluding land cost) will be taken into account for cost estimation. The ACCPE can follow the initiatives taken by the Indian Commission for Agricultural Costs and Prices (CACAP), which considers the following factors while recommending prices: cost of production, changes in input prices, input/output price parity, trends in market prices, inter-crop price parity, demand and supply situations, effects on general price level, effects on cost of living, international market price situation, differences between prices paid and received by farmers (see Annex 8.2 for more details). Based on these estimated costs, this committee will recommend product specific minimum sales price in the Cabinet meeting (National Food Committee headed by honourable Food Minister). The National Food Committee will then validate the product specific cost estimation through Food Planning and Monitoring Unit (FPMU), under Directorate-General of Food wing of Ministry of Food and Disaster Management, before declaring the final minimum sales price.

### **Market intelligence and transportation**

Performing market intelligence activities will be the most challenging activity for the MDO unit, which involves establishing the link between AGMC and other demand zones within the country (particularly in urban area). The recommended Directorate of Market Surveillance (DMS) under the MoC, will provide domestic market demand and price information to the MDO. At the same time, MDO will build up its own market intelligence system to supplement the information provided by DMC. They will also provide information regarding product specific supply status and price information to the DMC. Interested parties will be able to collect this information and then respond to the MDO directly, if they deem it necessary.

After exploring the marketing opportunities, MDO has to send consignments to the demand zone (or anyone can procure from the centre directly). Some options available for marketing the agro-products include: sending a marketing representative with each of the consignment to the demand zone, appointing commission agents in existing arat/mokum in

urban areas (e.g. Karwan Bazaar, Shyambazaar, etc. in Dhaka), practicing downstream vertical integration by employing someone in those arat/mokum for selling their products directly to retailers. It is to be noted that the MDO has to enhance its transportation systems (apart from transportation by roads, use of river transports and railways will be explored, depending on the location of AGMC, location of the demand zone and the cost analysis).

### **Processing, storage and preservation**

Since agricultural products are seasonal commodities and many of these are highly perishable, price could be set below the production cost. In other words, the profit margin could be lower during the harvest season. Improved, scientific storage and preservation systems should be introduced by MDO and these facilities should be developed over time. MDOs can use the existing local cold storage and other storage facilities during their initial tenure period. Using the government storage facility can be another alternative, however, only for the short term.

Some agro-products such as paddy, pulses etc. are sold in the retail market in processed form. MDOs can initially utilise existing mills to process intermediary commodities on a contractual basis. However, they can establish their own mill industry in the long run, if feasible.

### **Accounting and reporting**

The MDO should have an accounts division which will complete all accounting activities and publish a summary of financial statements, on a monthly basis. They must submit a complete and comprehensive audit report to the Advisory Committee through the ED of AGMC, at the end of each quarter or fiscal year.

### *Operational Modalities*

The government will provide budgetary allocation to AGMC. Otherwise, support from development partners will be sought to create the initial capital of the AGMC. Farmers will be paid a down payment (according to their size of consignment of products) equal to the minimum sales price determined by the MoA and GoB. They will be given a token with the quantity sold to AGMC and the amount paid for that. The market intelligence department of MDO unit will explore the best available prices for the products. Then the MDO will either sell their products, provided

that the market price is higher than the minimum sales price or store those for higher prices in the future. After deducting transportation and other marketing costs from the selling price, a certain percentage of profit (for instance, 10 per cent) will be retained by the centre and remaining profit will be distributed among producers.

Part of the retained profit of AGMC will be spent for paying salaries to the MDO employees. Government/donors' support will be reimbursed over a long period of time (if applicable, but the support must be interest-free) using some part of the profit. Rest of the profit will be used to create a contingency fund, from which genuine farmers (special preference will be given to landless or marginal producers) will be able to receive interest-free loans during production seasons. Besides, all registered farmers will be able to borrow from that fund in case of emergency needs, particularly during unfavourable harvesting season, or in case of loss of products due to natural disasters. It must be mentioned that even if the initial budgetary allocation is given as grant, the MDO will still need to redirect the amount accumulated from the profit to the contingency fund.

### **8.1.3 Recommended Measures and Steps**

#### *Immediate Measures*

- Selection of suitable location.
- Need Assessment (infrastructure and logistic needs) by the GoB/experts.
- Budgetary allocation for initial capital and infrastructure (including IT and networking) development. This should be accommodated in the budget for FY2008-09.
- Formation of the Advisory body.
- Publicity among the producers.
- Recruitment and training of MDO professionals (to be done by MoC, GoB after consultation with the Advisory body).
- Provide subsidy (for example 30 per cent) to the AGMC, in the form of reduced storage cost in the government-owned cold storages and godowns.

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*Mid Term and Long Term Measures*

- Explore the opportunities for contractual farming (see Annex Section 8.2.5 for more details).
- Investigate supply opportunities to the agro-based industries.
- Look into export opportunity (access to international markets).
- Agricultural knowledge dissemination.
- Impact analysis and study for further improvement of the project to enlarge it nationally.