Inflationary Trend in Bangladesh
and
Impact on High Food Commodity Prices

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Preface

Global food price has shot up in the last years that have been succeeded by an extraordinary global economic down -turn, Rich, mid and poor economies are affected largely in terms of erosion of growth, shrunk investment and lessening of job creation. The global food crises and the economic recession in the major economies have created a complex scenario whereby food price may not stabilize creating erosion of income of the common mass and making investment more costly.

This will present tremendous challenge to countries like Bangladesh which may plunge further in economic deprivation and stagnation. Food grain prices in Bangladesh are likely to have bearings on social, political, and macroeconomic fabrics of low income economies like ours. The present study validates a gloomy picture in terms of international trade of food grain. This will exacerbate given the major food producing countries are either creating trade barriers with respect to exporting of food stuffs or relocating food grains to be used as bio fuels.

The situation is also contingent upon other domestic factors like institutional management, macro-economic policies and agriculture polices of the country. It has been evinced that an incoherence of these domestic policies compounded by the diktat of international financial institutions, compulsions of multinational companies and vested non-government organisations have further aggravated Government's best intention to ensure food security in Bangladesh. The relevant data on the food security presented in this paper bodes a very murky road ahead for achieving self reliance in food production.

The present study aims to investigate the reasons - nationally and internationally - behind the increase in commodity prices, especially, the main food grains e.g. rice and wheat. It is understandable that issues prevailing in global food security including the recent stabilisation or reduction of food prices globally may not be explained in terms of our own food security and prices as this report reveals on the impacts of high commodity prices including food stuff on the poor producers, wage labourers and consumers in our domestic market. For that matter, this paper also reviews the present food security situation of Bangladesh. The paper also delineates the indirect impacts of climate change translated into the periodic and seasonal extra ordinary proportions of natural disasters that ruin Bangladesh's economy including standing crops, livestock etc.

The writer has duly attempted to explore the available policy responses at local, regional and international levels to address the present crises prevailing in Bangladesh with respect to the policy stagnation and institutional mismanagement. One may argue that impacts of structural transformation of the domestic economy and international trade policy rules should also be attributed due to investigate the recent abnormal commodity price-hike in our country. Basing this assumption a dovetailed policy measures adequately addressing major domestic and international issues should address immediately our concurrent policy negligence towards agriculture sector e.g. withdrawing agriculture subsidy and that of unwarranted trade liberalisation.

The present paper has duly attached great importance on the roles of our agriculture sector in food grain prices and recommended a policy integration of its land, input, output, credit markets with its extension services. I am confident that a food security situation would be viable, had a policy integrations of agro-sectors keeping up with adequate structural reforms and macro-economic policy adjustment remained in place.

The report has taken into cognizance of the salient features of today's global food scenario and dealt a fantastic job in creating a very pragmatic and relevant food security scenario in Bangladesh. The authors also deserve special thanks for coming out with a modest and tailor-made policy, strategy and solution.

Rashed Al Mahmud Titumir
Chairman
Unnayan Onneshan

Introduction:

Since early 2007, Bangladesh has been experiencing a rising rate of inflation particularly in food grain at the backdrop of global hike of food grain prices. The rising inflation has become a major threat to people from all segments of the society. This higher inflationary trend does not bode well with respect to the socio-economic progress, particularly, on the poor and vulnerable groups. Rapidly higher food inflation has made it difficult for the low income households to carry on with their daily basic expenditures. According to the World Bank, four million people have been pushed below the poverty line due to abnormal rise in food price. Another statistics of the World Bank shows that between January 2007 and March 2008, the gross income of the poor decreased by 36.7 per cent mainly due to surge of food items, pushing 2.5 million households below the poverty line. Even the bumper boro harvest could not save the people from the grip of high inflation. On the other hand, the adverse impact of inflation has created a stumbling block to macroeconomic stability and curtailed the pace of economic growth, which is necessary to poverty reduction and meeting other development challenges and goals.

While climate change and its impact becomes a global issue, increasing demand for bio-fuels has contributed to a shortfall of food grains at the backdrop of an ever increasing demand for foodstuffs. This appears to be one of the main reasons behind driving the food price internationally. Bangladesh being a net food importing country experiences a negative impact as a consequence. However, it is also crucial to look into the other factors triggering the commodity prices up, aside the facts that Bangladesh operates at a lower scale of economy hinged on the agro-based productions.

As a matter of fact, impacts of structural transformation of the domestic economy and international trade policy rules should be attributed due attention to investigate the recent abnormal commodity price-hike. There is no denying of the fact that concurrent policy negligence towards agriculture sector e.g. withdrawing agriculture subsidy and that of unwarranted trade liberalisation have changed the production pattern of economy, turning Bangladesh to a net food importing country from a major food producing country with self-sufficiency of food. Non-economic factors like extortion, market syndication etc. resulting from institutional weaknesses could not be ignored along with that economic factors e.g. macroeconomic policy mismanagement. While explaining the reason behind the domestic inflationary trend, failure to maintaining stable food stocks and to deliver adequate agriculture inputs like fertilisers, seeds, irrigation as well as natural calamities like floods and cyclones, are other major causes of increasing inflation.

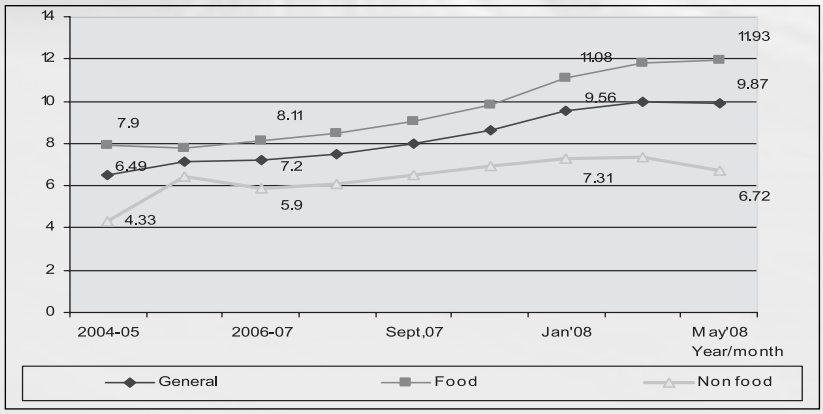
The present study, based on the secondary data and literature reviews, aims to investigate the impact of the current increase in commodity prices, especially, the main food items. It would also assess the implication of price-hike to poor producers, wage labourers and consumers in Bangladesh. In particular, the study has three main objectives, namely, first, to understand how international market trends impact on domestic economy in general and communities in particular; secondly, to identify who are the winners and losers from the current situation of high basic commodity prices; and third, to understand the availability of policy responses, at local, national, regional and international levels, both in the short term and in the long term, in order to minimise the negative impact of high food prices on consumers, and to maximise the opportunities to boost rural development and agricultural production, supporting smallholder production, particularly women.

The next section discusses the recent inflationary trends and its characteristics in Bangladesh. The following section reviews the food management system and food security position of Bangladesh both in terms of availability and accessibility as well as the status quo of food aid and government food distribution system among the vulnerable group. Third and fourth section analyses the trend of food grain prices respectively in international market and domestic market and examines the short and long term causes behind the price hike. The next section highlights some of the implications of rising inflation and food prices on consumer and producers. The last section draws the conclusion with some policy recommendations at national, regional and global perspectives.

Recent Inflationary Trend and its Important Characteristics in Bangladesh

Before analysing the impact of high commodity prices, it is important to look at the nature of inflationary trend and its salient characteristics in Bangladesh. From fiscal 2001 to fiscal 2005, the annual average inflation rate was low. For example, the annual average inflation calculated on Consumer Price Index (CPI) method was less than 2.5 per cent during fiscal 2001 and fiscal 2002. It increased to 4.4 per cent in fiscal 2003 and continued to rise as shown in figure 1. The annual inflation rose to as high as 10 per cent in March 2008 before it came down to 9.87 per cent in May 2008.

Figure 1: Inflation rate In Bangladesh
(12-month average, 1995-96=100)



Source: Bangladesh Bureau of Statistics (BBS)

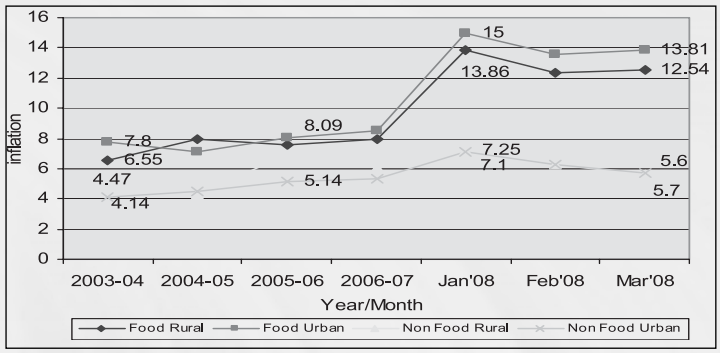
The current inflation phantom that haunt mass people in general and the government in particular has not appeared all on a sudden, but has emanated from the mixed impact of unforeseen and uncaring policy decisions of the present and the immediate past governments . If we divide the present inflationary trend into two stages i.e. between 2001

and early 2005 and 2005 and onwards, we see that price spiral between 2001 and early 2005 was mainly because of non-economic factors like extortion, syndication etc, and economic factors like exchange rate depreciation, inadequate agriculture subsidy, increasing transportation cost, and fuel costs etc, increasing the cost of production (ibid). Moreover, supply shortages of essential commodities due to disruptions in domestic production resulting from natural disasters causes food prices to spur. Price spiral during the period can also be explained in terms of negligence of agriculture sector over the years.

From 2005 onward inflationary pressure, which was fuelled by international commodity and fuel price-hike, was exaggerated due to some macroeconomic disturbances created from policy mismatch like IMF diktat; policy prescription did not suit with the fiscal stances. Arguing that the inflation is a sign of overheated economy with layman's parlance-"too much money is chasing too few goods", IMF has suggested the central bank to follow a contracting and inward-looking monetary policy with increasing interest rate. This in fact has increased the cost of investment and slowed down the economic activities.

One significant characteristic of the current inflationary trend is the rising gap between food and non-food inflation as shown in figure 2. While the average food inflation was 1.5 per cent compared to the non-food inflation rate of 3.8 per cent during fiscal 2001, it went on to the reverse order in the subsequent years with former increasingly outpacing the later. The average food and non-food inflation rate reached at 11.79 per cent and 7.33 per cent respectively in May 2008.

Figure 2: Food and Non-food Inflation in Urban & Rural Area



Source: BBS

Another important characteristic of the inflation rate, which is likely to have significant distributional implications on different population groups, is its difference in terms of rural and urban areas. During fiscal 2001 and 2002, average inflation rates in rural and urban areas were very similar: 2.3 per cent in rural areas and 2.4 per cent in urban areas. However, fiscal 2005 onward the average inflation rate was higher in rural area than in urban area, affecting the rural poor most. While food inflation is relatively lower in rural area than that of the urban area, reflecting the prevailing nature of agro-based economy in case of former. The scenario is opposite in case of non-food inflation as shown in the figure 2.

In terms of different commodity groups in the non-food bundle, the costs of several items such as housing, household items, medical care and health services have shown more rapid increase in the recent period, especially in the rural areas. In addition to the possible shrunk in expenditure on basic non-food items resulting from high food inflation, such price movements could have significant adverse implications not only on the current quality of life and human welfare but also on future human development, especially of the poor.

Thus inflation in Bangladesh is driven by the food inflation. Therefore it entails investigation into the food management and food security position in Bangladesh. It is also important to find how food prices hook up with international commodity market. The following section gives a brief review of the food management system in Bangladesh elaborating the availability and accessibility of food.

Review of the Food Management System and Food Security Position of Bangladesh

Historically, Bangladesh has a large agrarian base; with the country's 76 percent of total population living in the rural areas while 90 percent of these villagers are directly related to agriculture. The sector employs about 51 percent of the total labour force of the country and provides over 90 percent of the rural employment (BBS, 2004). Though relative share of agriculture has been declining in the recent past, it still constitutes over one-fifth of the total gross domestic product (GDP) while it has continued to remain the largest provider of employment, which has been growing relative to other sectors (GoB, 2007).

Food availability and consumption situation in the country

Bangladesh has continued to demonstrate a steady increase in domestic production of food grain since its independence. The production has increased from 11 million Metric ton in the 1970s to more than 20 million metric tons in the recent years, though the yearly food productions have fluctuated by several hundred thousand to a million metric ton.

In 2004, the food grain production declined by about 13 hundred thousand metric ton compared to 2003, which was revived in 2005 with a production figure of 27.26 million metric ton (table 1). The total production of food grain in the year 2006-07 was 28.05 million metric ton. For the fiscal 2007-08, the government set a production target of 33.63 million metric ton of food grains. As there has been a serious damage in rice production (Aman rice) due to two rounds of floods and devastating cyclone SIDR, the target has been revised at 29.54 million metric ton for the current fiscal.

Table 1: Food Grain Situation: *Production, Import and Aid*

in million MT

		2002	2003	2004	2005	2006	2007	2008 targeted revised
Production	Rice	24.3	25.188	26.19	25.16	26.53	27.32	28.70
	Wheat	1.61	1.51	1.25	0.98	0.74	0.74	0.84
Total		25.91	26.70	27.44	26.13	27.27	28.06	29.54
% change			3.05	2.80	-4.77	4.33	2.90	5.30
Imported	Rice	0.12	1.55	0.796	1.27	0.498	0.70	1.96
	Wheat	1.17	1.41	1.70	1.82	1.77	1.63	1.21
Total		1.29	2.97	2.50	3.08	2.27	2.33	3.16
% change			130.10	-15.75	23.41	-26.56	2.83	35.72
Aid	Rice	0.008	0.004	0.004	0.027	0.034	0.025	0.077
	Wheat	0.50	0.25	0.29	0.26	0.16	0.066	0.16
Total		0.501	0.25	0.29	0.29	0.19	0.09	0.24
% Change			-50.10	13.78	0.35	-33.10	-53.09	164.84
Grant total		27.70	29.92	30.23	29.51	29.72	30.48	32.94
% Change			7.98	1.06	-2.39	0.74	2.53	8.10

Source: DG Food, Ministry of Food and Disaster Management DAM,, Bangladesh Bank

Increasing trend of food import indicates that net domestic production is not sufficient to meet the requirement of cereals to feed the growing population. Every year, Bangladesh imports (government commercial import, import under food aid and private import) food grains, which is gradually increasing as shown in table 1, to meet the additional requirements in general and to stabilize the food market as well as to take precautions to address the unforeseen incidents in particular. Food aid that includes rice and wheat constituted a very limited proportion, accounting to 241 thousand metric ton. The major aid providers are WFP, CARE, Australia and Save the Children Fund. Total food aid received in 2006-07 was 194 thousand metric tons of rice and wheat.

Food grain requirement is calculated based on dietary pattern of the country, which albeit changes from time to time. Though the share of food grain in the daily diet has decreased in terms of weight and calorie over the years as shown in table 2, it is still the principal source of food calorie and protein supply. According to the Household Income Expenditure Survey (HIES) 2005 the calorie intake decreased to 2238.5 k. cal/ per capita/ per day in 2005 from 2263 k. cal/ per capita / per in 2000; whereas cereals which is one of the main source of calorie intake decreased to 469.2 gram/ per capita/ per day from 486.7 k. cal/ per capita/ per day. The non-cereals like potato, vegetables, pulses, meat, poultry, dairy, fish edible oil, condiment and spices etc. are other sources of calorie intake in Bangladesh.

Table 2: Comparison of Per capita Calorie Intake between 2000 and 2005

Food Intake *(gram per capita per day)*	**HEIS 2005**			**HIES 2000**		
	Total	Rural	Urban	Total	Rural	Urban
Cereals	469.2	485.6	419.3	486.7	502.8	422.4
Pulse	14.2	12.7	18.6	15.6	15	19
Vegetable	157	156.5	158.7	140.5	141.1	137.9
Fish	42.1	39.7	49.6	38.5	37.8	40.9
Meat	15.6	13.2	23.3	13.3	10.8	23.1
Egg	5.2	4.4	7.4	5.2	4.6	7.9
Milk & milk Product	32.4	31	36.6	29.7	29	32.6
Fruit	32.5	32.4	32.9	28.4	26.5	35.6
Protein	62.52	61.74	64.88	62.5	61.9	65
Calorie (k.cal/ capita day)	2238.5	2253.2	2193.8	2240	2263	2150

Source:HIES, 2005

In Bangladesh, diet is very much carbohydrate based, lacking in sufficient amount of protein and micronutrients. Consuming a balanced diet is more a problem of access to food rather than availability of food for a nation where nearly half of the population are poor.

Estimation of food gap and self-sufficiency

The food requirement/demand estimates are usually determined on the actual consumption pattern, which varies by income groups and urban-rural set up. According to HIES 2005, per capita average calorie intake per day is 2238.5, of which 75per cent of the energy intake comes from cereals. Using the conversion factor of 3.57 Kcal/g , the daily domestic food grain (cereals) requirement can be calculated as:

Daily Food Per capita Grain Requirement = (75%* 2238.5)/ 3.57

= 470.3 gram/ per capita/ per day

The above estimate can be used to calculate the annual food grain (cereals) requirement and food gap in the country.

Annual Food Grain Requirement = Population * 470.3 * 365 days

Food Gap = Requirement - Domestic Production

The table given below represents the data on food grain requirement and food availability in Bangladesh since 2001.

Table 3: Food Grain Requirement and Food Availability

	2002	2003	2004	2005	2006	2007	2008 targeted revised
Domestic Production *(mn mt)*	25.91	26 .70	27.44	26.13	27.27	28.06	29.54
Population (in mn)	131.6	13 3.4	135.2	137	138.8	140.6	144.67
Total food Grain requirement *(mn mt)*	22.59	22 .90	23.21	23.52	23.83	24.14	24.83
Food Gap (Requirement-Production) *(mn mt)*	-3.32	-3 .80	-4.23	-2.61	-3.44	-3.92	-4.71
Import *(mn mt)*	1.29	2. 97	2.50	3.08	2.27	2.323	3.16
Aid *(mn mt)*	0.509	0. 254	0.289	0.29	0.194	0.091	0.241
Total food availability (Production + Import+ Aid) *(mn mt)*	27.70	29 .92	30.23	29.51	29.72	30.48	32.94
Food grain availability Per capita food grain availability (grams)	576.76	614.38	612.61	590.08	586.71	593.83	623.87
Net food availability (Requirement – Total Food Availability) *(mn mt)*	-5.11	-7 .02	-7.02	-5.99	-5.89	-6.34	-8.11
Food Grain Stock (Public) *(mn mt)*	--	--	--	0.75	0.74	0.60	0.96

Source: calculated from available data of DAM, Bangladesh Bank, BBS, Ministry of Food and Disaster Management

Domestic food production and requirement have been increasing gradually over the years excepting in 2005 when domestic production declined marginally, while former exceeding the latter, meaning that the country maintained a surplus food grain production. The government however overestimated the domestic production underestimating the net loss from production and the population growth. Due to the lower rate of loss in calculation, the figures on yearly availability of food grain has remained overestimated.

Food import and aid helped to maintain buffer stock for emergency purposes such as disaster, production plunge and any other supply shocks. While Bangladesh is known as a disaster prone country, the food import has been increasing persistently over the years while the food aid declined. Per capita food grain availability witnessed some fluctuations and maintained a level above the requirements, which is between 570 gram / per capita/ per day and 624 gram/ per capita/ per day.

Data on food grain availability and public food grain stocks indicates that government has little to control over market, which is otherwise predominantly controlled by the private sector hoarders, giving in to a leeway for market syndication. Bangladesh bank data on opening L/Cs shows that only few traders accounted for over 80 per cent of rice import. At the local level few millers who procured paddy from the small and marginal farmers control the rice market.

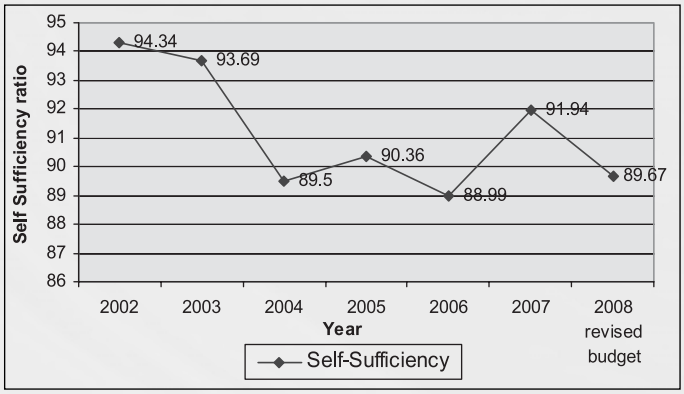
Self-sufficiency ratio

The self-sufficiency ratio (SSR) determines magnitudes of production in relation to domestic utilisation. It is another way of expressing the food deficiency in the country. SSR is defined as:

SSR = Production/(production + imports - exports) * 100

Based on the official and private food grain production and import data the SSR for Bangladesh is gradually declining (figure 1). The lowest self-sufficiency rate is found in 2005, which could be attributed to the crop damage during the severe flood in 2004. Considering the estimates on self-sufficiency ratio, which is in declining trend (as SSR declined to 89.7 per cent in 2007-08 from 94 per cent in 2000-01), it can be deduced that dependency on food import has been gradually increasing to maintain a food stock at a secure level.

Figure 3: Food Self-sufficiency Ratio



From the above estimated data, it could be inferred that food insecurity in Bangladesh is an outcome of inaccessibility and lack of utilisation rather than availability. Though access to food is a common food security issue throughout the country, a typical outcome of accessibility is reflected in the occurrence of seasonal food insecurity, especial during lean season in the northern districts, locally called as Monga prone area. However, the food insecurity inflicted all sphere of lives, especially, poor and middle income families across the country in recent times which has been created out of exorbitant price hike both at the domestic and international market.

Access to food

Food access is only partially correlated with food availability. National availability of food does not necessarily employ that cent per cent people have access to the national stock. This is illustrated from the above table 3 that per capita food availability is actually higher than the per capita food intake.

The strongest link between food availability and food access is determined through price mechanism, and in recent years, the rapidly increasing food price has made it difficult for the poor, low and middle income group to have access to food. This could be illustrated from the relationship between food inflation and per capita food intake: as shown in the above table 2: In 2005 per capita food intake came down to 469.2 gram/ per capita/ per day from 486.7 gram/ per capita/ per day in 2000. Over the same period food inflation increased to 7.91 percent from 1.38 percent. In recent years the food inflation has increased further meaning that per capita food intake went down further.

The rising food price has an impact on total household expenditure. The distribution pattern of consumption expenditure for food and non-food items in rural and urban areas shows the overwhelming dominance of food items. According to HIES 2005, though total expenditure per household increased between 2000 and 2005, share of food expenditure on total expenditure increased to 52.31 percent from 50.7 percent. It is apparent that this composition has intensified further in recent months with soaring food price both at the domestic and international market.

Table 4: Household Food Expenditure Vis-à-vis Total Expenditure

(tk per month)

Expenditure	HEIS 2005			HIES 2000		
	Total	Rural	Urban	Total	Rural	Urban
Total Expenditure per h/h	6134	5319	8533	4881	4257	7337
Consumption Expenditure per h/h	5964	5165	8315	4537	3879	7125
Food Expenditure per h/h	3209	3023	3756	2477	2300	3175
Share of Food Expenditure on						
Total Expenditure	52.31	56.83	44 02	50.7	54	43.3
Consumption. Expenditure	53.81	58.54	45.17	54.6	59.3	44.6

Source: HIES 2005

The above table shows that, although current trend reveals lower food inflation in the rural areas compared with the same in the urban areas, the impact of food price inflation on the rural people could be significant in view of the high weights of food items in their consumption basket. Moreover, the burden increases for the lower income groups as these groups spend a larger share of their budget on food.

Households that are most vulnerable to food intake, include those depending on irregular income from daily wage labour and lacking productive assets. Occupational groups such as day labourers, fishermen, and beggars fall into this category. Within households, children, disabled, and pregnant and lactating women face the greatest nutritional risk. Although people suffering from food insecurity can be found throughout Bangladesh, a higher concentration of seasonal food insecurity exist among people living on marginal lands, in areas affected by river erosion along the major river banks and chars.

Another important feature that de-links food availability from food access is income inequality and chronic poverty. The poverty line in Bangladesh is officially defined in terms of energy intake. The upper poverty line is put at 2,122 kcal per capita/day. Around 40 percent of the population live below this level and are officially described as living in absolute poverty. About a fifth of the population is below the lower poverty line consuming less than 1,805 kcal/capita/day. Those below this level are officially termed as the hard core poor. The FAO-WHO recommendation is 2,400 kcal/capita/day.

In addition, the diet of the poor is seriously imbalanced, with extremely inadequate intake of fats, protein and micronutrients. Moreover, an estimated above 75 percent of calorie intake derives from rice, which is far above international norms.

Table 5: Poverty Scenario in terms of Calorie Intake

	HIES 2005			HEIS 2000		
	Total	Rural	Urban	Total	Rural	Urban
Incidence of poverty DCI method (per cent in population)						
Less than 2122 k.cal	40.4	39.5	43.2	44.3	42.3	52.5
Less than 1805 k.cal	19.5	17.9	24.4	20	18.7	25
Incidence of poverty CBN method						
Lower Poverty Line						
Head count (%)	25.1	28.6	14.6	34.3	37.9	20
Poverty Gap	4.6	5.3	2.6	7.5	8.3	4.1
Squared poverty gap	1.3	1.5	0.7	2.4	2.6	1.2
Upper Poverty line						
Head count (%)	40	43.8	28.4	48.9	52.3	35.2
Poverty Gap	9	9.8	6.5	12.8	13.7	9.1
Squared poverty gap	2.9	3.1	2.1	4.6	4.9	3.3

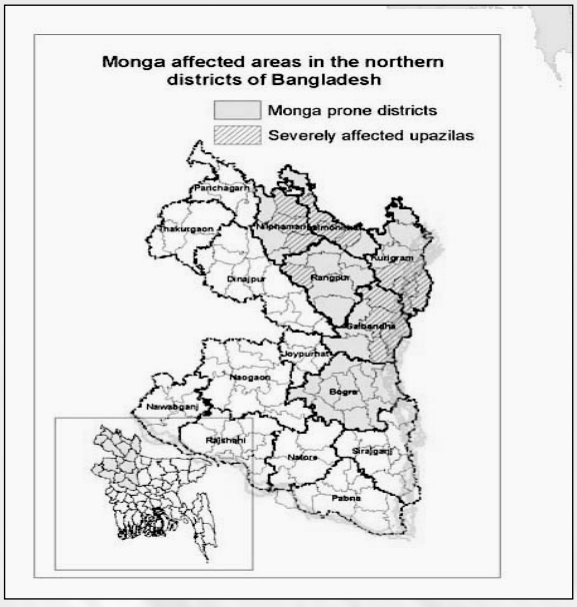
Source: HIES 2005

Therefore the above analysis shows that food availability does not ensure food entitlement due to low accessibility. Increasing price is one of the main reasons that impede to food access. While an array of domestic factors are responsible to the price-hike, the low accessibility of food in the domestic front could also be explained by the international price-hike. In fact, the international factors intensified the domestic factors that pushed up the food prices in the domestic market. Apart from this, stringent export policy of food grains like rice, wheat of some of the neighbouring countries left the government without any alternative but to import at a relatively higher import price of food grains in 2007. The private sector import of food grain has also slumped therefore causing shortfall of food grain and hike of food grain price. The following section gives a brief review of the recent trend of food grain prices in the domestic and international market.

Seasonal food insecurity

Seasonal food insecurity is a common phenomenon in rural Bangladesh. In every year severe food crisis popularly known as Monga occurs in the northern part of Bangladesh; whereas in other parts of the country Akal is a more known term; both bearing the same meaning i.e. severe scarcity of food, mainly rice.

Figure 4: Monga Affected Area in Northern Bangladesh



This periodic food insecurity occurs during the pre-harvest period known as lean season for agricultural production. The agricultural lean period occurs twice a year lasting one to two months. The longest lean period starts in mid September and continues until mid November when the harvesting of Aman paddy starts. Another lean period, which is shorter in length, lasts from mid March until the harvesting of Boro rice in mid April.

This periodic food insecurity is more related to the traditional system of subsistence agricultural, feudal land tenure arrangements and exploitative loan and mortgage system in the rural credit market. Natural calamities like river erosion, cyclone, flood and drought just add to worsen such food crisis.

The WFP has identified the Monga prone area in northern part of Bangladesh. The districts of Kurigram, Lalmonirhat, Nilphamari, Rangpur, Gaibandha, Bogra and Serajganj are identified as most suffering area of food shortage during the

lean seasons as shown in figure 5. The typical characteristics of the food insecurity prone districts are: (i) Crops are in the field waiting to be harvested having no employments in the agricultural fields, (ii) the household level food stock is mostly consumed amid inadequate supply of food grain in the market and (iii) the price of rice in the market is very high while the marginal farmers and the labourers run out of food and cash. Due to limited income earning opportunities in the non-farming sector, these vulnerable groups do not have any jobs to support their living as a result of their purchasing capacity ceases to almost ground zero causing acute food shortage at household level.

Food aid and public food distribution operations

As mentioned in the above section, inflow of food aid has been virtually declined in Bangladesh. Food aid declined to 6.2 per cent in 2006 from 47.9 per cent of the total aid in 1971. While in 2002 the total food aid Bangladesh received was 0.49 million metric ton, this has declined further to 0.19 million metric ton in 2007 as shown in table 3. In fact, the food aid declined after 1990. This is perhaps because of donors' strategy shift in countries under their assistance strategy because of the changing nature of attached conditionality. Before 1990, most of the aid came in the form of food aid and commodity aid while the conditionality of those aids were to induce the government to adopt overall reforms like privatisation, deregulation etc. From 1990 and onwards, the amount of sector specific project aid has increased significantly with increasing conditionality. This, as a result, has created space for more policy influence by donors to the government. Besides, declining in food aid is also a part of global trade strategy, in which the tussle between the USA and the EU over aid in cash or in kind remains inconclusive.

While food aid is on declining trend and the food crisis becomes acute, to combat food insecurity the government initiated the Public Food Distribution System (PFDS) to make food accessible for the vulnerable group through price subsidies and targeted food distribution programmes such as VGF, VGR, FFW, Test Relief etc. As food prices became exorbitantly higher in recent months government has stepped up its effort introducing new programmes to feed more people at reasonable prices. For example, short-term measures included 'Dal-Bhat Programme' of BDR (Bangladesh Rifles), open market sale (OMS) of food grains at subsidized price, withdrawal of customs duty on the import of food grains and edible oil, increasing the amount of food grain imports, lowering of interest rate against import credit of food grains, regular monitoring of markets, and fixation of maximum retail price for edible oil. However, these initiatives have failed to bring any significant impact on the market as the prices of essentials are on the rise, increasing everyday.

Government maintains a national food reserve of around 800 thousand metric tons of food grains of which about 450 thousand metric tons are intended to meet the food crisis during the emergencies. In recent months the concern of food insecurity deepened as the national food grain stocks went down to subliminal level, which triggered the food grain prices up in the market.

A total of 1,462 thousand metric tons of food grains comprising 1,272 thousand metric tons of rice and 190 thousand metric tons of wheat were distributed through the PFDS channels during the fiscal year 2006-07. The target for distribution in the current fiscal year 2007-08 was initially set at 2,198 thousand metric tons which was finally revised at 1,335 thousand metric tons.

Between July 2007 and March 2008, about 531 thousand metric tons has been distributed through OMS, VGD and VGF. Besides, 114 thousand metric tons of rice received from Saudi Arabia has also been distributed through VGF programme in the Sidr affected areas. A total of 3.47 million families were covered by the VGF programme in which each family received 15 kg rice per month. Under the VGD programme, each of the 0.75 million families received 25/30 kg rice/fortified atta per month. Grains distributed under FFW programme up to March 2008 included 65.5 thousand metric tons of rice and 23.6 thousand metric tons of wheat. Besides, 101 thousand metric tons of rice and 5.0 thousand metric tons of wheat were distributed through TR and GR. Under OMS channel, 154 thousand metric tons of rice was sold at subsidized price through dealers appointed by the DG Food and BDR-run 'fair price shops' under the Dal-Bhat Programme. Subsidized rice was also provided for the Tea garden workers under LEI component of the PFDS.

Table 6: Channel wise Public Distribution of Food Grains

(000 mt.)

Sector	Channel	Cumulative distribution (01 July/07-31 March/08)		
		Rice	Wheat	Total
Monetized	EP	97.9	60.2	158.1
	OP	10.7	4.8	15.5
	LEI	4.9	4.4	9.3
	OMS	154.0	0.0	154
	Others	0.0	0.0	0.0
	Sub-total	267.4	69.4	336.8
Non Monetized	FFW	65.5	23.6	89.1
	TR	65.3	4.7	70
	VGF	178.3	0.0	178.3
	VGD	151.3	48.0	199.2
	GR	35.4	0.0	35.4
	Others	55.3	20.7	76
	Sub-total	551.0	97.0	648.0
Grand Total		818.4	166.5	984.8

Source: FPMU

'100 Days Employment Generation' Programme:

In addition, in the current fiscal (2008-09) the government has newly introduced '100 days employment generation' programme that has estimated to ensure employment opportunity to those who remained unemployed in lean season, especially in the Monga prone area of the Northern part of the country apart from that of existing 'Food for Work' programme. It is estimated that more than 20 lakh unemployed people would be guaranteed to be employed under these programmes.

Given that 40 per cent of the total population living below the poverty line, the PFDS under various programmes covering only few hundred thousands people, would not be sufficient enough to combat with food insecurity. On the other hand, proper implementation, distribution and delivery of these programmes often remain questionable. Moreover, most of the ongoing programmes are to feed the poor and the extreme poor, which have so far contributed little to reduce poverty. In addition, the lower income and middle income group which have been inflicted on the wake of recent food crisis poses another dimension of threats.

Private sector initiatives

Meanwhile, the private sector has taken some intuitive albeit at small scale and temporary basis to wane the distress of the wage earning workers, especially, readymade garments workers. 90 per cent of total 2.5 million of them are engaged in the RMG industries who are women. The trade bodies for woven and knitwear, two sub-sectors of the readymade garment industries announced the launch of its rationing programmes so as to deliver some essential commodities to their workers countrywide at a subsidised rate for a specific period of time, namely, in Ramadan - the holy month for Muslims who keep fasting. The business bodies declared to sell essential commodities at nine spots in and around Dhaka and two spots in Chittagong. Under the package, workers can purchase essentials once a week showing their identity cards. However these programmes are not sufficient to feed more than two million readymade garments workers across the country.

International Food Grain Prices and Production Outlook

The World Bank reports that global food prices rose 83 per cent over the last three years and the FAO cites a 45 per cent increase in their world food price index during the last nine months. The Economist's comparable index stands at its highest point since it was originally formulated in 1845. As of March 2008, average world wheat prices were 130 per cent above their level a year earlier, soy prices were 87 per cent higher, rice had climbed 74 per cent, and maize was up 31 per cent.

According to FAO's preliminary forecast, world paddy production in 2008 is expected to increase by 2.3 percent to 666 million tons. However, forecast of world rice trade in 2008 has been lowered by 1.5 million tons to 28.8 million tons, largely reflecting more difficult access to international supplies after growing number of countries imposed restrictions on exports. Much of the contraction in world rice export in 2008 is likely to stem from reduced deliveries by India, Cambodia, Egypt and Vietnam. Only a part of the reduced sales is expected to be compensated by increased shipments from China, Myanmar, Pakistan, Thailand and the USA. World wheat production in 2008-09 is projected to reach 656 million tons, up 8 per cent from previous year's level. However, increase in world wheat use is projected to be smaller than the increase in supply, resulting in increased world stock by end 2008-09. World wheat trade in 2008-09 is projected to reach 117 million tons, up 6 percent from previous year's depressed level.

Table 7: International Production and Stock of Rice and Wheat

Year	Production			Stock		
	Rice	Wheat	Total	Rice	Wheat	Total
2004-05	406.9	632.0	1038.9	99.2	175.6	274.8
2005-06	424.3	624.7	1049.0	105.5	179.9	285.4
2006-07	428.7	595.4	1024.1	106.8	159.2	266.0
2007-08 (forecast)	429.3	602.1	1031.4	107.7	142.6	250.2

Source: Food outlook November 2007

The FAO's forecast of world food grains production at 1031.4 million tons in 2007-08 was marginally higher than the actual production of 1024.1 million tons in 2006-07. World food grain (rice and wheat) stock is projected to decrease from the actual of 266 million tons in 2006-07 to 250 million tons in 2007-08 as shown in table 7.

Import Price of Food Grains Doubled in Bangladesh: In Bangladesh, as food grain prices went up in the international market, the LC settled price, generally used as the reference price for rice/wheat import in Bangladesh, increased from US$ 210 in July 2005 to US$ 462 in March 2008. On the other hand, price of Thai rice increased from US$ 265 in July 2005 to US$ 580 in March 2008. The price of wheat also more than doubled over the last two years, increasing from US$ 145 in July 2005 to US$ 482 in March 2008. On the other hand, LC settled price increased from US$ 194 to US$ 354 during the same period.

It is expected that with the good harvest in most of the rice exporting countries, prices may be under seasonal downward pressure in the next few months. However, they are unlikely to weaken much, especially since India, the major source of supply for Bangladesh, announced minimum export price of US$ 1000 per ton, while Egypt introduced export tax on rice in last September for one year. Import from Thailand would also be costly because of enhanced price quotes for most grades of Thai rice due to tight market condition and strong Thai bath. Vietnam has also officially banned new export sales since last September. Thus unless the sizes of the crops soon to be harvested are significantly larger than currently foreseen, world rice prices could undergo further increases and continue through to the third quarter of 2008.

Reasons for global food crisis

Short term issues:

A number of immediate factors have included the following:

- Droughts in major wheat-producing countries in 2005-06 while floods and cyclones in rice producing countries;
- Low grain reserves (according to Holt-Giménez and Peabody , we have less than 54 days worth, globally)

- High oil prices;
- A doubling of per-capita meat consumption in some developing countries
- Diversion of 5 per cent of the world's cereals to agro fuels.

Fundamental longstanding causes:

While media reports have been concentrating on the immediate causes, the deeper issues and causes have not been discussed as much. The crisis has not occurred suddenly. Prices have been rising for quite some time now , and perhaps earlier warning signs were missed or ignored?

According to the FAO, with record grain harvests in 2007, there is more than enough food in the world to feed everyone-at least 1.5 times of the current demand. In fact, over the last 20 years, food production has risen steadily at over 2 per cent a year, while the rate of population growth has dropped to 1.14 per cent a year. Population is not outstripping food supply. The overpopulation argument seems like an obvious one, but when considering who consumes what, in what quantities and whether much use of resources are actually productive or not suggests that there may be other issues, though overpopulation concerns could become real at some point. For example,

- A lot of land goes into producing products that could be considered unnecessary or excessive in their production (e.g. tobacco, sugar, beef, bio-fuels, urbanization, etc).
- Some 80 per cent of the world's production is consumed by the wealthiest 20 per cent of the world suggesting an inequality in resource use due to social, economic and political reasons, and perhaps less because of Malthusian concerns about population sizes outstripping resource availability in most cases.
- Furthermore, while many go hungry an equally large number are considered obese.

Rich countries wrongly play down impact of bio-fuels:

The US and some European countries have often insisted that the impact of bio-fuels on the food crisis has been small. It seems that this claim has been self-serving, because of interests in the bio-fuel industry. Yet, based on the most detailed analysis of the crisis so far, bio-fuels have forced global food prices up by 75 per cent-far more than previously estimated-according to a confidential World Bank report obtained by the Guardian.

Rich countries have attempted instead to blame demand from rising poorer countries as a bigger cause. President Bush has linked higher food prices to higher demand from India and China, but the leaked World Bank study disputes that: "Rapid income growth in developing countries has not led to large increases in global grain consumption and was not a major factor responsible for the large price increases." The report mentions the following ways in which bio-fuels have distorted food markets:

- Grain has been diverted away from food to fuel; (Over a third of US corn is now used to produce ethanol; about half of vegetable oils in the EU goes towards the production of bio-diesel);
- Farmers have been encouraged to set land aside for bio-fuel production;
- The rise in bio-fuels has sparked financial speculation in grains, driving prices up higher.

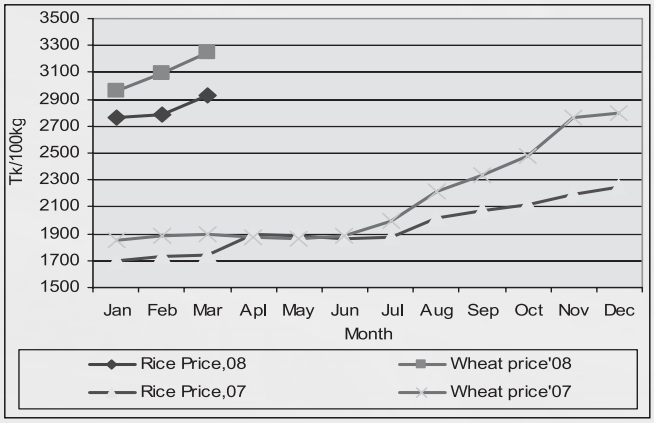
The World Bank has also estimated that an additional 100 million more people have been driven into hunger because of the rising food prices. Another institute, the International Food Policy Research Institute (IFPRI) estimates that 30 per cent of the increase in the prices of the major grains is due to bio-fuels. In other words, bio-fuels may be responsible for some 30-75 million additional people being driven into hunger.

However, bio-fuels and droughts can not fully explain the recent food crisis - hedge funds and small investors bear some responsibility for global hunger. The study like "The Role of Speculators in the Global Food Crisis" says that vast amounts of money are flooding the world's commodities markets, driving up prices of staple foods like wheat and rice.

Fluctuations of Food Grain Prices in Domestic Market

As the price of rice and wheat becomes double in the international market, it has affected in the domestic market as shown in figure 5. It is largely due to the fact that Bangladesh is a net food importing country. According to government statistics, the nominal rice and wheat prices increased by 66 per cent and 69 per cent respectively between March 2007 and March 2008 as shown in table 8. The corresponding real price rises were 51 per cent and 53 per cent. The rate of increase of wheat price was slightly higher compared with rice price.

Figure 5: Nominal Rice and Wheat Price in 2007 & 2008



Source: DAM

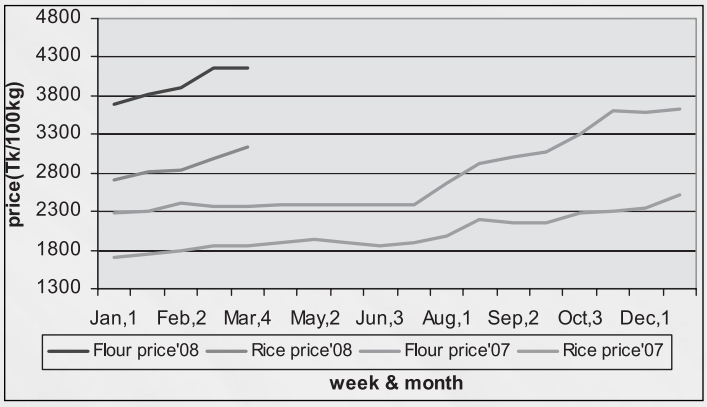
Table 8: Change of rice and wheat prices during 2007-08

Period	Nominal price (%)		Real price (%)	
	Rice	Wheat	Rice	Wheat
Mar, 2007 to Mar, 2008	65.78	68.81	50.62	53.37
Mar, 2006 to Mar, 2007	9.97	37.45	2.37	27.95
Jan, 2008 to Mar, 2008	5.98	8.45	4.65	7.09
Jan, 2007 to Mar, 2007	3.64%	2.70	1.08	0.17

Source: DAM

Retail prices of rice and flour increased continuously over the last year with rice price increasing at a faster rate than flour price as shown in the following figure 6.

Figure 6: Weekly retail rice & wheat prices in 2007 & 2008

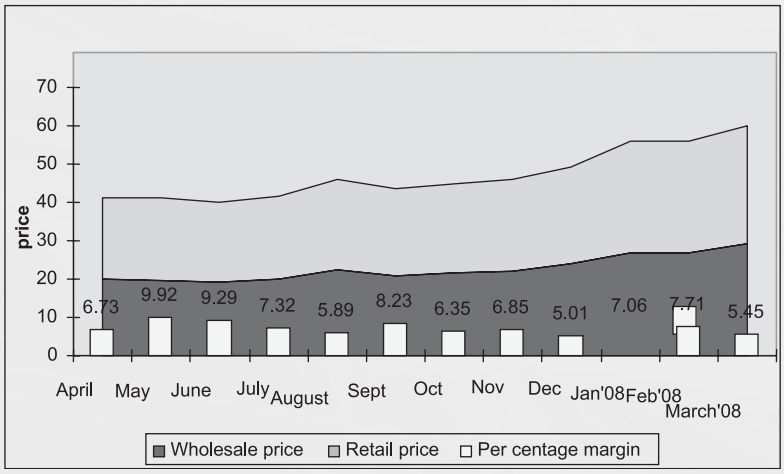


Source: MISM, DG Food

Difference between retail and wholesale prices

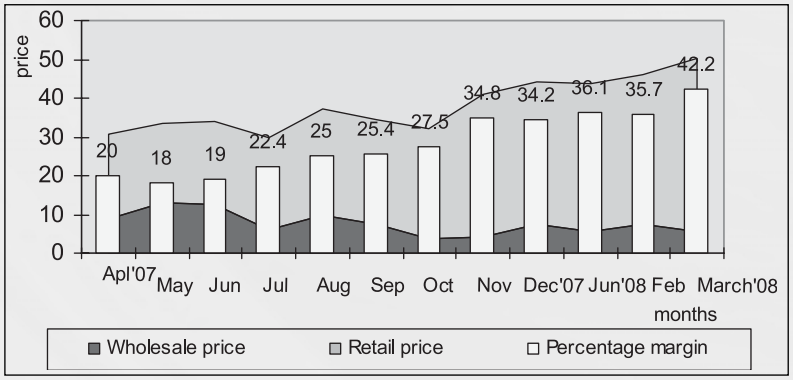
For rice and flour, retail and wholesale prices moved in the same direction, parallel to each other during April 2007 to March 2008 period, with percentage margin ranging from 5 per cent to 10 per cent for rice and 4 per cent to 13 per cent for wheat. Both rice and flour price margins declined in March despite the rising trend of both the prices.

Figure 7: Retail and whole prices and per centage margins of Rice in Dhaka During 2007 & 2008



Source: DAM

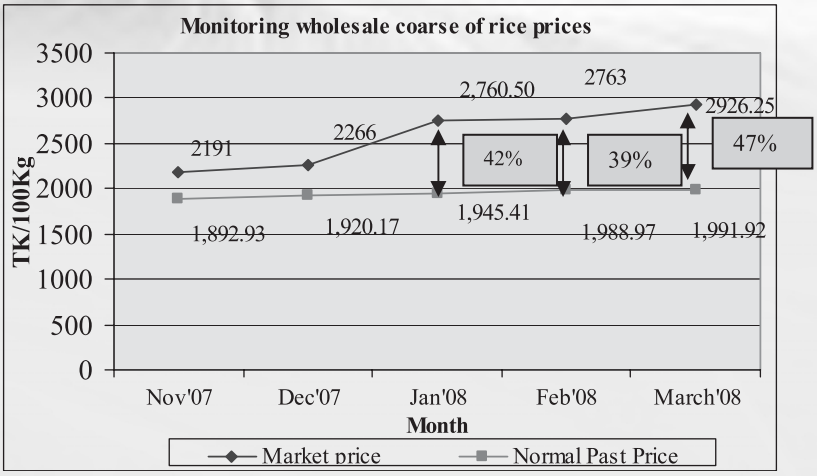
Figure 8: Retail and whole prices and per centage margins of wheat in Dhaka during 2007/08



Source: DAM

Monthly price of rice during November 2007 to March 2008 did not follow the normal pattern of the last four years; the rate of increase was much higher compared with normal year. The gap between actual and normal prices started increasing after December and reached the highest level of 47 per cent in March 2008.

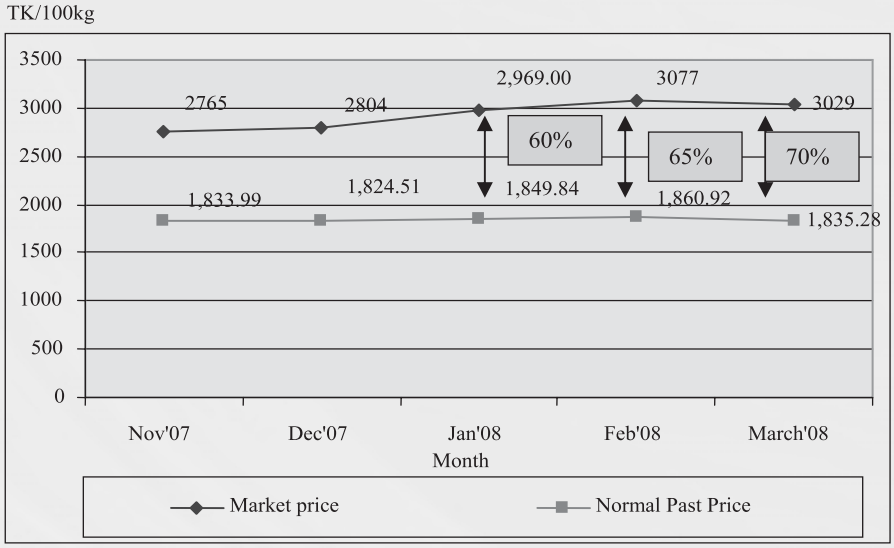
Figure 9: Monitoring of wholesale coarse rice prices



Source: Calculated based on DAM data

Wheat prices, although much higher than the normal year, did not follow the normal pattern of last four years: price went up instead of going down in normal year. Like rice, the gap between actual and normal prices started increasing from December and reached 75per cent in March on the basis of past trends.

Figure 10: Monitoring of wholesale coarse Wheat prices



Source: Elaboration on DAM data

Domestic causes

Apart from international price-hike an array of domestic factors ranging from economic to non-economic factors that has a negative influence on inflation in general and food inflation in particular in Bangladesh. There are number of reasons to explain why inflation is sky-rocketing:

Short term issues:

- Two consecutive floods and the cyclone Sidr wrecked havoc on the country's agricultural production in 2007. An estimated 1 million hectares of aman crops (wet season rice crop) were damaged or ruined in the cyclone. Average crop loss in the affected area (home to 9 million people) was 50 per cent. Closer to the coastal areas, crop loss was almost 100 per cent. Compounding the problem was the destruction of up to 60 per cent of boro seedbeds in some areas, as well as damage to fresh water canals that are crucial to the

production of boro (dry season rice crop). In this area, farmers most commonly rely on their own seeds, saved after each harvest, for the next planting season. Thus, loss of crops also reduces the ability of farmers to plant in coming seasons, since any rice that could be grown and salvaged would be consumed rather than saved. Bangladesh is normally short of national needs by only 1.5 million metric tons, but in the aftermath of this destruction, an additional 1.9 million metric tons can be added to this figure.

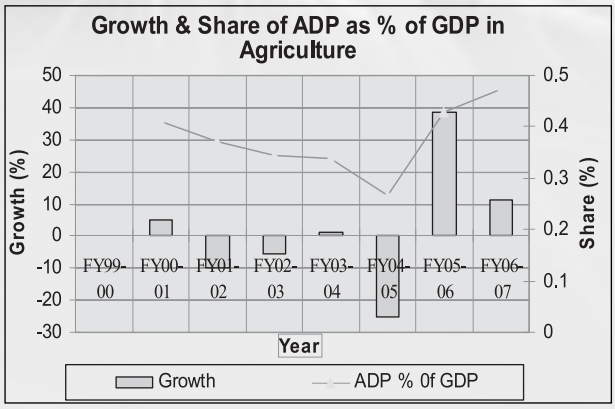
- Sudden jump of food grain prices especially that of wheat and rice at international market in 2007 led speculation among traders and tempted them to increase prices in domestic market. As shown in the previous sections as LC settled price of food grains increased with rising price in international market, the corresponding prices in the domestic market increased relatively larger proportion.
- One of the main reasons that aggravated the present food insecurity situation is that government failed to maintain a sufficient food stocks, partly, because of the fact that it follows the donors instruction to maintain a low level of food stocks and lately because of government's erratic decision on food import in various occasion. Depletion of government food stock below the threshold level of 0.8 million metric tons and limiting scope of government opportunity to procure rice from international market further intensified speculation among traders. As shown in table 3 the government food stock went down below 0.6 million metric ton in 2007. However, the unofficial estimates suggest that it went below the level as shown by the government data. This worked as fear factor creating opportunity for the traders to increase the food price.
- Shortage of inputs to agriculture is also a huge part of the problem. For example, imagine how prices will continue to incline as China imposes higher tariffs in order to protect its fertilizer industry in order to meet its own needs. Beijing's 100 per cent-plus tariffs on some fertilizer exports should temper domestic costs but may drive up prices in world markets that depend on China's supplies, the latest in a series of commodities-related protectionist moves around the world that risk fuelling rather than cooling global food costs. The same is true for hybrid seeds, most of which are produced in China. Bangladesh imports most of its hybrid seed from China, and a renewed push for hybrid seeds, despite their poor performance overall, is coming from Chinese companies. Large NGOs like BRAC, along with IRRI are helping to push through hybrid rice on a massive scale in Bangladesh. Critics have waged that BRAC is taking advantage of farmers in their time of needs, in order to push through hybrid seeds, popping up another cause of concern along with that of input crisis.
- While syndication is more often than not alleged as main culprits behind the abnormal price hike of essentials, government's sporadic efforts like allowing armed forces e.g. Rapid Action Battalion, Bangladesh Rifles to monitoring and intervening the market and therefore containing the syndicates under the protection of state of emergency (State of emergency imposed on January 11, 2007 after the fallout of two major political parties to reach consensus to hold the national elections), which spread apprehension among general traders, disrupting normal supply channels of the daily essentials. By now, it is clear that market regulation through ad hoc mechanism failed to contain inflation while keeping the state-owned regulatory body, like, Trading Corporation of Bangladesh ineffective.

Long term issues:

Negligence of agriculture sector:

In Bangladesh, shrinking government support to agriculture has made the production hardly viable over the years. Drastic reduction in public expenditure in agriculture increased the input costs and shrinking price incentives in an imperfect unregulated market structure ultimately swept the farmers out of their business. Just after the liberation in 1971, share of ministry of agriculture in total annual development programme was 30.97 per cent while it came down to only 2.59 per cent in 2001 (MoA 2001). In terms of share of GDP, real public investment in agriculture did not grow over the years. In fact between 2001 and 2005 real public investment in agriculture marked a negative growth sliding to 0.16 per cent in fiscal 2005 before raising it to 0.48 per cent in 2007 (the growth and share are measured in real terms with base 1995-96=100) as shown in the following figure 11.

Figure 11: Growth and Share (%) of Public Investment in Agriculture as Per centage of GDP



Source: Fiscal Fiduciary: Embedded Edges
A Rapid Assessment Of National Budget 2008-09, Unnayan Onneshan

The poor investment in agriculture is reflected from the poor performance of agriculture during the period. For example, the agriculture sector excluding fisheries, which grew at 6.92 per cent in fiscal 2000, plunged to a negative growth rate of 0.62 per cent in fiscal 2002. The agriculture growth rate was not very rosy in the subsequent year.

It is in the recent years that government has started giving subsidy to agriculture sector in the wake of increasing costs of agriculture inputs including that of oil price. For example, the government has proposed to allocate Tk 1,050 crore for agriculture in fiscal 2008-09, up by 4.03per cent from the preceding revised budget. The government has also allocated Tk 1,650 crore as subsidy for fertiliser and agriculture subsidy. Subsidy for fertiliser, electricity and others was allocated to the tune of Tk. 4,285. In addition, a special allocation of Tk 122.96 crore will be spent for food security.

Nevertheless, given the numerous constraints faced by the agriculture sector, three questions still remain to be asked:

First, is the allocated budget for agriculture sufficient?
Second, how much of the proposed outlay will really be implemented? And
Third, would the benefit go to the marginal farmers?

The first question is to deal with two concerns, namely, the allocation in real terms (after adjusting inflation) is not sufficient given the increasing prices of agriculture inputs; secondly, current investment in agriculture failed to make a link with government policy to ensure future food security.

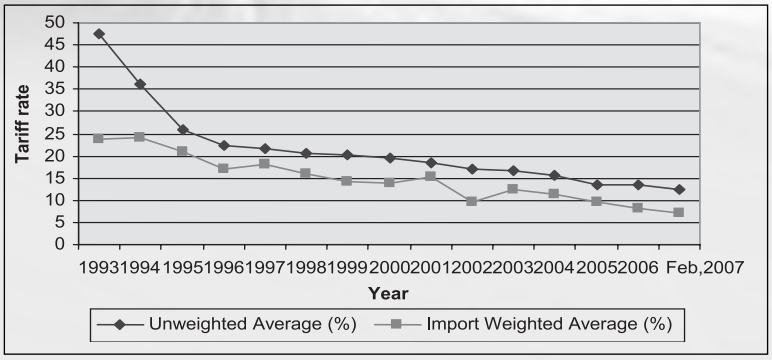
Past experiences are not well enough as far as the last two questions are concerned. It is clear from the past experiences that ADP is not satisfactory at the implementation level. For example, in the first ten months of the current fiscal, 61per cent of the ADP in agriculture has been implemented.

Also the amount of subsidy is very insufficient compared with the neighbouring countries. Bangladesh is giving less than 1 per cent subsidy of its agriculture output whereas neighbouring India is giving around 9 per cent subsidy to its agriculture. It is important to note that Bangladesh imports a large volume of food items from India. Besides, the sub sector of agriculture is obscure. The concern of agricultural subsidy also relies upon the efficacy of its use as it is often claimed that subsidy does not reach the marginal farmers.

Trade liberalisation and increasing trade deficit:

Over the last decade the (weighted) average tariff reduced to 6.98per cent in February 2007 from 23.6per cent in June 1993; un-weighted average tariff reduced from about 49per cent to about 13per cent as shown in figure 12. Number of restricted items which were 193 in the import policy of 1991-93 was reduced to 63 in the import policy of 2003-06. This has intensified the dependency of import. As a result trade deficit has increased by 85per cent to US$ 3458 million in 2007 from US $ 1865 million in 2000. High trade deficit also leads currency to depreciate thus has an impact on inflation.

Figure 12: Impact of Tariff Reforms on Average Import Duty



Source: Bangladesh Economic Survey, 2007

Increasing Dependency on Import:

As a result of trade liberalisation, dependency of import increased significantly, especially, from India and China. These two countries are the main sources of Bangladesh's import, especially, of food and other essential commodities. Bangladesh accounted for, on an average, around 28-30 per cent of her total import from these two countries in the last four years or so. At the same time, in the last few years, Indian Rupee and Chinese Yuan has appreciated by 15-17 per cent and 4-6 per cent, respectively, against dollar while between 2003 and June,2007 taka depreciated by about 19 per cent, meaning that cost of import from these countries increased substantially, which has an impact on inflation

Table 9: Bangladesh's Import from China and India

(US$ Million)

Year	India	China
2002-03	1358	938
2003-04	1602	1198
2004-05	2030	1642
2005-06	1868	2079
2006-07 9 (Up toFeb)	1402	1755

Source: Bangladesh Bank

Table 10: Exchange rate (Taka per Currencies)

Year	US $	Chinese Yuan	Indian Rupee
2003-04	60 .43	7.30	1.31
2004-05	63 .75	7.70	1.46
2005-06	70 .40	8.78	1.57
2006-07	69 .65	9.03	1.70
2007-08	68 .51	9.05	1.70

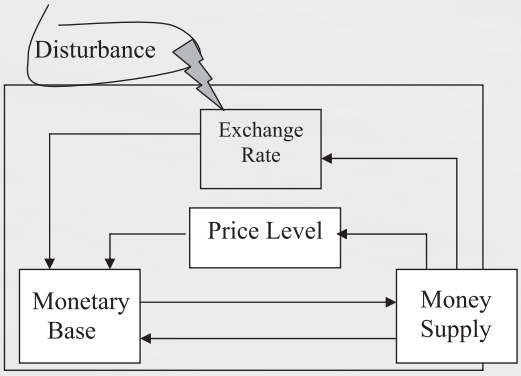
Source: Bangladesh Bank

Currency Depreciation is an Inflation Booster:

Depreciation tends to increase the domestic price of imported goods which led to an increase in price of final output and then wages. The higher inflation requires further depreciation to maintain export competitiveness. Consequently, this has three broad implications: first, depreciation further stimulates inflationary pressure; second, depreciation means that country's terms of trade eventually deteriorate, implying that cost of import is higher than the cost of import, which in turn causes a negative impact on trade balance. Thus further lead currency to depreciate; third, since price is sticky in the short run, it gradually adjusts in line with the rate of currency depreciation. This means that export lose competitiveness after a certain period of time, stimulating currency to depreciate further to maintain the export competitiveness, thus, puts further pressure on inflation.

The vicious circle of hypothesis says that under a floating exchange rate system, an initial disturbance (either domestic or foreign) can create an exchange rate-inflation spiral. That is the disturbance which can set into motion a cumulative process of inflation and exchange rate depreciation, through which exchange rate effect is rapidly translated into domestic prices and costs and back to the exchange rate.

Figure 13: Impact of Exchange Rate Disturbance on Price Level



Macroeconomic implications:

Though a wide range of national and international issues like international price hike, increasing oil price, natural calamity, unwarranted agriculture and trade policy are responsible for exorbitant price hike of the commodities, some macroeconomic issues like policy mismatch of the fiscal and monetary authority, expanding budget deficit, growing public indebtedness and so on could also be responsible for present inflationary trend in general and food inflation in particular. This is because of the fact that in situation where macro economic variables are in an unstable position, the inflation and GDP are likely to lead to disequilibrium position. In this circumstance, some exogenous shocks like oil price hike and/or like natural calamities may worsen the situation leading to a further disequilibrium position of inflation and output while the increasing prices of food and other commodities as well as lowering down the production is the resultant impact. The followings explain some of the imbalances in macroeconomic front that has been prevailing over the past few years:

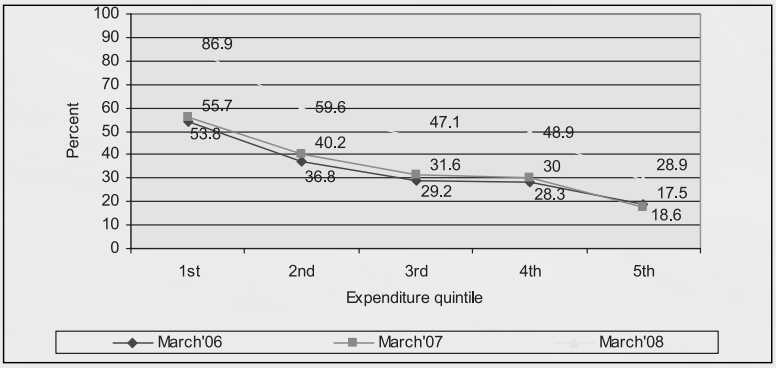
- Policy Mismatch: Between 2005 and 2007, the central bank has been persuading contractionary monetary policy, while over the past few years budgetary measures were expansionary. Tightening monetary policy initiated in early 2005 following an instruction of IMF. The IMF reasoned that the economy was overheated, which triggered inflation. Following the instruction, the BB raised SLR, CRR & Bank Rate. This followed by an unhealthy competition within the banking as well as non-banking financial institutions to raise the interest rates. This has a negative impact on overall economic activities in general and inflation in particular as investment became costlier. As shown below, the increasing interest rate due to tightening money supply has an increased production cost which has an impact on investment. This policy mismatch has resulted in a gap between the aggregate demand and supply in the economy which caused price instability. As the general economic sense is that price tends to increase if there is a backward shift of aggregate supply amidst increasing aggregate demand.
- Expanding Budget Deficit: Fiscal authority was not accommodative to complement the monetary authority; instead it continued pursuing an expansionary budgetary measure. As a result budget deficit which was 4.19per cent in 2004 rose to 4.5per cent in 2007. Budget deficit is a problem for an inflationary economy, especially when the deficit is financed for government consumption purposes. Bangladesh's inflation experience may be explained in a large part by the needs of public finance.
- Growing Public Indebtedness: Expanding budget deficit means that the deficit to be financed by borrowing from domestic and external sources. Currency depreciation and increased interest rate cause to increase the cost of borrowing, implying growing public indebtedness. This means that budget deficit tends to be higher in the subsequent period; since the source of government revenue is limited, it further depends on public borrowing; leading to inflationary pressure.

Impact of Rising Inflation and Food Prices

Food consumption and nutrition: Effect of high food prices on food consumption

The rise in food prices is having serious impacts on food consumption and nutrition. Estimates on food consumption from Dhaka City during the period 2006 - 2008 show a marked effect of soaring food prices: the food bundle habitually taken by the poor is now beyond their reach even with regard to basic staples such as rice. Assuming constant income and constant share of food to total expenditure, figure 14 shows that the share of rice expenditure to total food expenditure in the bottom quintile increased from 54 per cent in 2006, to 59 per cent in 2007 and to 87 per cent in 2008. Likewise, in the second expenditure quintile, households would have had to spend 60per cent of their total food expenditure only for rice.

Figure 14: Share of Rice to Total Food Expenditure by Expenditure Quintile,2006-2008



Share of food on total expenditure assumed constant at 2005 level
Source: BBS, HIES (2005) & CAB

Poor households who are not food purchasers and whose incremental income lags behind inflation are at the greatest risk of higher levels of malnutrition. As such households are forced to spend a greater proportion of their limited income on rice and little or none on other foods such as meat, vegetables and fruits. Thus the price rise must have also had a marked impact on dietary diversity.

Rates of malnutrition in Bangladesh are among the highest in the world. More than 54 per cent of pre-school-age children, equivalent to more than 9.5 million children, are stunted, 56 per cent are underweight and more than 17 per cent are wasted. It is obvious that with the increase food prices the malnutrition condition in Bangladesh would be worsened further

Who benefits from increasing food prices?

The welfare gain (or loss) of different income groups, especially the producers of food crops, resulting from increasing food prices is a contentious issue in Bangladesh. The majority of the farmers in the country are rice producers and their welfare, no doubt, is significantly determined by returns to rice production. Moreover, the variability of returns from crop production is high, especially in the aus and aman seasons, mainly due to frequent incidence of floods and other natural disasters (such as two consecutive floods in July-September 2007 and the cyclone in November 2007). Similarly, production in the boro season critically depends on timely and uninterrupted availability of required quantity of fertilizer, diesel, electricity, high quality seeds, agricultural credit, and other inputs by the farmers. In this context, it is also important to highlight that the overwhelming majority of the farmers in Bangladesh belong to small and marginal category who own and operate small pieces of land. In 2005, about 90.5 per cent of the rural households had owned land of less than 2.5 acres; while 72.9 per cent had less than 1.0 acre. The distribution of operated land is also very similar: 90.3 per cent operate less than 2.5 acres and the operated land for 71.2 per cent is less than 1.0 acre. This shows that the vast majority of the crop producers in Bangladesh, including the rice producers, are small and marginal farmers and they mostly constitute net purchasers of food items, especially rice.

In recent years, prices of food commodities, especially that of rice, have been increasing in the country. An analysis of Bangladesh Bank shows that the average retail price of fine quality rice in Dhaka city rose by 41 per cent in

December 2007 over its average value in FY07; while the increase in the case of coarse rice over the same period was by 33 per cent. The prices of other essential food commodities experienced similar increases. In the rural areas, retail prices of rice and other major food commodities have also shown similar trends.

The average price of rice at the producers' level, however, increased at a slower rate; by less than 12 per cent between January 2005 and July 2007, with little fluctuations around the modestly rising trend. On the other hand, producers' prices of other major agricultural commodities, especially seasonal products and vegetables, showed increasing but more fluctuating price movements.

The increase in the market price of rice is likely to have different implications on various population groups in the country. An analysis of the value chain of domestically produced rice in Bangladesh shows that, on an average, around 44 per cent of the unit price paid by the consumers is attributed to production and processing costs, 19 per cent goes as margin to the producers, nearly 24 per cent is appropriated by the millers and wholesalers, 12 per cent goes to the retailers, and less than 1 per cent goes to local traders. In the case of imported rice, import cost accounts for 85 per cent, while 5 per cent is retained as margin by the importers, and less than 10 per cent goes as wholesale and retail margins.

Table 11: Value chain for domestically produced and imported rice in Bangladesh

(per cent of unit price)

Production/marketing stage	Participating agents/activities	Per cent of unit price paid by consumers	
		Domestically produced rice	Imported rice
Production/ Import and local marketing	Production/processing and import cost	44.3	85.2
	Producers/ importers	19.2	5.3
	Local traders/intermediaries	0.7	--
Milling and trading	Millers and wholesalers	3.6	--
Retailers		12.2	9.5*
Total		100	100

**Includes both wholesale and retail margins.*
Source: CPD

As shown in the above table, on an average, less than a fifth of the price paid by the consumers accrues to the domestic rice farmers as margin. Note that this margin goes to the producers only on the price at which they actually transact in the market. Since the vast majority of the rice producers in the country belong to small and marginal farmer groups, most of them go to informal market while a few of them go to the formal market. Thus most of them have little, if any, marketable surplus. Moreover, they usually sell the surplus immediately after the harvest to meet other pressing needs especially when the price tends to lower; and even if they do not have any surplus, they usually sell a part of their production to meet such demands and purchase rice later on presumably at higher prices. This shows that the benefit of higher rice prices can accrue to the majority of the rice farmers only if rice prices are high in the harvesting seasons; while any subsequent increase in rice prices in the retail market mostly benefits the millers, wholesalers, and the retailers.

A study conducted by Unnayan Onneshan in 2005 shows that there exists a huge gap between the farmers' selling price of paddy and market price of rice both in the advanced and backward areas. The empirical findings show that the farmers' loss is substantial, after the subtraction of husking costs and transport costs. The calculation shows that farmers' net loss of income from the market is Tk 4.7 billion only for Boro production. If this calculation is applied to the whole rice production of the country for a year, the estimated loss stands at Tk 8.7 billion. The middleman and brokers appropriate most of the income (see the Box).

In this context, it is also important to note that, since more than 90 per cent of the farmers including the rice cultivators, belong to the small and marginal category; the vast majority of the rural people including the landless

rural labourers and other disadvantaged groups are net purchasers of rice in the country. In the urban areas, the share of households who belong to the net purchasers of rice category and is dependent on the market is likely to be higher. The above shows that any price increase of domestically produced rice could bring benefit to the majority of the rice growers through providing a share of higher prices to them, only when reasonable and competitive rice prices are maintained after harvest. The gain resulting from any subsequent rise in rice prices in the retail market largely accrues to the millers, stock holders, other dealers, and probably a few large rice producers without much benefit to the majority of the small rice producers who form the overwhelming majority.

FARMERS LOSE TK 87575M PER YEAR AT THE DOMESTIC MARKET

Rice growers in Bangladesh incur huge income loss due to existing trading practice, which transcends beyond so-called market arrangement of financial intermediation, allowed for 'efficiency' by decreasing transaction cost. The market survey conducted for the report shows that there exists a huge gap between the farmers selling price of paddy and market price of rice both in the advanced and backward areas. The empirical findings show that the farmers' loss is substantial, after the subtraction of husking costs and transport costs. The middleman and brokers appropriate most of the income. The calculation shows that farmers' net loss of income from the market is Tk 47950 million only for Boro production. If this calculation is applied to the whole rice production of the country for a year, the estimated loss stands at Tk 8.7 billion. If this amount is compared with the contribution of crop and horticulture sector in the economy for FY05, it would be more than 1/5 of the sector's share to GDP and 1/6 of the total share of agriculture to the GDP. This estimate is based on market price of rice and paddy in the advanced area during the harvesting season of Boro rice, which has the largest share in the total production of rice. The calculation is conducted for the pick-harvesting season when the market price of rice is usually low. If the seasonal fluctuation were taken into account, the lost income of the producers would be higher. The big hoarders primarily appropriate the gain from this fluctuation.

Source: TNLP-Agriculture, 2005

In the case of imported rice, the margin from higher retail prices is shared between the importers and the wholesalers and retailers. On the other hand, since the vast majority of the population in both rural and urban areas are net purchasers of rice, this large group especially the poor faces significant disadvantages and real income erosion when rice price increases.

The increase in prices of most other domestically produced food crops, especially vegetables, has strong seasonal dimensions. The prices of these commodities usually show wide fluctuations depending on market availability and temporary shortages and disruptions in the supply chain. While the major share of higher prices in the retail market is normally appropriated by the intermediaries, a small share probably percolates down to the producers facilitated by 'imperfect' adjustments in producers' prices in line with retail price changes. The producers, even the small ones, are able to derive the benefit mainly due to the practice of harvesting and selling in small lots over a period. The major impediment, however, is the weak market (including lengthy and often imperfect supply and transport networks) and its disjointed chain that create supply-demand mismatch at the local level leading to gluts in supply especially in the peak season and distress sells and wastages (this is especially true for bulk, low value, and perishable products) in the absence of preserving and processing facilities.

Impact on women and children

It is evident that general increase in the price level caused erosion of real income. The burden of income loss varies across the people of various income groups. As a matter of fact the burnt of inflation as faced by children and women, especially, those of poor and wage earners cannot be avoided if one wants to assess the actual impact of inflation. This is important because of women's contribution to the economy while poor status of women in society represents their deprivation and lack of access to all opportunities and benefits.

In Bangladesh, of total 143.91 million population, 69.81 million are women, reflecting 48.5 per cent of total population. About 86 per cent of women in Bangladesh live in rural areas. Between 2005 and 2006, total female labour force accounts for 12.1 million, of them 2.8 million live in the urban area while 9.3 million in the rural area. In rural areas, they take part in economic activities and earn income through cattle rearing, gardening, poultry etc. About 80 per cent of workers in total labour force are women in the RMG sector. They work at a low rate of wage while 26 per cent of female workers earn less than Tk 3000 only. Only 3.7 per cent of female workers earn more

than Tk 5,000. With the low income and rising price of essentials, it has become very difficult for these women to provide their families with the basic requirements.

The recent increase in commodity prices greatly affects physical access to services among male and female. Women are more sensitive to price change than men. Studies conducted in India and Pakistan show that price elasticity of demand for health and nutrients consumed is much larger for females than for males.

The present study that examines the impact of price hike on women and children shows that women in households tend to spend more on children and food. Women are subject to discrimination as there is a social perception that men contribute more to a society than a woman. As income of the household falls due to rising inflation, it is the women who suffer the most. Impact of soaring food price on women and children could be summarised as below:

- Increasing prices of foods reduces the real income of households thereby rationing spending on children's schooling. This as a consequence is likely to reduce the literacy rate among girls in near future. The evidences suggest that in Bangladesh, it is the female children who are firstly taken out of schools if the family is in financial setback.
- As education, skills and knowledge influence women's status in the society and at home, they loose their bargaining power thereby their ability to take part in the decision making process shrink eventually.
- There is a greater disparity in nutrition intake among men and women. Men consume more nutrients than women. The female members in households especially in rural areas take their meals after their male members and children. Studies suggest that it is one of the main reasons of early childhood malnutrition. Moreover there are many other factors that can be attributed to the maternal nutritional factors, for example, low birth weight of infants, infant mortality etc.
- In recent years the rise in the price of baby foods has made it difficult for households to provide their children with required nutrition. This is evident even among the middle income groups. According to a government report, the prices of baby food and powdered milk have risen by 30 to 38 per cent over the year 2006 and 2007. The inability of families to provide proper nutrition for the children may result in undernourishment of children which contributes to increasing child mortality.
- In Bangladesh, women are subject to violence in the society. Due to rise in the price of food and other essentials, as income of the family falls, tension rises within households and the women are often subject to violence by the male members of the family.
- It is a common phenomenon that women take the role to provide food and nourishment to the members of family by arranging and preparing food. As a result, they have to bear the burden of rise in the price of food.

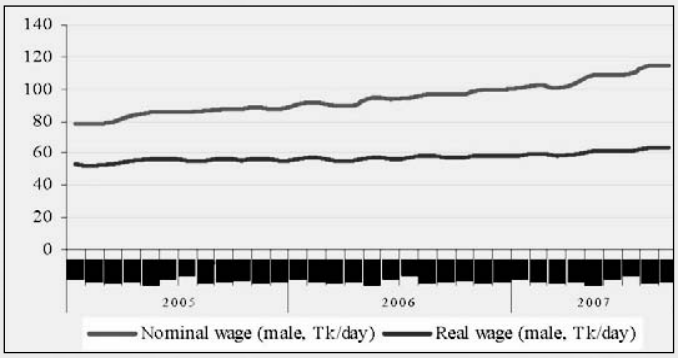
Thus economically, women have always been involved in production although their share in consumption as well as control over the cash and monetary decision making in the family is neglected. Any financial pressure hits hard the female members of the family most. The recent inflation has created a burden on the female population by reducing their ability to provide their families with the day to day needs. There is a need to take measures to subsidize the female workers, at the same time undertake other measures by different organizations and NGOs to reduce the burden of inflation. It is imperative that government and private sector would come up with comprehensive strategies to contain the impact of food price hike on women and children. Unfortunately though the government has launched a 100-day employment scheme to increase the purchasing power of the extreme poor, there has been no mention about employing the female unemployed population. There can be a separate quota for the female workers to mitigate their sufferings.

Inflation erodes income of the poor

One obvious consequence of inflation is the erosion of real income of the people resulting from the general increase in prices. The burden of income loss, however, differs across different income groups. No doubt, the household groups who are employed in the formal sector and whose salaries/wages are fixed in nominal terms and are re-fixed periodically are the worst sufferers. The same is true for those employees in the informal sector who have income fixed in nominal terms. In Bangladesh, a major concern, however, is the inflation-induced loss of real income of the poor.

While assessing the impact of inflation on the poor's income, it is important to keep in view that the poor is not a homogeneous group and they derive income from a variety of sources. The livelihood activities of the poor are diverse and their sources of household income are multiple, often involving subsistence and home-based production and participation in the low-remunerative activities in both formal and informal economy. The Household Income and Expenditure Survey (HIES) 2005 shows that, in the rural areas, the poor mostly consist of wage-labour based workers in agriculture and other non-farm sectors, and other low-paid workers in production, services, and other activities. In the urban areas, the profile of the poor is very similar with daily wage labourers forming the majority. This shows that, since labour is the only major asset of the poor, the return to labour is the major source of their income.

Figure 15: Changes in Agricultural Wages



Source: Bangladesh Bank

In the face of inflation, it is important therefore to examine whether the labourers are able to adjust the wage rate in order to make up, even if partially, for the loss in real income. Figure 15 shows the trend in daily wage of agricultural labour and the daily wages of unskilled workers in other sectors, which follow similar trends.

The Bangladesh Bank analysis shows that the daily agricultural wage rate in real terms over the period from January 2005 to September 2007 has not declined, rather it has shown a slightly increasing trend. This shows that agricultural labourers, who constitute the largest poor group in the country, usually turn out successful in maintaining the level of their daily real wage almost unchanged through upward adjustment in the nominal wage rate without any substantial time lag. One factor that seems to facilitate such quick indexation of the nominal wage rate to inflation is the prevailing characteristics of the agricultural labour market that ensures flexibility and permits almost daily wage bargaining keeping in mind the reservation of wage to a minimum quantity of the wage good (rice). A similar behaviour may also be noticed in the informal labour markets that set the daily wage rates in construction, services, and other low-paid activities in which the poor are the major participants.

The evidence on income adjustment thus indicates that the poor day labourers in Bangladesh have some ability to at least partially revise their nominal wage income in a quick manner to compensate for the loss in real income due to inflation. This shows that nearly half of the poor in the rural areas and more than one-third in the urban areas can negotiate an upward adjustment in their major source of earning, the wage component of household income, in the face of inflation and therefore can somewhat protect themselves against the onslaught of inflation although the net welfare impact could go either way since they would probably receive higher prices for some of the commodities that they sell (e.g. household production items) while they would pay higher prices for many of their purchased goods. On the other hand, most of the components of income and expenditure of the poor households belonging to the self-employed category, who constitute more than one-third of the poor households in both rural and urban areas, are affected in diverse ways so that the net impact of inflation is difficult to predict a priori. The welfare of the salaried poor households, though constitute only around 5 per cent of the rural poor households but around a fifth of urban poor households, are more likely to be negatively affected since their real income is eroded by rising inflation while they pay higher prices for purchased goods. The remaining major poor group comprising nearly 10 per cent of the poor households in both rural and urban areas belongs to unemployed/not working category households and these households no doubt become extremely disadvantaged with rising inflation.

Conclusion and Policy Recommendations

Agriculture sector in Bangladesh has two-way roles to play in the overall performance of the country. On the one hand, it is the largest sector of the country in terms of total value addition and on the other; it is the most important sector providing the maximum employment for the whole country maintaining the lives and livelihood provisions for the poor rural people. The fact also remains that Bangladesh is a net food importing country. The rapid population growth and the growing food requirements pose a difficult challenge given the limited availability of cultivable land in Bangladesh. The re-occurring disasters further complicate the stability of food production, endangering the food security. Given the current context, the food insecurity is not only a national concern but also a global concern. Therefore, it is important to pursue specific direct measures nationally, regionally and globally to dampen inflationary pressures especially that of containing food prices resulting from supply shocks and other events.

The major area of intervention in the rice sector should be-

- Increase production especially of food and other essential items and productivity of land and labourers through technological advancement and infrastructure development.
- Institutionalise mechanism by which the small farms can get incentive in farming e.g. lessening input costs, insurance for price volatility, support mechanism for natural disaster etc. In the present situation, monetary policy needs to focus more on stabilising supply in the face of adverse shocks in order to protect the poor. This can be achieved through facilitating imports of essential commodities in the short run alongside measures to increase domestic production.
- Domestic production and supply chain needs to be strengthened to cease artificial food crisis prompted by the market syndication. This requires an effective regulatory body that could closely monitor the market with effective intervention. It is proved that an ad hoc mechanism like allowing armed forces to control the market can never be effective.
- One useful way to dampen the price effects of food supply shocks is the practice of maintaining adequate strategic buffer stock of food (under the public food distribution system) that is released when needed through different food transfer programmes targeted to the poor and food insecure households. In the present situation, it is necessary to enhance the scope and increase of the coverage of these programmes in order to make a perceptible impact on both the food market and the targeted households. Since domestic production could not always be sufficient to maintain adequate buffer stock, outsourcing needs to be sought.
- An effective government procurement policy is needed to reduce the seasonal volatility of rising prices of domestically produced rice and other agricultural products as well as to protect the interest of farmers. It is important to adopt effective policies that reduce seasonal variability in the prices of different commodities especially rice, and provide a remunerative and fair price of rice to the growers after harvest. For vegetables and other non-rice food crops, the priority would be to strengthen the marketing links, both horizontally and vertically by promote market integration and supporting processing and high value activities.
- Existing private sector initiative could be expanded at a larger scale with an extension of time line to reduce the burden of price hike on the female labour force of the country. For example, business bodies like BGMEA and BKMEA came up with the plan to provide some of the essential commodities at subsidized prices for a temporary period of time in some particular locations. But since the prices are continued to creep up, there should be a serious thinking of continuing this sort of step to supply essentials at lower price to their workers for longer period of time at a large scale to bring all the readymade garments workers under the purview of the rationing system. A permanent rationing system for these wage earners may help to some extent to cope up with the steep rise in the price of essentials.
- Climate change has an adverse impact on agriculture production. Recent domestic and global developments including recurrent floods and the cyclone in 2007, caused disruptions in agriculture production in many countries including Bangladesh. This has a two way effects: one reduced growth and induced inflationary pressure. In particular, crop sector growth has slowed down due to shortfall in aus and aman production. In addition, significant losses were sustained in the production of other crops and in other agricultural and non-agricultural sub-sectors including livestock, forestry, poultry, aquaculture, handloom, and other rural industries. Under the situation, it is important to ensure rapid rehabilitation of

the livelihood activities in the flood and cyclone affected areas so that the adverse impact of the disasters are mitigated within the shortest possible time, production losses are recouped, and the supply of essential products increases to create positive impact on food and essential commodity prices. The potential of recovery of all economic sectors is strong, so that adequate credit and other critical input flows to productive activities would be crucial to realizing the expected increase in economic activities.

- Attention needed to be given to encourage non-cereal food production and consumption along with food self-sufficiency. Greater attention needed to give supportive policies for agriculture input, research on non-cereal crops, and commercial and homestead promotion of poultry and fruits/vegetables are receiving greater attention. There is a clear need to diversify food sources both in terms of land/environmental sustainability, development of the rural economy and increased consumption to achieve improvements in the nutritional status of the people of Bangladesh.
- There are female members in many families, especially in rural areas, who are unable to work outside. NGOs and other organisations may take initiative to employ these women, give them works like sewing, poultry rearing etc, so that they can earn for the family.
- Initiatives could be taken at the government and non-government level to increase the awareness of people, especially the women about food habit. There are many foods which are comparatively cheaper but rich in nutritional substance. Through media, women can be encouraged to keep these food items in their daily menu, which will save their money and at the same time provide the necessary nutrition to the family and children.
- Since the shortage of food supply is a global crisis now-a-days, it is imperative to create food bank, at least at the regional level, which could be useful to address the immediate supply shocks at the country level. The recent SAARC Summit being held in Colombo, Sri Lanka, in July 2008 has already announced to set up a regional food bank. However, a concerted effort among the member countries, including the economic giant of the region, India, is needed to make the food bank workable. The concern rose because SAARC remains ineffective even after more than 25 years of its formation.
- Within the region there should be a funding mechanism to ensure that farmers in resource constraints countries get the adequate support so that they can compete under the free trade regime. In this regard, it could be suggested that the regional countries can create South Asian Agriculture Fund (SAAF) under the SAFTA to develop the regional agriculture. The same kind of fund could be created under bilateral arrangement. Besides tariff reduction period should be longer for LDCs under any kind of free trade agreement. Also a compensatory fund for tariff reduction should be established for the resource poor countries.

Therefore a comprehensive package is needed. Elements of such package could be, amongst others: correction of inequities in access to irrigation; bringing all cultivators into the ambit of institutional credit, including tenant farmers; augmentation of farming through technology, extension, price and other incentives; encouragement of cheaper and more sustainable input use, with greater public provision and regulation of private input supply and strong research and extension support; protection of farmers from high volatility in output prices; and enhancement of rural economic diversification to more value-added activities and non-agricultural activities.

All these measures need extensive support to agriculture. However, Bangladesh is not capable enough to support its agriculture given the resource constraints. In fact, the government support in agriculture is not sufficient and declined over the period, which is well below the WTO's allowable limit for the last ten years. The right choice for Bangladesh and other LDCs to bargain for the creation of funding mechanism is to protect the consumers in general from abnormal food price hike and to make sure that the poor farmers can get support at least from the level of those in the developing countries.

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http://www.alternet.org/waroniraq/86515/, read article "Iraq War May Have Increased Energy Costs Worldwide by a Staggering $6 Trillion" for more information on this.

Food price index data from the UN's Food and Agriculture Organization show sharp rises in recent months for some food types. The BBC's food price statistics as well as Holt-Giménez and Peabody (cited above) both note the sharp rise in basic cereals.

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In terms of occupation, agricultural labor households have a high incidence of poverty as do non-agricultural casual and unskilled worker households. According to HIES 2000, in both rural and urban areas, the incidence of poverty is significantly high (75 per cent and 67 per cent respectively) for the households headed by casual wage laborers. Of the total number of the poor, 46 per cent in the rural areas and 36 per cent in the urban areas belong to this category. Households whose heads are self-employed in agriculture and non-agriculture sectors, account for 40 per cent and 35 per cent of the poor in rural and urban areas respectively. Of the remaining poor, salaried employment accounts for 6 per cent in the rural areas and 20 per cent in the urban areas, while 8 per cent in the rural areas and 9 per cent in the urban areas belong to unemployed/not working category. The income profile shows a high reliance on daily wage labor as the major source of income of the poor households. For the poorest 20 per cent households, daily wage income provides nearly half of their total income.

For instance, this is often made possible through the pursuit of the widely used practice of setting nominal wage rate in many locations keeping in view the price of rice in the local market. This not only protects the real income of the poor day laborers but also ensures the access to a minimum quantity of the wage good (rice).