

## **Inflation in Bangladesh: A Supply Side Analysis**

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### **Abstract :**

*This paper attempts to verify that the supply side factors are no less contributory than demand side factors to generate inflation in the Bangladesh economy. An analysis of the inflation trend of recent years suggests that supply side phenomena such as food price hike, exchange rate depreciation, soaring import cost, wage rate increase, oil price hike etc have contributed significantly to price inflation. The findings of the study prompt policy makers to take supply side issues into active consideration before taking measures for combating inflation.*

### **I. Introduction:**

Recent inflation in Bangladesh is a major and perhaps the most important economic issue. Like many other economic issues, inflation also is not a monocausal phenomenon. In a market set-up both (aggregate) demand related and (aggregate) supply related factors are observed to generate inflationary pressure. The relative importance of the factors on each side may diverge from case to case.

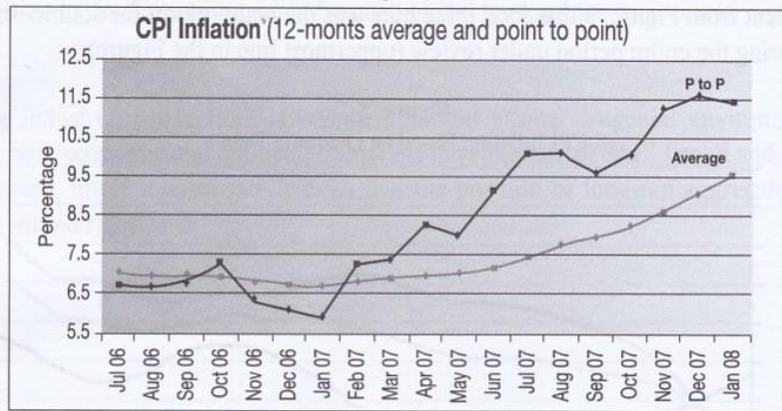
Economists, policy makers, politicians and people at large have different views on the point of recent inflationary pressure in Bangladesh. Some, in line with the opinion of great monetarist Milton Friedman, opine that inflation is always and everywhere a monetary phenomenon. They are also of the view that money supply is a major factor that has mainly contributed to the recent inflation in Bangladesh. Yet there are others who consider recent inflation of Bangladesh as primarily a supply side phenomenon where international price movement basically played a major role.

In the present paper, it is argued on the basis of data and some other statistical evidences that the supply related factors have played a dominant role in accelerating the pace of inflationary pressure in Bangladesh. The paper accordingly has been organized in the following way. In section II, statistical evidences of ongoing inflation of Bangladesh have been presented. In section III, supply related factors like food price hike, exchange rate depreciation and import cost, wage rate increase, oil price hike, oligopolistic market structure and speculation, political instability, etc are discussed. Section IV concludes with few comments on policy implications.

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**II. The recent trend of inflation in Bangladesh:**

**Figure; 1**

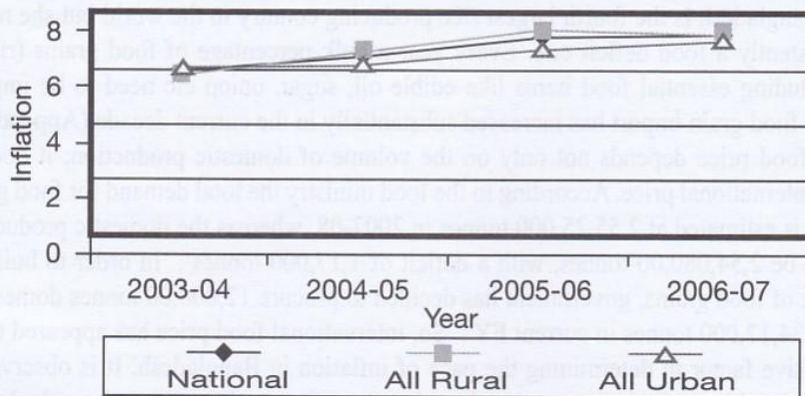


Source: Appendix: A

Figure:1 demonstrates the inflationary trends (the average index implies both food and non-food items) of Bangladesh on the basis of 12-month average data of CPI (Base Year: 1995/96=100) as well as point to point (monthly) rate of inflation (shown by P to P in Figure: 1) between July 2006 to January 2008. The data of CPI show that average rate of inflation increased to 9.56 percent in January 2008 from 9.11 percent in December 2007. During the corresponding period the point to point inflation staggered more or less around 11.5 percent although in January 2008 the inflation rate decreased slightly.

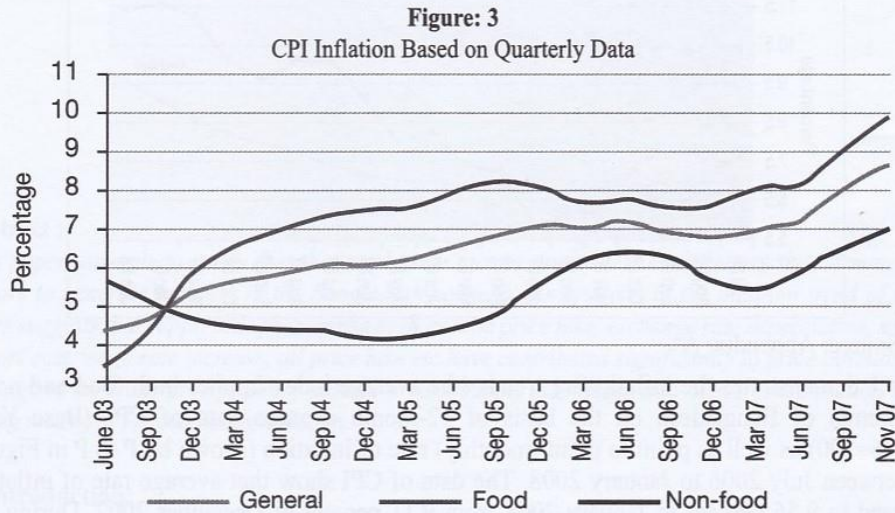
Almost the same picture about inflation is portrayed by the data provided by BBS. Figure: 2 shows that during the period 2003/2004 and 2006/2007, inflation kept on increasing. In the first half of the fiscal year 2007/08, overall inflation rate based on CPI shot up for the first time after independence beyond 10 percent (Appendix: B). In November 2007, it exceeded even 11 percent.

**Figure 2: Annual Inflation Rate**



Source: Appendix: B

Figure: 3 based on the quarterly data of CPI provided by Bangladesh Bank also shows that in the first half of the fiscal 2007/2008, the inflation rate started rising beyond 10 percent. It is further evident from Figure: 3 that food price hike was the main reason for double-digit rate of inflation during the entire period under review (uppermost line in the Figure).



Source: Bangladesh Bank Quarterly Report (Oct-Dec 2007), p-14

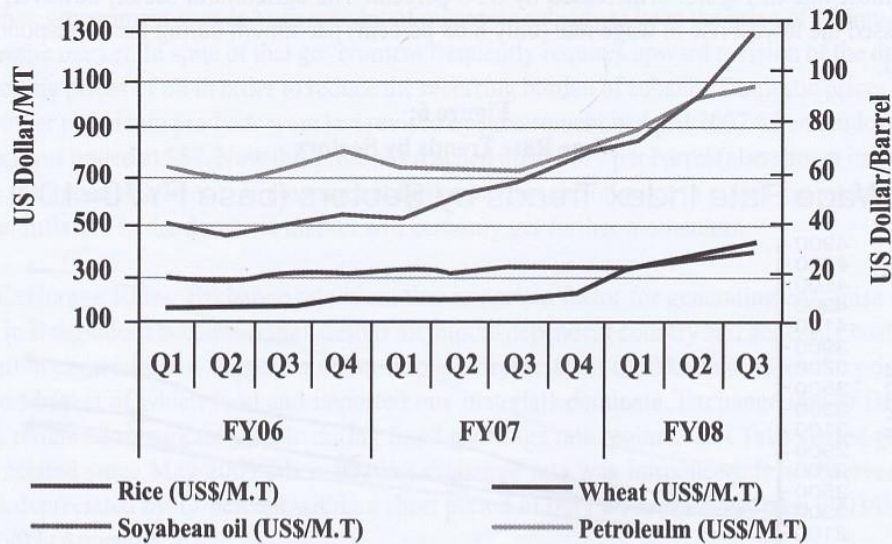
### III. Supply side factors that caused inflation in Bangladesh:

(1) **Food Price:** Consumer expenditure on food constitutes a bulk percentage in Bangladesh. So, food price plays a significant role in enhancing inflationary pressure in the country. According to the CPI (Appendix: A), the rate of food price inflation which was 8.11 percent in FY 2006-07 stood at 11.08 percent (Appendix: A) in the month of January 2008.

Although Bangladesh is the fourth largest rice producing country in the world but she remains to be consistently a food deficit one. Every year a bulk percentage of food grains (rice and wheat), including essential food items like edible oil, sugar, onion etc need to be imported. Particularly food grain import has increased substantially in the current decade (Appendix: C). Therefore, food price depends not only on the volume of domestic production; it does also depend on international price. According to the food ministry the total demand for food grain in the country is estimated at 2,55,25,000 tonnes in 2007-08, whereas the domestic production is expected to be 2,54,080,00 tonnes, with a deficit of 1,17,000 tonnes<sup>2</sup>. In order to build up a buffer stock of food grains, government has decided to procure 12,000,00 tonnes domestically and import 34,17,000 tonnes in current FY<sup>3</sup>. So, international food price has appeared to have been a decisive factor in determining the pace of inflation in Bangladesh. It is observed that prices of essential items in the international market (e.g., rice, soybean oil, etc) reached an ever

highest level in the last 20 years as shown in Figure-4. The second and third highest lines in Figure: 4 show respectively the movement of prices of soybean and rice in the international market. The lowest line in the same Figure shows the movement of prices of wheat which also exhibit an increasing trend particularly during 2008. According to Bangladesh Bank, Indian food price inflation would affect more on Bangladesh food price than price developments of other food exporting countries because Bangladesh imports bulk share of food grains from India. India unexpectedly raised export price of rice from \$399 to \$500 per tonne and finally restricted export which led to abnormal increase in the price of food in Bangladesh<sup>4</sup>. The export prices of rice fixed by major rice exporting country like Thailand and Vietnam have also increased abnormally (\$1100 and \$1200 per tonnes respectively) in the recent time which has certainly caused price hike of food in Bangladesh<sup>5</sup>. It is relevant to mention here that domestic food price did not increase in 1998 even after the devastating flood causing 25 lakh tonnes of food deficit because international price of rice at that time was only \$175 per tonne<sup>6</sup>. But with an estimated food deficit of 15 lakh tonnes following two consecutive floods in July-Sept. 2007 and devastating cyclone “Sidr” in mid November 2007, domestic food price has shot up abnormally because of excessive rise in the price of food in the international market.

**Figure 4:**  
**Commodity Prices in International Market**



Source: Bangladesh Bank Quarterly Report (Oct-Dec 2007), p-14

(2) **Import Cost:** Imports play a significant role in Bangladesh economy because most of the essential food items like rice, wheat, edible oil, as mentioned earlier as well as intermediate goods like fertilizer, capital machineries, industrial raw materials (chemicals, dyeing, etc) are imported. Following increase in domestic consumption and export demand, import payments

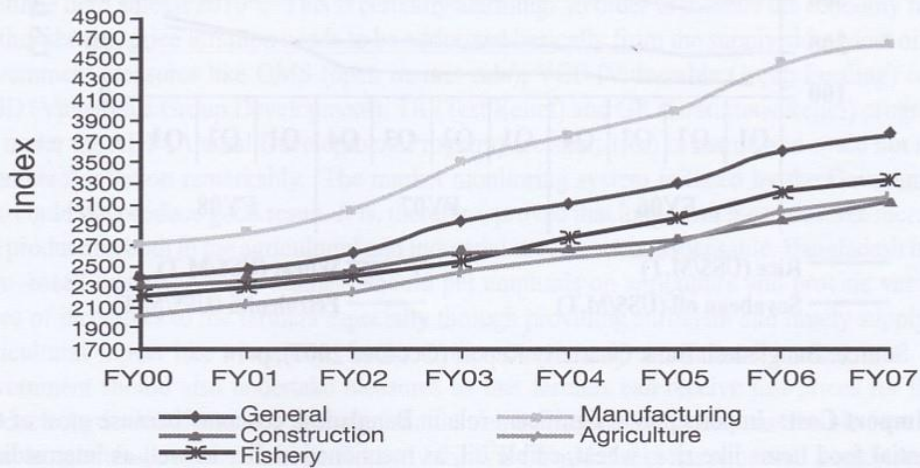
<sup>4</sup> The Prothom Alo, Monday, February 11, 2008, p.1 and 17.  
<sup>5</sup> Op. cit., Monday, April 21, 2008.  
<sup>6</sup> op. cit.,

increased during 2006/07 which amounted to US\$17600 million (26.0% of GDP) compared to US\$ 14746 million (23.8% of GDP) in 2005/06 showing an increase of 19.4% in 2006/07 compared to 12.2% increase in 2005-06<sup>7</sup>. Thus country's overall import bill grew by 17.25 per cent in the first half of the current fiscal year especially due to import of food grains<sup>8</sup>. According to Bangladesh Bank, the country made a record import payment worth US\$1.9 billion in March due to global price hike of food grains, petroleum products and raw materials<sup>9</sup>. This abysmal increase in the overall volume of imports and import cost has certainly exerted a considerable influence on inflation in Bangladesh.

(3) **Wage Rate:** Wage bill generally forms a lion's share in the total cost of production. This is particularly true for developing countries like Bangladesh where labor intensive industries like, ready-made garments (RMG), textiles, re-rolling mills, etc, contribute major share in the industrial GDP of Bangladesh. Thus when labor unions demand increase in money wage rate, cost-push inflation crops up as has been happening in the case of Bangladesh represented in Figure: 5. It is shown in Figure: 5 (the corresponding data shown in Table: 1) that whereas the index of general nominal wage rate (weighted average of wages of all sectors) has registered an actual or compound rate of growth of 7.2 percent per annum between the period 2001 and 2007 (shown by the second highest line in Figure: 5), the industrial wage rate represented by the uppermost line in Figure: 5 increased by 8.56 percent. The agricultural sector, however, has witnessed the lowest rise in wage rate (only 6.68 percent) per annum during the corresponding period.

**Figure 6:**  
Wage Rate Trends by Sectors

Wage Rate Index Trends by Sectors (base FY70=100)



Source: Bangladesh Bank Annual Report, 2006-07<sup>10</sup>

<sup>7</sup> Bangladesh Economy During 2006-07. Published by Metropolitan Chamber of Commerce and Industry, Dhaka.

<sup>8</sup> The Financial Express, Thursday, February 7, 2008, p. 1.

<sup>9</sup> The Financial Express, Wednesday, April 16, 2008, p. 1

<sup>10</sup> Bangladesh Bank Annual Report, 2006-07, Price and wages, Chapter-3.p.21 www.bangladesh-bank.org.com

Table 1:  
Trends of Wage Rate Indices (Base FY70=100)

	FY01	FY02	FY03	FY04	FY05	FY06	FY07
General	2488.8 (4.15)	2637.2 (5.96)	2926.3 (10.96)	3111.1 (6.32)	3292.9 (5.85)	3615.4 (9.79)	3778.8 (4.52)
Manufacturing	2831.6 (4.82)	3034.5 (7.17)	3501 (15.37)	3765.4 (7.55)	4015.0 (6.63)	4444.6 (10.70)	4635.9 (4.30)
Construction	2356.5 (3.07)	2443.7 (3.70)	2624.3 (7.39)	2668.5 (1.68)	2758.2 (3.36)	2948.5 (6.90)	3134.8 (6.32)
Agriculture	2140.9 (5.10)	2262.4 (5.67)	2442.6 (7.96)	2581.5 (5.69)	2719.2 (5.33)	3021.5 (11.12)	3155.7 (4.44)
Fishery	2292.4 (3.24)	2410.8 (5.16)	2562.6 (6.29)	2774.8 (8.28)	2957.3 (6.58)	3217.7 (8.81)	3332.0 (3.55)

Source: **Bangladesh Bank Annual Report, 2006-07**, p.2 (Figures in the parentheses show percentage changes over the preceding year)

(4) **Oil Price:** Bangladesh has to rely on import for each and every drop of oil (Appendix: D). Further, government spends huge amount of money as subsidy to keep the price of oil low in the domestic market. In spite of that government frequently requires upward revision of the domestic selling prices of oil in order to reduce the recurring burden of subsidy. Domestic prices of oil and other petroleum products were last revised by government in April 2007 when crude oil per barrel was traded at \$67. Now this price has reached up to \$117 per barrel (also shown in Figure: 4 by the uppermost line)<sup>11</sup>. If government further revises the oil price to match the international price, inflation in the domestic market will certainly get further momentum.

(5) **Exchange Rate:** Exchange rate is another important factor for generating cost-push inflation in Bangladesh because Bangladesh is an import-dependent country and generally cost push inflation comes from a triggering effect through depreciation of Taka that raises the prices of import basket of which food and imported raw materials dominate. Exchange rate of Bangladesh remained remarkably stable during fixed exchange rate regime. But Taka started getting depreciated since May 2003 when floating exchange rate was introduced. It is observed that Taka depreciated by 17 percent within a short period of only three years between 2003/04 and 2006/07 (Appendix: E).

(6) **Market syndicate and Speculation:** In Bangladesh most of the essential food items like rice, wheat, edible oil, onion, garlic, sugar, etc are imported where the private sector plays the dominant role. Since the private sector supplies the bulk share of the market of these imported food items, in order to maximize profit it can frequently manipulate the market by forming “unfair cartel” among the suppliers or importers which creates barriers in the supply chain and

<sup>11</sup> The Financial Express, Tuesday, April 22, 2008, p. 7.

help raise prices. These businessmen create an “oligopolistic market” popularly known in Bangladesh as “syndicate” and thereby dominate the market as price leaders. The best example of market syndicate is the sugar market of Bangladesh where the sugar price increased by 60% within just one month in January 2006, although the sugar price in international market has increased merely around 15 percent<sup>12</sup>.

**(7) Political Instability:** Unstable political situation is also sometimes considered as one of the important factors that worked on the supply side for raising inflationary pressure in Bangladesh. This is particularly true for the period following the assumption of power by the present caretaker government in January 11 2007, which intensified anti corruption and anti hoarding drive that adversely affected normal supply chain of most of the essential items of the country. These activities of the government also have affected business confidence and expectations of the potential investors that also contributed in interrupting normal supply scenario.

We have so far identified seven factors that are considered to be active on the supply side in generating inflation in Bangladesh. This, however, does not imply that demand-related factors are totally inactive or playing virtually no role in this regard. Factors like workers’ remittances from abroad or government expenditure might be also working simultaneously on the demand-side in causing inflation in Bangladesh. But in comparison with the supply-related factors their role in generating inflation in Bangladesh appears to be less prominent.

#### **IV. Conclusions and Policy Prescriptions:**

According to the London based Economist Intelligence Unit (EIU), the economic crisis of Bangladesh will not recover soon, may be inflation will also increase and also GDP growth rate slow down to 5.8%<sup>13</sup>. UN also forecasts that high food price and resulting inflation will continue until at least 2010<sup>14</sup>. This is certainly alarming. In order to insulate the economy from further shocks, price inflation needs to be addressed basically from the supply side. Most of the government measures like OMS (open market sale), VGF (Vulnerable Group Feeding) card, VGD (Vulnerable Group Development), TR (Test Relief) and GR (Gratuitous Relief) program, etc under the ADP (Annual Development Program) are short-term in nature and could not also counteract inflation remarkably. The market monitoring system initiated by the Government also could not produce good result. It is, therefore, proved that long-term measures like increasing production both in the agricultural and industrial sectors are indispensable. Bangladesh is an agro-based country. So, government should put emphasis on agriculture and provide various types of incentives to the farmers especially through providing sufficient and timely supply of agricultural inputs like electricity, fertilizer, diesel and credit at minimal interest rate. The government should also undertake measures so that farmers can receive just prices for their produce. Agricultural research activities should also be undertaken so that sustainable development in agriculture can be ensured. Recently the WB (World Bank) has approved a credit worth \$62.60 million to help the government for improving agricultural productivity and farm income by revitalizing the national agricultural technology system<sup>15</sup>. Government should also take steps

<sup>12</sup> A report prepared by a parliamentary sub-committee of Commerce Ministry mentioned that while the import price after tariff of sugar stood at only BDT 34.56 per kg in March 2006, the market of sugar in April 2006 mounted to a record high of BDT 64 per kg implying the existence of market manipulation. *The Daily Naya Diganta*, Monday, November 27, 2006.

<sup>13</sup> *The Financial Express*, Monday, February 18, 2008, p. 1.

so that new techniques like Goti Urea, Drum seeder etc are popularized that will help increase total production and decrease cost. The government can also build up a buffer stock of food to ensure food security in the coming years because global demand for food would continue to remain high.

For boosting industrial production, government should ensure congenial environment for investment – both economic and political, encourage development of SME (small and medium scale enterprises), lower interest rate, etc. so that the position of long-run aggregate supply curve can be shifted rightward.

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*The Financial Express*

*The Prothom Alo*

*The Daily Naya Diganta*

<sup>14</sup> *The Financial Express*, Saturday, March 8, 2008, p. 1.

<sup>15</sup> *The Financial Express*, Saturday, Feb.9, 2008.



Appendix: A  
**Consumer Price Index (CPI) and Inflation Rate (Point to Point)**

<b>Consumer Price Index (CPI) and Rate of Inflation at National Level (Base : FY96=100)</b>												
Period	Twelve-Month Average Basis						Twelve-Month Point to Point Basis					
	General		Food		Non-food		General		Food		Non-food	
	Index	Inflation	Index	Inflation	Index	Inflation	Index	Inflation	Index	Inflation	Index	Inflation
2004-2005	153.24	6.49	158.08	7.90	147.14	4.33	157.45	7.35	162.51	8.73	151.20	5.32
2005-2006	164.21	7.16	170.35	7.76	156.56	6.40	169.32	7.54	176.82	8.81	159.86	5.73
2006-2007	176.04	7.20	184.16	8.11	165.79	5.90	184.89	9.20	194.19	9.82	173.19	8.34
2006-2007 <sup>R</sup>												
July	165.11	7.09	171.36	7.62	157.31	6.44	169.54	6.77	176.43	7.42	160.88	5.92
August	166.00	6.99	172.39	7.45	158.03	6.43	170.94	6.67	178.42	7.42	161.42	5.64
September	166.93	6.97	173.55	7.55	158.66	6.26	174.00	6.89	182.85	8.25	162.60	4.86
October	167.94	6.98	174.84	7.69	159.28	6.08	177.32	7.31	187.88	9.00	163.53	4.76
November	168.82	6.85	175.89	7.58	159.91	5.88	175.51	6.37	184.44	7.28	163.83	4.87
December	169.65	6.77	176.88	7.57	160.52	5.67	173.18	6.13	184.45	7.08	163.99	4.65
January	170.48	6.72	177.81	7.56	161.17	5.53	172.65	5.94	179.15	6.65	164.72	4.95
2007-2008 <sup>R</sup>												
July	177.47	7.49	185.84	8.45	166.89	6.09	186.66	10.10	196.57	11.42	174.12	8.23
August	178.91	7.78	187.57	8.81	167.97	6.29	188.24	10.12	199.15	11.62	174.31	7.99
September	180.30	8.01	189.26	9.05	168.96	6.49	190.70	9.60	203.14	11.10	174.55	7.35
October	181.79	8.25	191.09	9.29	169.98	6.72	195.15	10.06	209.91	11.73	175.67	7.42
November	183.43	8.65	193.22	9.85	170.97	6.92	195.19	11.21	209.95	13.83	175.72	7.26
December	185.10	9.11	195.039	10.46	171.96	7.13	193.25	11.59	206.54	14.46	175.91	7.27
January	186.75	9.56	197.51	11.08	172.95	7.31	192.39	11.43	204.59	14.20	176.59	7.21

Source: **Bangladesh Bank Monthly Update, March 2008** (Volume 03/2008), p.20

Note: P = Provisional; R = Revised.

Appendix: B  
**Consumer Price Index (CPI) and Inflation Rate**

(1955-96=100)

CPI Classification	2003-04	2004-05	2005-06	2006-07	2007		
					Sep	Oct	Nov
<b>NATIONAL</b>							
General index	143.90	153.23	164.21	176.06	190.70	195.15	195.19
<i>Inflation</i>	5.83	6.48	7.17	7.22	9.60	10.06	11.21
Food index	146.50	158.08	170.34	184.18	203.14	209.91	209.95
<i>Inflation</i>	6.393	7.91	7.76	8.12	11.10	11.73	13.83
Nonfood	141.03	147.14	156.56	165.79	174.55	175.67	175.72
<i>Inflation</i>	4.37	4.33	6.40	5.90	7.35	7.42	7.26
<b>ALL RURAL</b>							
General index	144.46	154.03	165.37	177.42	192.29	197.17	197.20
<i>Inflation</i>	5.77	6.62	7.36	7.30	9.60	10.22	11.19
Food index	145.22	156.82	168.77	182.18	200.33	207.39	207.41
<i>Inflation</i>	6.55	7.99	7.62	7.96	10.68	11.54	13.13
Nonfood	143.18	149.29	159.59	169.33	178.53	179.79	179.84
<i>Inflation</i>	4.47	4.27	6.90	6.10	7.61	7.71	7.55
<b>ALL URBAN</b>							
General index	142.54	151.29	161.39	172.73	186.82	190.23	190.29
<i>Inflation</i>	5.99	6.14	6.68	7.03	9.57	9.64	11.29
Food index	149.60	161.14	174.18	189.06	209.87	216.05	216.13
<i>Inflation</i>	7.80	7.71	8.09	8.54	12.09	12.15	15.50
Nonfood	135.80	141.90	149.20	157.17	164.85	165.63	165.67
<i>Inflation</i>	4.14	4.49	5.14	5.34	6.65	6.67	6.64

Source: Web site of Bangladesh Bureau of Statistics, www.bbs.govt.bd.com

Appendix: C  
**Import of Food and Food Aid of Bangladesh (1972/73 -2006/07)**  
(In “000” MT)

Fiscal Year	Food aid	Import	Total
1972-73	1097	1728	2825
1973-74	631	985	1616
1974-75	837	1631	2468
1975-76	527	909	1436
1976-77	527	268	795
1977-78	875	770	1645
1978-79	1107	48	1155
1979-80	1360	1422	2782
1980-81	751	325	1076
1981-82	1141	114	1255
1982-83	976	868	1844
1983-84	1441	615	2056
1984-85	1306	1287	2593
1985-86	1087	113	1200
1986-87	1425	342	1767
1987-88	1787	1130	2917
1988-89	1356	780	2136
1989-90	949	584	1533
1990-91	1540	37	1577
1991-92	1414	150	1564
1992-93	735	448	1183
1993-94	654	312	966
1994-95	935	1633	2568
1995-96	738	1689	2427
1996-97	618	349	967
1997-98	549	1402	1951
1998-99	1235	4256	5491
1999-00	870	1234	2104
2000-01	491	1063	1554
2001-02	511	1288	1799
2002-03	254	2966	3220
2003-04	289	2499	2788
2004-05	290	3084	3374
2005-06	194	2368	2562
2006-07	90	2330	2420

Source: **Bangladesh Economic Review**, 2006, p.13  
(Bangla version, 2007) and P.264 (English version)

Appendix: D  
**Import of Crude Petroleum Commodities**

<b>Fiscal Year</b>	<b>Quantity (Metric Ton)</b>	<b>C &amp; F price (Million US Dollar)</b>	<b>Creore Tk.</b>
1990-91	1181652	215.36	783.04
1991-92	1017764	147.63	570.4
1992-93	1128657	162.52	678.17
1993-94	1239038	149.94	599.2
1994-95	1363888	181.83	733.88
1995-96	1140334	153.42	639.23
1996-97	1239699	203.69	875.31
1997-98	1144048	151.56	714.1
1998-99	955874	98.1	473.72
1999-00	1236049	218.68	1110.96
2000-01	1337121	290.73	1598.6
2001-02	1224707	220.19	1277.78
2002-03	1331003	289.3	1693.03
2003-04	1252424	314.12	1848.43
2004-05	1063208	364.01	2261.98
2005-06	1253285	573.65	3901.16
2006-07 (Provisional)	1168349	583.76	4643.22

Source: **Bangladesh Economic Review 2007**.p.130

Appendix: E  
**Average Rate of Foreign Exchange with US Dollar**

<b>Fiscal year</b>	<b>Taka-Dollar average exchange rate</b>
1971-72	7.3
1972-73	7.8763
1973-74	7.9664
1974-75	8.8752
1975-76	15.0541
1976-77	15.426
1977-78	15.1168
1978-79	15.2231
1979-80	15.49
1980-81	16.2586
1981-82	20.0652
1982-83	23.7953
1983-84	24.9437

Fiscal year	Taka-Dollar average exchange rate
1984-85	25.9634
1985-86	29.8861
1986-87	30.6294
1987-88	31.2422
1988-89	32.1399
1989-90	32.9214
1990-91	35.6752
1991-92	38.1453
1992-93	39.1395
1993-94	40.0009
1994-95	40.2005
1995-96	40.8365
1996-97	42.7008
1997-98	45.4563
1998-99	48.0644
1999-00	50.3112
2000-01	53.9592
2001-02	57.4347
2002-03	57.9
2003-04	58.9353
2004-05	61.3939
2005-06	67.0797
2006-07	69.0318

Source: *Bangladesh Economic Review* 2007.p.284