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**TRADE LIBERALIZATION,
PRIVATE SECTOR IMPORTS
AND
NATIONAL FOOD SECURITY
IN BANGLADESH**

**PAUL A. DOROSH
K.A.S. MURSHID**

JUNE 2001

FMRSP Synthesis Report No. 2

FMRSP Bangladesh
Food Management & Research Support Project
Ministry of Food, Government of the People's Republic of Bangladesh

International Food Policy Research Institute

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FMRSP Bangladesh

Food Management & Research Support Project
Ministry of Food, Government of the People's Republic of Bangladesh



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C

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	i
1.INTRODUCTION	1
2.THE RICE ECONOMIES OF BANGLADESH AND INDIA	3
RICE PRODUCTION, MARKETS AND CONSUMPTION	3
GOVERNMENT POLICY AND PUBLIC FOODGRAIN DISTRIBUTION..	7
RICE TRADE BY BANGLADESH AND INDIA	10
3.ORGANIZATION AND CONDUCT OF THE RICE IMPORT TRADE	18
RICE IMPORTING FIRMS	18
COSTS OF TRADE.....	19
RISKS IN THE RICE IMPORT TRADE.....	21
PRIVATE STORAGE AND CAPITAL.....	22
PORTS AND INFRASTRUCTURE	23
4.RICE TRADE BETWEEN INDIA AND BANGLADESH	24
PRIVATE IMPORTS AND FOOD SECURITY: IMPLICATIONS OF TRADE WITH INDIA.....	27
THE RELIABILITY OF THE INDIAN RICE MARKET.....	32
PRIVATE RICE IMPORTS SINCE 1999.....	33
TRADE RESTRICTIONS ON RICE IMPORTS.....	34
5.IMPLICATIONS FOR BANGLADESH FOOD POLICY	36
REFERENCES	38

LIST OF TABLES AND FIGURES

Table 2.1 — The Bangladesh and India Rice Economies, 1998/99	4
Table 2.2 — Rice Area, Yield and Production in India by State and Season (Average 1992/93 - 1994/95)	6
Table 2.3 — Public Foodgrain Distribution in Bangladesh, 1988/89 – 2000/2001p	8
Table 2.4 — Rice Production, Trade and Stock Changes in India, 1980/81 - 1997/98.....	11
Table 2.5 — India Total Rice Exports, 1992/93 - 1998/99	12
Table 2.6 — Estimated Volume of India's Non-basmati Rice Exports by Destination, 1992/93 - 1998/99	14
Table 2.7 — Bangladesh Foodgrain Trade, 1980/81 - 1998/99	15
Table 2.8 — Bangladesh Rice Imports by Source, 1994/95 - 1997/98	16
Table 3.1 — Distribution of LCs by Size Groups and Cash Margin Requirements.....	20
Table 4.1 — Private Sector Rice Imports, January through September 1998.....	28
Table 4.2 — Total Production of Aman and Kharif Rice In Bangladesh and India and Percentage Deviation from Trend, 1981-99	31
Figure 4.1 — Rice Prices and Quantity of Private Rice Imports in Bangladesh, 1997-2001	25
Figure 4.2 — Rice Prices and Quantity of Private Rice through Sea Ports Imports in Bangladesh, 1997-2001.....	35

1. INTRODUCTION

Economic theory and empirical modeling suggest that a liberalized trade regime can help stabilize prices by increasing supplies through imports in times of domestic production shortfalls and by providing additional markets for output through exports following bumper harvests. Relying on international trade to help stabilize prices in this manner can reduce the need for large government stocks and lower the costs of price stabilization (Pinckney, 1988; Goletti, 1994).

In this paper we describe how private rice imports have made a major contribution to national food security in Bangladesh since the liberalization of the rice trade in early 1994. Following major production shortfalls in late 1997 and again in the second half of 1998, Bangladesh domestic rice prices rose rapidly to levels equal to import parity with India, providing the financial incentives for several million metric tons of rice imports. By encouraging this trade, the Government of Bangladesh was able to augment domestic rice supplies quickly and stabilize market prices.

This paper synthesizes the results of analysis of the private sector rice trade presented in Dorosh (1999a), (1999b), (1999c) and Murshid (1999). We present evidence on the structure of the Indian foodgrain market (the most important source of Bangladesh rice imports in the late 1990s) and the structure of the Bangladesh import trade (particularly the degree of competition among traders) to show why private imports stabilized market prices in Bangladesh in 1998 and 1999. We also discuss the correlation in production shortfalls in Bangladesh and India, along with implications of importing rice from other sources, suggesting that the benefits of a liberalized trade regime for national food security are not tied to conditions unique to 1998 and 1999.

Chapter 2 of this paper summarizes the basic characteristics of the rice economies and trade policies of Bangladesh and India. Chapter 3 then presents survey

data on the structure of the private sector rice trade based on a trader survey in late 1998 (Murshid, 1999). The levels of imports and the contribution of this trade to price stabilization in recent years are discussed in Chapter 4. Conclusions and policy implications are presented in Chapter 5.

2. THE RICE ECONOMIES OF BANGLADESH AND INDIA

The rice economy of Bangladesh shares much in common with that of India, particularly the eastern states of West Bengal, Bihar, Orissa and Andhra Pradesh. At the national level, however, rice plays a more dominant role in the food system of Bangladesh than it does in India, with rice accounting for 76.1 percent of calories consumed in Bangladesh, but only 30.5 percent of calories consumed in India. Nonetheless, given the nearly eight-fold difference in population between the two countries (992.7 million people in India compared with 134.6 million people in Bangladesh in 1997/98), total rice consumption in India is 3.3 times greater than in Bangladesh.

India's external trade in non-basmati rice up until the mid-1990s was small, and generally limited to public sector exports or imports. Private sector exports were liberalized in India in October 1994, though still subject to export quotas. Non-basmati rice exports surged to 4.54 million MTs in 1995-96, and averaged 3.17 million MTs per year from 1995-96 to 1998-99. Bangladesh was the leading importer in this period, with 26.4 percent of the total value of non-basmati exports; Africa's total share was 27 percent. Bangladesh, in contrast, has been a consistent net importer of rice throughout the last two decades. In the 1980s, rice imports by the public sector averaged 266 thousand MTs per year. During the 1990s, rice imports fell to an average of 133 thousand MTs. As a result of the trade liberalization in India, a depreciation of the rupee, and lower transport costs, India replaced Thailand as the major source of Bangladesh rice imports.

RICE PRODUCTION, MARKETS AND CONSUMPTION

No single foodgrain dominates India's food consumption as does rice in Bangladesh. Rice accounts for 76.1 percent of calories consumed in Bangladesh, but

Table 2.1 — The Bangladesh and India Rice Economies, 1998/99

	(1) Bangladesh	(2) India	(3) Difference (1) - (2)
Population (million)	134.6	992.7	-858.1
Rice Production ('000 MTs)	19,905	88,244	-68,339
Aman (Kharif) ('000 MTs)	7,736	71,840	-64,104
Boro/Aus (Rabi) ('000 MTs)	12,169	11,000	1,169
Imports ('000 MTs)	2,205	64	2,141
Exports ('000 MTs)	0	2576	-2576
Net Imports ('000 MTs)	2,205	-2,512	4,717
Net Imports/Production (%)	11.1%	-2.8%	13.9%
Government Rice Stocks ('000 MTs)	695	11,658	-10,963
Government Rice Stocks/Production (%)	3.5%	13.2%	-9.7%
Rice Consumption (kg/cap/year)	168	74.2	94.0
Calorie Share (percentage)	76.1%	30.5%	45.6%

Note: ^a FAO Food Balance Sheet, 1999.

Sources: (1) Bangladesh data from, FPMU, 2000, except for rice consumption and calorie share.

(2) India data from FAO Food Balance Sheet, 1999, and CMIE, October 1999.

(3) Dorosh (1999a)

only 30.5 percent of calories consumed in India (Table 2.1). In India, wheat (20.4 percent) and other foodgrains (sorghum, millet and maize, 9.4 percent) are the major foodgrains in substantial regions of the country. Thus, on a national basis, though rice is the leading food in India in terms of calories consumed, annual rice consumption was only 74.2 kilograms per capita in 1998/99, less than half of per capita rice consumption in Bangladesh. Nonetheless, given the nearly eight-fold difference in population between the two countries (992.7 million people in India compared with 134.6 million people in Bangladesh in 1998/99), total rice consumption in India is 3.3 times greater than in Bangladesh, and total wheat consumption is 21 times greater than in Bangladesh.

Nearly 90 percent of India's rice is produced in the kharif (aman) season (Table 2.1). Thus, during this season, India's production of rice is about 72 million metric tons (milled equivalent); nearly nine times that of Bangladesh (about 8 million tons).

In contrast, India's rice production during the rabi season is approximately the same magnitude as in the corresponding boro and aus seasons in Bangladesh (11 million tons in India and 12.17 million tons in Bangladesh in 1998/99). Thus, Bangladesh rice production is only a small share of the total regional production of rice during the aman (kharif) season, while it is approximately 86 percent of the regional production in the boro/aus (rabi) season.

Rice production in India is concentrated in the Ganges river basin, Punjab, and the southern states of Andhra Pradesh and Tamil Nadu, (Table 2.2). During the rabi (boro/aus) season, rice production in India is much more concentrated, however, with two states, Andhra Pradesh and West Bengal, together accounting for 65.9 percent of production. Overall, the state of West Bengal produces about 12.6 million metric tons of rice annually, (equal to 15.5 percent of India's production and about two-thirds of Bangladesh rice production). Assam, which borders Bangladesh on the north, has an annual production of about 3.3 million metric tons. The two other states bordering

Table 2.2 — Rice Area, Yield and Production in India by State and Season (Average 1992/93 - 1994/95)

States	Production ('000 MTs)			Area ('000 Ha)			Yield Rate (MT/Ha)		
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total
Andra Pradesh	6288	2904	9192	2564	991	355	2.4	2.9	2.59
Arunachal Pradesh	123		123	119		11	1.0	n.a.	1.04
Assam	3098	225	3323	2364	136	250	1.3	1.6	1.33
Bihar	5111	195	5306	4553	101	465	1.1	1.9	1.14
Gujarat	870		870	595		59	1.4	n.a.	1.46
Haryana	2051		2051	750		75	2.7	n.a.	2.73
Himachal Pradesh	108		108	82		8	1.3	n.a.	1.32
Jammu & Kashmir	508		508	273		27	1.8	n.a.	1.86
Karnataka	2308	841	3148	1032	301	133	2.2	2.7	2.36
Kerala	866	151	1017	447	6	51	1.9	2.1	1.97
Madhya Pradesh	5748		5748	5144		514	1.1	n.a.	1.12
Maharashtra	2355	60	2415	1512	3	154	1.5	1.9	1.56
Manipur	321		321	158		15	2.0	n.a.	2.04
Meghalaya	117		117	104		10	1.1	n.a.	1.13
Mizoram	8	9	94	60	3	6	1.4	2.4	1.47
Nagaland	177		177	135		13	1.3	n.a.	1.31
Orissa	5636	483	6119	4243	242	448	1.3	2.0	1.36
Punjab	7449		7449	2174		217	3.4	n.a.	3.43
Rajasthan	164		164	147		14	1.1	n.a.	1.11
Tamil Nadu	6099	981	7080	1955	321	227	3.1	3.0	3.11
Tripura	378	97	475	202	5	25	1.8	1.9	1.88
Uttar Pradesh	10006	8	10014	5419	3	542	1.8	2.4	1.85
West Bengal	8988	3019	12007	4798	984	578	1.8	3.0	2.08
Others	268	14	282	120	6	12	2.2	2.3	2.24
All India	69122	8986	78108	38948	3238	4218	1.7	2.7	1.85
Border States ^a	12666	3350	16015	7527	1174	870	1.6	2.8	1.84

Source: Directorate of Economics and Statistics, Department of Agriculture and Co-operation, MOA, GOI, Dorosh (1999a)

Notes: n.a. indicates not available.

^a States bordering Bangladesh : West Bengal, Assam, Meghalaya, Mizoram and Tripura.

Bangladesh (Meghalaya and Tripura) produce little rice, less than 0.7 million metric tons in total. Average rice yields in West Bengal, (2.18 metric tons/hectare in 1996/97, rice equivalent) are 17 percent higher than in Bangladesh (1.86 metric tons/hectare or 0.75 tons per acre in 1996/97). Yields in the Rajshahi division in northwest Bangladesh, where HYV's have been widely adopted, are nearly equal to those in West Bengal, however.

GOVERNMENT POLICY AND PUBLIC FOODGRAIN DISTRIBUTION

The public foodgrain distributions in India and Bangladesh share much in common, in part a carry-over from their common colonial experience. In both countries, foodgrain is typically procured at fixed prices. In Bangladesh, most government procurement is done through purchases of grain directly from farmers or traders at the fixed procurement price.¹ In India, fixed procurement prices and state procurement targets for rice and wheat are set annually by the central government, and state government institutions or cooperatives procure grain on behalf of the Food Corporation of India (FCI). Non-basmati rice is procured through a levy on rice millers that involves compulsory sales at below-market prices. For example, the procurement price of paddy in rice equivalent terms was on average only 33 percent below the wholesale market price of rice in Dehli from 1995-97, allowing little margin for milling and marketing costs (Dorosh, 1999a).

Until Bangladesh instituted major reforms in the early 1990s, subsidized sales of grain through ration systems were major distribution channels in both countries. In Bangladesh, between 1988/89 and 1990/91, on average, 612 thousand MTs of rice and

¹ Local tenders have also been used in recent years, particularly when fixed-price procurement has failed to meet government targets.

Table 2.3 — Public Foodgrain Distribution in Bangladesh, 1988/89 – 2000/2001p

(in 000 MTs)

Channel	1988/89			1989/90			1990/91			1991/92			1992/93			1993/94		
	Rice	Wheat	Total															
SR	0	203	203	7	149	156	46	189	235	0	169	169	0	56	5	0		0
P&PR	182	151	333	386	4	432	479	0	479	215		217	0	0	0	0		0
Essential Programs	8	5	137	95	4	141	86	5	143	90	6	150	93	62	155	97	6	162
Other Priority	9	330	423	62	217	279	75	132	207	60	150	210	4	11	1	3		6
Large Employee Industries	0	4	4	1	3	3	9	3	4	30	2	58	0	13	1	1	1	1
Open Market Sales	167	125	292	16	3	4	74	1	8	274		275	7	65	7	172	12	296
Fair Price Cards																		
Flour Mills	0	8	8	0	168	168	4	278	282	0	254	254	0	87	8	0	1	1
PC	0		0	0	111	111	0	8	8	0	8	88	0	40	4	0		0
MO	0		0	0	0	0	0	0	0	0		0	7	11	1	0		0
FS	0		0	3	0	3	4	7	1	0		0	0	0	0	0		0
Other/Auction	0		0	0	0	0	0	0	0	0		0	0	0	0	6	2	3
Ration	523	992	151	570	802	137	777	79	157	669	752	1421	111	345	456	279	25	531
FFW	2	590	611	28	429	457	38	420	458	12	485	497	205	163	368	1	42	425
Test Relief	141	168	309	71	7	148	70	4	115	52	145	197	104	12	116	13	8	101
VGD	5	501	506	6	181	187	86	139	225	26	204	230	56	77	133	0	16	167
Gratuitous Relief	0		0	0	0	0	0	0	0	0		0	0	0	0	0		0
FFE	0		0	0	0	0	0	0	0	0		0	0	0	0	0	7	7
Vulnerable Group Feeding																		
Other	0		0	0	0	0	0	0	0	0		0	0	0	0	57	1	7
Relief	167	125	142	105	687	792	194	604	798	90	834	924	365	252	617	71	77	845
Total	690	225	294	675	148	216	971	140	237	759	158	2345	476	597	107	350	102	1376

Table 2.3 — Public Foodgrain Distribution in Bangladesh, 1988/89 – 2000/2001p (Continued)

(in 000 MTs)

Channel	1994/95			1995/96			1996/97			1997/98			1998/99			1999/2000			2000/01P		
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total												
SR	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
P&PR	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Essential Programs	100	72	17	115	8	195	11	85	200	118	8	201	127	85	21	123	87	210	125	9	224
Other Priority	5	4		5	1	2		10	15	6		31	7	12	1	8	26	3	1	1	25
Large Employee Industries	2	15	1	0	2	2		15	15	0	1	13	0	14	1	0	11	1		1	15
Open Market Sales	156	70	22	404	0	404		0	0	163		163	1	4	1	0	0	0			0
Fair Price Cards													0	0		0.89	34.9	35.79		3	30
Flour Mills	0	33	3	0	1	1		45	45			8				0		0			0
PC	0	47	4	0	0	0		0	0			0				0	0	0			0
MO	0	0		0	0	0		0	0			0				0	0	0			0
FS	0	0		0	0	0		0	0			0				0	0	0			0
Other/Auction	0	4		0	0	0		0	0			0				0	0	0			0
Ration	263	245	50	524	125	649	12	155	275	287	110	397	144	116	26	131.89	158.9	290.79	135	15	294
FFW	7	493	50	9	468	477	12	399	525	3	466	469	8	690	69	334	42	754	278	38	683
Test Relief	9	118	12	15	8	100	6	35	100	1	104	119	3	53	9	62	62	124	6	5	110
VGD	3	181	18	0	173	173	8	95	175	100	129	229	1	193	20	62	155	217	6	12	184
Gratuitous Relief	0	0		0	6	6	4	0	48	9		18	6	8	7	8	13	2	3		38
FFE	5	168	17	0	238	238	20	45	250	7	270	341	6	227	28	112	174	286	150	20	350
Vulnerable Group Feeding													168	297	46	127	22	149	188	2	209
Other	4	39	8	45	5	9	4	6	49	4		50	3	19	5	39	19	5	4	1	59
Relief	6	999	106	69	107	114	56	580	1147	241	983	1224	386	1488	187	744	865	160	814	79	1613
Total	329	1244	157	593	120	179	68	735	1422	529	109	1621	530	1603	213	875.89	1023.9	1899.8	949	95	1907

Note: 2000/2001p is based on May.' 01 Analysis

Source: Directorate of Food, Dorosh, Shahabuddin, Aziz and Farid (2001)

wheat were sold through the Rural Rationing and the urban Statutory Rationing channels, 26.7 percent of total foodgrain distribution (which averaged 2.294 million MTs). Total sales channels, including open market sales and other programs, accounted for 63.5 percent of distribution, with relief and food-for-work channels accounting for the other 36.5 percent of distribution in these years (Table 2.3). Reforms in 1991/92 and 1992/93 closed the Rural Rationing and Statutory Rationing channels, in an effort to improve the targeting of foodgrain distribution, as well as to reduce fiscal costs (Ahmed, Haggblade and Chowdhury, forthcoming). As a result, both the percentage and total amount of foodgrain distributed through targeted and relief channels increased in the mid- to late-1990s, averaging 1.166 million MTs per year from 1995/96 to 1997/98, 72.8 percent of the 1.603 million MT total annual average distribution during these three years.

In India, rationed sales remain the major distribution channel. State governments are responsible for distribution of the foodgrain to ration cardholders through fair-price shops; they also determine the size of the ration, price and target group. These distribution programs were not well targeted to the poor and resulted in major costs to the government (Ahluwalia, 1993; Radhakrishna and Subbarao, 1997, pp. 23, 84). In an effort to reduce costs, reforms in the late 1990s included differential sales prices and ration sizes for households Above the Poverty Line (APL) and Below the Poverty Line (BPL).

RICE TRADE BY BANGLADESH AND INDIA

India's trade in non-basmati rice up until the mid-1990s was small, and generally limited to public sector exports or imports. Total rice exports in the 1980s averaged only 415 thousand MTs per year, with basmati rice accounting for the bulk of these exports (Table 2.4). In three years, 1984-85, 1988-89 and 1989-90, over 500 thousand MTs of rice were imported. In the early 1990s, total rice export trade increased somewhat to reach 903 thousand MTs in 1993-94. Non-basmati exports accounted for 42.3 percent of

Table 2.4 — Rice Production, Trade and Stock Changes in India, 1980/81 - 1997/98

Year	Production (^{'000} MT)	Imports (^{'000} MT)	Stock Changes (^{'000} MT)	Exports (^{'000} MT)	Total Supply (^{'000} MT)	Net Imports/ Total Supply (Percent)
1980/81	53,568	4	-7,006	480	46,086	-1.0%
1981/82	53,282	52	2,080	970	54,445	-1.7%
1982/83	47,205	21	7,037	538	53,724	-1.0%
1983/84	60,062	208	-10,118	231	49,921	0.0%
1984/85	58,398	501	-538	199	58,161	0.5%
1985/86	63,910	52	-6,421	316	57,225	-0.5%
1986/87	60,550	22	3,244	254	63,563	-0.4%
1987/88	56,921	26	6,733	390	63,290	-0.6%
1988/89	70,948	706	-10,287	351	61,016	0.6%
1989/90	73,577	593	-3,377	424	70,370	0.2%
1990/91	74,382	146	-3,155	507	70,867	-0.5%
1991/92	74,732	100	3,478	680	77,630	-0.7%
1992/93	72,704	176	4,786	582	77,083	-0.5%
1993/94	80,440	139	-1,398	770	78,411	-0.8%
1994/95	81,080	63	-1,155	903	79,084	-1.1%
1995/96	79,668	53	4,595	4,927	79,389	-6.1%
1996/97	81,374	53	6,503	2,520	85,410	-2.9%
1997/98	83,508	33	5,770	2,142	87,170	-2.4%
1997/99	85,056	38	3,141	3,523	84,712	-4.1%
1999/2000	88,244	64	-6,072	2,576	79,660	-3.2%
Average (1980/81 - 1989/90)	59,842	219	-1,865	415	57,780	-0.3%
Average (1990/91 - 1999/2000)	80,119	87	1,649	1,913	79,942	-2.3%

Source: Food Balance Sheets, FAO, Dorosh (1999a)

Table 2.5 — India Total Rice Exports, 1992/93 - 1998/99

	1992-93	1993-94	1994-9	1995-9	1996-97	1997-98	1998-9	Average 1995/96-1998/99
Total Exports (MTs)	580,409	770,000	890,62	4,914,013	2,512,197	2,389,066	4,940,77	2,459,342
Non-Basmati	255,619	242,773	448,49	4,540,699	1,989,040	1,795,743	4,340,17	3,166,414
Basmati	324,790	527,227	442,12	373,31	523,157	593,323	600,60	522,599
Total Exports (Rs.lakh)	97,560	128,672	120,57	456,80	317,236	337,100	620,08	288,537
Non-Basmati	17,496	22,546	34,04	371,74	192,472	168,538	433,45	291,552
Basmati	80,064	106,126	86,53	85,067	124,764	168,562	186,62	141,255
Average Price (Rps/kg) ^a								
Non-Basmati	6.84	9.29	7.5	8.1	9.68	9.39	9.9	9.3
Basmati	24.65	20.13	19.57	22.79	23.85	28.41	31.07	26.5
Exchange Rates								
Rps/\$	26.41	31.36	31.40	33.46	35.50	37.12	42.08	37.0
Tk/\$	39.00	39.84	40.24	40.47	42.22	44.71	47.59	29.2
Average Price (\$/MT)								
Non-Basmati	259.15	296.10	241.7	244.66	272.57	252.84	237.33	251.9
Basmati	933.35	641.78	623.3	680.98	671.77	765.35	738.43	714.1

Note: ^a using CMIE's non-basmati export total of 565,487 MTs, the average price would be 3.99 Rps / Kg, but the average price for 1993-94 is calculated using CMIE's non-basmati export value of 22,546 lakh Rp divided by the total export figure from the FAO Food Balance Sheet of 770,000 MTs less CMIE's basmati rice exports of 527,227 MTs.

Source: Trade data in rupees and metric tons from CMIE, Agriculture, page 401, Sept 1999.
Dorosh (1999a)

the total volume of rice trade from 1992-93 to 1994-95, with exports ranging from 243 thousand to 228 thousand MTs, (Table 2.5).

Private sector exports were liberalized in India in October 1994, though still subject to export quotas. At the same time, FCI stocks of rice soared from 8.5 million MTs of rice on January 1, 1993 to 17.4 million MTs on January 1, 1995, as successive good harvests and increases in procurement combined with a reduction in offtake caused by an increase in sales prices. In order to dispose of aging rice stocks, FCI began exporting large quantities of rice, and as a result, non-basmati rice exports (both public and private) surged to 4.54 million MTs in 1995-96.² Thereafter, non-basmati rice exports continued at high levels, averaging 3.17 million MTs per year from 1995-96 to 1998-99. According to Government of India data, Bangladesh was the leading importer in this period, with 26.4 percent of the total value of non-basmati exports, followed by South Africa (10.7 percent) and Indonesia (7.3 percent) (Table 2.6). In all, Africa's share of India's exports was 27 percent. Much of these exports were lower quality, broken rice.

A major change in macro-economic policy in India, the gradual liberalization of trade and a depreciation of the rupee, also played a major role in increasing the financial returns from exports of rice. Between 1990 and 1996 the rupee was devalued by 50 percent relative to the U.S. dollar, from 17.50 Rps/\$ to 35.43 Rps/\$ (IMF, various years). Given inflation in India of 74.6 percent, and a 9.8 percent increase in the international price of traded goods (here proxied by the U.S. wholesale price index), the real exchange rate depreciation over this period was approximately 27 percent. This real depreciation increased the competitiveness of producers of tradeable goods in India, including rice producers.

² India's non-basmati exports in the mid-1990s were discounted 20 percent discount (about \$60/MT) relative to Thai export prices. (World Bank, 1996, p.91).

Table 2.6 — Estimated Volume of India's Non-basmati Rice Exports by Destination, 1992/93 - 1998/99*

	1992-93	1993-9	1994-9	1995-96	1996-9	1997-9	1998-99	Average 1995/96 - 1998/9
World	255,619	242,77	448,495	4,540,699	1,989,040	1,795,743	4,340,175	3,166,414
Bangladesh	0		116,830	1,160,456	150,14	383,49	2,213,088	976,79
South Africa	0	9	1,792	371,351	195,63	259,49	515,819	335,57
Nigeria	0		0	24	10,469	126,95	220,676	89,530
Cote d'Ivoire	0		0	120,278	3,214	980	158,686	70,789
Saudi Arabia	29,352	60,16	119,662	140,872	262,28	112,66	150,455	166,56
Russia	2,776		1,897	128,963	328,11	163,63	140,823	190,38
Somalia	0	42	1,370	8,562	83,283	67,221	112,125	67,798
UAE	21,375	46,94	16,282	133,922	84,534	65,208	80,835	91,124
Mali	0		0	14,487	0		70,461	21,237
Iran	9,935	43,84	7,522	121,719	67,482	41,756	69,560	75,129
Senegal	10,797		5,533	113,963	36,500	58,367	66,036	68,717
Philippines	0		0	58,692	60,806		55,021	43,630
Yemen	29		0	33,456	20,927	58,367	37,699	37,612
Kenya	3,419	10	52,336	373,488	67,710	3,090	36,968	120,31
Malaysia	40,163		0	1,026	4	6	31,851	8,246
Benin	0		0	11,457	0	6,276	21,057	9,698
Poland	2,352		0	22,841	11,967	2,472	20,987	14,567
Singapore	438	7,850	12,883	7,756	8,123	20,255	20,507	14,160
Mauritius	0		6,178	10,908	28,481		18,905	14,573
Indonesia	0		18,297	1,016,042	475		18,664	258,79
Japan	73	3	0	3,603	2	4,411	18,654	6,672
Seychelles	0		0	3,164	1,292	2,557	18,584	6,399
Morocco	0		0	3,506	124	24,336	18,354	11,580
Sri Lanka	30,550	25,04	2,819	73	198,62	134,82	17,252	87,694
Ukraine	0	38	40	13,949	19,852	34,916	15,921	21,159
Tanzania	13,967	9	0	26,921	8,608	3,122	15,590	13,560
Angola	7,816		0	25,773	10,117		14,769	12,665
South Korea	0		0	66,252	744	2,387	13,217	20,650
Gambia	0		0	1,661	0		11,996	3,414
Others	82,577	57,78	85,057	545,532	329,47	218,88	135,616	307,37
Sub-Total Africa^a	35,999	72	67,208	1,085,543	445,43	552,39	1,300,025	845,85
Average Price (Rp/Mt)^b	6.84	9.2	7.59	8.19	9.68	9.3	9.99	9.31
Share of Total Export (%)								
Bangladesh	0.0	0.0	26.0	25.6	7.5	21.	51.0	26.4
Africa ^a	14.1	0.3	15.0	23.9	22.4	30.	30.0	26.8
Others named above	53.6	75.	40.0	38.5	53.5	35.	15.9	35.9
Others	32.3	23.	19.0	12.0	16.6	12.	3.1	11.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: ^a Calculated using the value of exports by destination and the average price of total annual non-basmati rice exports.

^b Average price for 1993-94 is calculated using CMIE's non-basmati export value of 22,546 lakh Rp divided by the total export figure from the FAO Food Balance Sheet of 770,000 MTs less CMIE's basmati rice exports of 527,227 MTs.

^a Includes Mauritius and Seychelles.

Source: CMIE, 1999; Dorosh (1999a),

Table 2.7 — Bangladesh Foodgrain Trade, 1980/81 - 1998/99

Year	Food Aid			Commercial			Public Import			Private Import			Total Import		
	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total	Rice	Wheat	Total
1980/81	19	732	751	65	260	325	84	992	1076	0	0	0	84	992	1076
1981/82	30	1111	1141	114	0	114	144	1111	1255	0	0	0	144	1111	1255
1982/83	131	845	976	186	682	868	317	1527	1844	0	0	0	317	1527	1844
1983/84	117	1324	1441	62	553	615	179	1877	2056	0	0	0	179	1877	2056
1984/85	125	1181	1306	570	717	1287	695	1898	2593	0	0	0	695	1898	2593
1985/86	27	1060	1087	10	103	113	37	1163	1200	0	0	0	37	1163	1200
1986/87	108	1317	1425	150	192	342	258	1509	1767	0	0	0	258	1509	1767
1987/88	192	1595	1787	398	732	1130	590	2327	2917	0	0	0	590	2327	2917
1988/89	40	1316	1356	21	759	780	61	2075	2136	0	0	0	61	2075	2136
1989/90	41	908	949	258	326	584	299	1234	1533	0	0	0	299	1234	1533
1990/91	10	1530	1540	0	37	37	10	1567	1577	0	0	0	10	1567	1577
1991/92	39	1375	1414	0	150	150	39	1525	1564	0	0	0	39	1525	1564
1992/93	19	716	735	0	93	93	19	809	828	0	355	355	19	1164	1183
1993/94	0	654	654	0	0	0	0	654	654	74	238	312	74	892	966
1994/95	0	935	935	230	390	620	230	1325	1555	583	430	1013	813	1755	2568
1995/96	1	737	738	487	352	839	488	1089	1577	650	200	850	1138	1289	2427
1996/97	10	608	618	9	103	112	19	711	730	15	222	237	34	933	967
1997/98	0	549	549	0	650	650	0	1199	1199	993	142	1135	992.6	1341	2334
1998/99	59	1174	1233	334	429	763	393	1603	1996	2663	805	3468	3056	2408	5464
Average (1980/81 - 89/90)	83	1139	1222	183	432	616	266	1571	1838	0	0	0	266	1571	1838
Average (1990/91 - 98/99)	15	920	935	118	245	363	133	1165	1298	553	266	819	686	1430	2117

Source: Directorate of Food and NBR, Dorosh (1999a)

Table 2.8 — Bangladesh Rice Imports by Source, 1994/95 - 1997/98

Country	Imports ('000 MTs)				Total Import ('000 MTs) (1994/95 - 1997/98)	Share of Total Imports (%) (1994/95 - 1997/98)
	1994/95	1995/9	1996/9	1997/98		
India	575.19	1069.33	145.18	1119.95	2909.65	75.84%
Pakistan	442.12	39.87	16.60	23.82	522.41	13.62%
United States	30.24	56.70	14.77	0.05	101.77	2.65%
Myanmar	90.12	0.00	0.0	1.86	91.98	2.40%
Thailand	46.87	19.33	15.11	0.00	81.31	2.12%
Other Countries ^a	26.52	17.44	0.0	0.00	43.96	1.15%
Canada	0.00	24.48	0.0	0.00	24.48	0.64%
Vietnam	0.00	0.00	0.0	18.76	18.76	0.49%
Mozambique	0.00	0.00	0.0	14.53	14.53	0.38%
Australia	0.00	10.36	0.0	0.03	10.39	0.27%
Nepal	0.00	0.00	0.0	6.86	6.86	0.18%
Japan	4.38	0.01	0.0	0.00	4.46	0.12%
Singapore	0.00	0.02	2.7	0.00	2.77	0.07%
U.K.	0.93	0.00	0.0	0.00	0.93	0.02%
Italy	0.00	0.65	0.0	0.00	0.65	0.02%
Saudia Arabia	0.61	0.00	0.0	0.02	0.63	0.02%
Bhutan	0.00	0.57	0.0	0.00	0.57	0.01%
Sri Lanka	0.00	0.00	0.0	0.26	0.26	0.01%
Other Ocenia	0.00	0.00	0.0	0.03	0.03	*
China	0.00	0.00	0.0	0.00	0.02	*
Chile	0.00	0.02	0.0	0.00	0.02	*
Oman	0.00	0.00	0.0	0.00	0.01	*
United Arab	0.00	0.00	0.0	0.01	0.01	*
Hong Kong	0.00	0.00	0.0	0.00	0.00	*
Philippines	0.00	0.00	0.0	0.00	0.00	*
Netherlands	0.00	0.00	0.0	0.00	0.00	*
Germany	0.00	0.00	0.0	0.00	0.00	*
Total	1216.99	1238.75	194.54	1186.17	3836.45	1.0

Notes: ** indicates less than 0.01 percent.

^a countries not specified in 1994/95 and/or 1995/96.

Source: Foreign Trade Statistics of Bangladesh, BBS, Dorosh (1999a)

Bangladesh, in contrast, has been a consistent net importer of rice throughout the last two decades, though as in India, substantial increases in rice production have reduced net imports over time. In the 1980s, rice imports, (permitted only by the public sector) averaged 266 thousand MTs per year (Table 2.7). During the 1990s, rice imports fell to an average of 133 thousand MTs, though there have been substantial year-to-year fluctuations.

Throughout the 1980s and early 1990s, Thailand was the major source of Bangladesh rice imports. However, the 1994 liberalization that permitted private sector imports coincided with India's rice trade liberalization and build-up of public rice stocks and dramatically changed the rice import trade. India, which enjoys the advantages of lower transport costs, reduced time of delivery (for private sector imports) and the possibility of smaller import contracts delivered by truck, quickly replaced Thailand as the major source of imports of Bangladesh. In 1996/97 and 1997/98, 91.6 percent of Bangladesh rice imports came from India, with the next largest import sources, Pakistan, Vietnam and Thailand, each accounting for only 1-3 percent of the trade, (Table 2.8).

3. ORGANIZATION AND CONDUCT OF THE RICE IMPORT TRADE

The benefits of a liberalized trade regime in terms of food security are dependent on the efficiency of the private sector import trade. In this section, we present evidence from a survey of 40 Bangladesh rice importers conducted in late 1998 (Murshid, 1999) that indicates that the import market functioned well during this crucial period. Nonetheless, several institutional problems and inadequacies in infrastructure increased risk and lessened efficiency of the private import trade.

Rice Importing Firms

Though private sector rice imports began on a large scale only in 1995, (following the liberalization of the private import trade), most rice importing firms surveyed also imported other commodities from India, primarily fertilizers, cement, spices and chilies, and had been established trading firms prior to the rice trade liberalization. Only two firms were established after 1990, 17 in the 1980s, 13 in the 1970s and the remainder before 1970 - the oldest firm dating back to 1950. Nearly half (45 percent) of the firms surveyed began importing rice in 1995, soon after the change in trade policy. Another 40 percent of the firms surveyed, however, entered the rice import trade only in 1998.

A major consideration for traders was the speed of execution of transactions. Long lags in delivery increased the risk of changes in market conditions and could entail significant interest costs, given the high cost of financial capital. Compared to transport by rail, import by trucks entailed much smaller transaction size and much speedier delivery. Delivery lags by rail were typically very long, ranging from 115 to 120 days compared to 20-25 days by truck. While rail transport was much cheaper, capacity was highly constrained because of inadequate wagon-space, delays in off-loading, and poor

infrastructure (especially on the Bangladesh side of the border). Small importers found truck transport to be a very attractive proposition, even if transport costs per unit were higher, because they could conduct trade with smaller amounts of capital and generate a quick turnover on their investment. Nonetheless, even with delivery by trucks, the problem of delivery lags figured prominently amongst the complaints made by traders.

Costs of Trade

Details of costs incurred by Indian exporters and Bangladeshi importers for a typical transaction are given in Table 3.1. Variations in costs can result from differences in the mode of transport (higher if trucks are used) and supply locations (for example, whether the grain originates in the distant Punjab or from a point closer to Bangladesh, such as Uttar Pradesh or West Bengal). There are also some additional costs that could be incurred: weight loss, rent for storage in a godown, incidental expenses incurred in opening LCs, costs of extending the LC time (0.25 percent) and interest charges if payment is delayed after arrival of the grain. Other costs include the costs involved in maintaining a physical presence in India to oversee quality/quantity and other terms, as well as to collect price-supply information. Large traders have indicated that very significant costs related to travel and stay (for example, passport and visa, accommodation etc.) in India have to be met -- a precondition that is difficult for smaller traders to fulfill. According to one estimate, a minimum of Tk 1,000 is needed to meet the costs of travel per trip and, on most traders reported frequent trips to India over 1998-99. Importers often sent their representatives across the border on different, frequently specialized assignments such as checking on quality, negotiate prices or renegotiate an LC. One trader reported that he financed the stay of his younger brother and his family in Madras for a full year so that he could function as his "permanent"

Table 3.1 Costs of Private Sector Rice Import Trade

A. Cost of 100 kgs of rice from a Punjab miller up to Darsana (Rs/100 kgs), February, 1999 -- average quality):

1. Minimum State Government procurement price	850.0
2. Brokerage commission	8.5
3. Packing	20.0
4. Milgate to railway Stn. (By Truck)	16.0
5. Rail freight up to Darsana (including loading/unloading)	80.0
Sub-Total	974.5

B. Other costs (borne by exporters)

1. Clearing and forwarding charges @0.5 percent	4.3
2. Customs surcharge @0.5 percent	4.3
3. Bank charges	1.7
4. Bank interest @ 1.5 percent for 3 months	10.5
Sub-Total	20.7

C. Importers' Costs

1. Advance Income Tax (AIT) @ 3 percent	29.9
2. Insurance	2.8
3. Clearing and forwarding charges	3.0
4. Bank Commission	5.0
5. Freight (rail): Darsana to Khulna	0.9 ³
6. Plant quarantine report	12.0
7. Other	73.1
Grand Total Rps	1,068

TK 1,257

³ Source: Murshid (1999).

representative during this time.⁴ Thus, one of the major problems of trading at a distance, especially across international borders, is being solved in an expensive manner, through dispatching trusted agents frequently. In the case of Hindu or Marwari traders, the problem is easier to solve through their network of relations and friends residing in India. An institutional resolution of this problem is still awaited.

Risks in the Rice Import Trade

Quality of information was another major problem for the rice import trade. Because there were no institutional mechanisms for the monitoring and dissemination of vital trade information to traders, importers had to invest heavily in information collection through their own efforts. No association of rice importers was in place and the existing Traders' Association did not serve as an information-clearing house.

There were generally no problems in opening a letter of credit (LC), though, as the foreign currency requirement could be arranged in just one day, and the cost of an LC was around 1.5 percent of its total value, including bank charges, insurance, transport and commission. The cash margin generally varied from 10 to 25 percent, with the vast majority of transactions conducted with cash margins of 15 percent.⁵

However, the irrevocability of letters of credit provided exporters with a great deal of leverage over importers. Importers could not cancel an LC during its validity period without approval from the exporter. Although importers could request an exporter to stop shipment if he thought that that prices might fall dramatically in the Bangladesh market, he could request the exporter to stop shipment. However, such requests usually went unheeded. On the other hand, importers were often under pressure

⁴ Although the number of visits appear to be prohibitively high, the means frequently adopted to lower costs is interesting. The agent will usually go to India on a three-month visitor's visa but within the three-month period will enter Bangladesh and re-enter India informally, at will. Thus "one trip" actually includes a number of sub-trips!

⁵ See Murshid (1999) for further details on credit for the rice import trade.

to raise the price (through a LC amendment) - to which they generally seemed to succumb, as non-compliance could lead to delays or poor quality of grain received.

Moreover, there was a clear perception amongst all respondents that suppliers often did not stick to their side of the bargain. 68 percent thought that the quality provided was inferior in comparison to the sample shown at the time of the opening of the LC.⁶ Similarly, more than 70 percent of respondents claimed that the quantity delivered tended to be lower than the stipulated amount. A physical presence at the time of loading of shipments in India was thus important, and most firms had their own men (apart from the clearing and forwarding agent) at the border to check the quality before taking delivery.

Somewhat surprisingly, insecurity, *mastani* or toll-collection did not figure as a problem in the aftermath of the 1998 floods. During this period, there was tremendous political pressure to ensure a smooth flow of rice imports, but independently of that, everyone concerned felt that it was his national duty in the face of a grave situation verging on famine to remain on guard so that rice flows were not disrupted. Traders reported that for rice imports, officials did not ask for extra payments, and there were no labour or transport problems, no harassment or delays.

Private Storage and Capital

Importers generally had access to storage space, e.g. in the form of godowns, with 71 percent of the traders actually owning these themselves. The volume of stocks held (on the day of the interview) was 470 MTs on average (ranging from 0-4,000 MT), with 18 percent of respondents reporting zero stocks. Average stock level during the preceding six months was lower, 229 MTs, equal to about 20-25 percent of capacity

⁶ Trade negotiations are carried out in one of three ways: (a) visits by the importer or his agent to India, (b) communication through phone or fax (with samples sent out by courier service), and (c) and face to face meetings between the two parties in no-man's land. In the last case, the traders must register with the border security forces of the two countries. The scale of business and the size of the importing firm usually decides which option will be followed, with the first two being much more common for larger traders.

utilization. 18 percent of respondents reported zero stocks both in the last six months and in the last year.

Many importers also owned their own trucks. On average, each importer owned 1.5 trucks (ranging from 0 to 23 trucks). While most traders have to rent additional trucking space, a clear attempt to create vertical linkage is apparent. The main behavioral urge here is to import and sell as quickly as possible. Holding large stocks is considered costly and undesirable, while quick transport and distribution arrangements play a vital role. Thus, there is a strong tendency to sell off quickly and to minimize the need for holding stocks, and those who do hold stocks do so under the force of circumstances.

Ports and Infrastructure

There was a great deal of variation in terms of the critical facilities available in the different land ports of Bangladesh: transport and storage facilities, availability of international phone/fax/courier services, and banking facilities. Darsana, the oldest rail port, (which accounted for essentially all rice imports by rail and about one-third of all rice imports from India in 1998), had access to the local telephone network but lacked warehouses. Though it was serviced by all the major banks and the banking infrastructure was generally considered to be good, release of consignments were often delayed on weekends due to bank closure.

4. RICE TRADE BETWEEN INDIA AND BANGLADESH

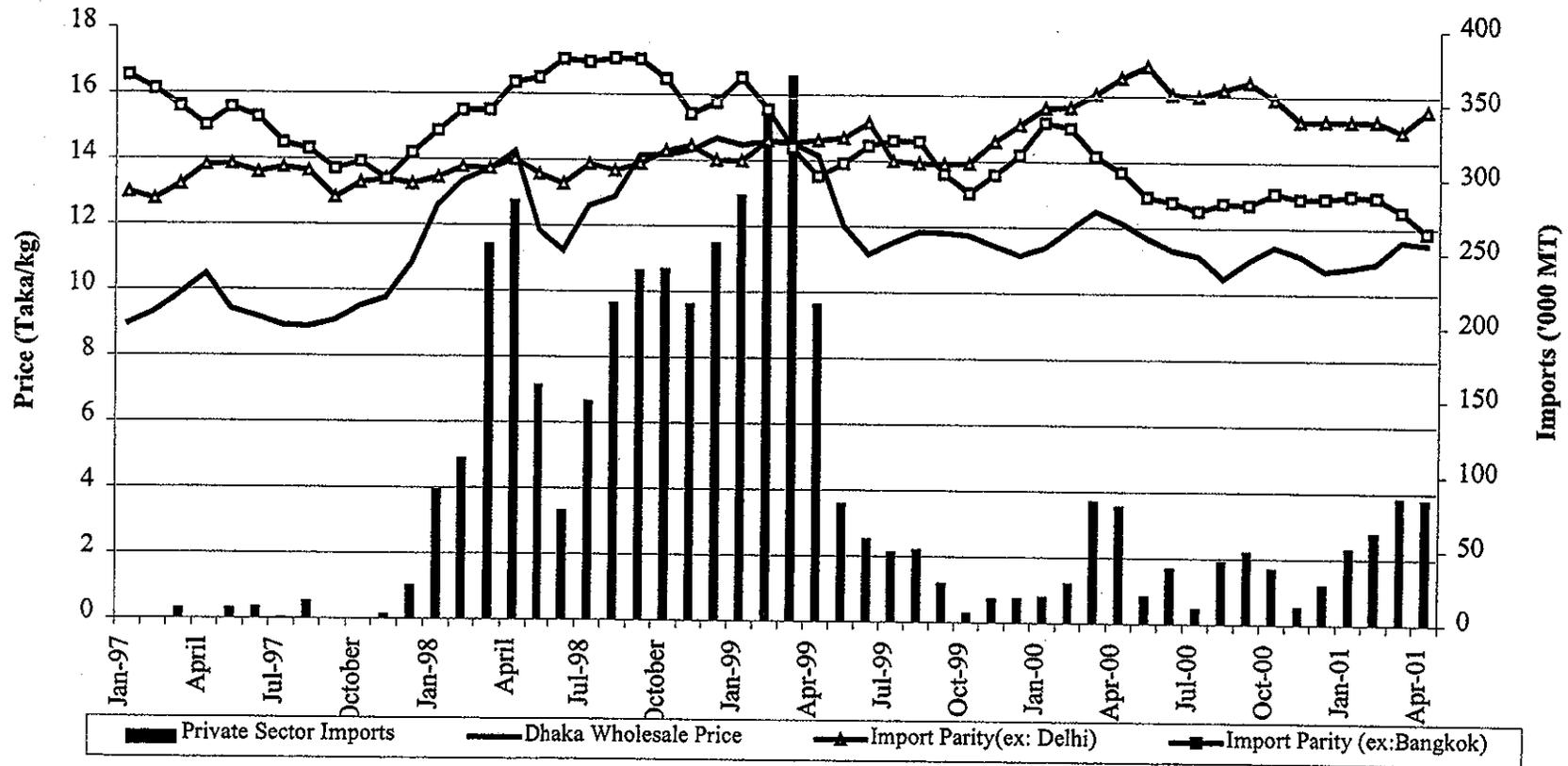
Following the liberalization of private rice imports in Bangladesh in early 1994 and India's trade liberalization later that year, Bangladesh imported substantial quantities of rice from India during three separate periods of rice shortage: 1994-95, 1997-98, and following the 1998 flood. During a period of three successive poor harvests in Bangladesh, there was a substantial excess of demand over supply at import parity prices. As a result, 1.127 million metric tons, (an average of 66 thousand metric tons per month), were imported by the private sector, in addition to 704 thousand metric tons imported by the government.

Rice flows between the two countries came nearly to a halt in 1996 and 1997, however, as favorable weather and stable input supplies helped boost rice production and drop domestic market prices below import parity levels (Figure 4.1). But, following another poor aman rice harvest in Bangladesh in November/ December, 1997 rice prices rose sharply, and within two months of the start of the aman harvest, again reached import parity levels. Given the price incentives for imports and the large gap between domestic supply and demand, 917,000 MTs of rice were imported by the private sector through official channels from December 1997 to May 1998.

A good boro rice harvest in May 1998 brought a sharp decline in rice imports from India as prices dropped below import parity. But from July through September, floods in Bangladesh caused extensive damage to the aus and aman rice crops. As the Government of Bangladesh continued its policy of encouraging private sector imports, the private sector imported more than 200 thousand MTs of rice per month from August 1998 to March 1999.

Thus, because of the poor 1997/98 aman harvest and the flood-damaged aus and aman harvests in 1998/99, Bangladesh rice prices (wholesale Dhaka) remained close to

Figure 4.1 — Rice Prices and Quantity of Private Rice Imports in Bangladesh, 1997-2001



Souce : FPMU, MIS(DG Food) and CMIE, Dorosh, Shahabuddin, Aziz and Farid (2001)

India import parity prices for most of calendar year 1998. Wholesale prices after the flood were in fact remarkably stable. The national average wholesale prices of coarse rice remained in the range of 14.14 to 14.83 Tk/kg from September 1998 through mid-April 1999.

The volume of Bangladesh rice imports from India is somewhat uncertain. Bangladesh customs data indicate that 3.172 million MTs of rice were imported from India from April 1998 through March 1999, 2.827 million MTs (89.1 percent) by the private sector. Indian data on the quantity of rice exports, estimated using actual data and a value of trade between the two countries divided by the average prices of Indian worldwide exports, is only 2.215 million MTs, 958 thousand MTs (30.2 percent) less than the Bangladesh customs figures. The data for 1997-98 are similar: the calculated volume of India's rice exports to Bangladesh is 384 thousand MTs, 24.7 percent less than the figure from Bangladesh customs. Possible explanations include false declarations at customs (to avoid high tariffs on other commodities, such as cement, fruit and spices), capital flight from Bangladesh, or simply reporting mistakes in one or both countries.

Comparisons of calculated rice availability and movements in market prices in Bangladesh give another indication that the official data on the volume of rice imports from India may be overstated. Given the sharp increase in average real prices of rice in Bangladesh following the poor aman rice harvest in December 1997 and the floods in mid-1998, estimated per capita demand from December 1997 through May 1999 was 3.8 to 4.4 percent less than in 1996-97. Total demand was less than apparent availability by an estimated 2.169 million MTs over the eighteen-month period. A change in private stocks of this magnitude seems highly unlikely, given that the periods are defined to end just before major harvests. More likely is a combination of overestimates of production and imports, (the 1.083 million MT total discrepancy between Bangladesh import and Indian export data is equal to almost exactly half of the difference in estimated consumption and total availability).

PRIVATE IMPORTS AND FOOD SECURITY: IMPLICATIONS OF TRADE WITH INDIA

If rice imports from India had not been available, the next lowest cost source for private importers would have been Thailand. In the December 1997 through November 1998 period, the import parity price of 15 percent broken rice ex: Thailand in Dhaka was 16.1 Tk/kg, 20.9 percent higher than actual prices. At these higher prices, estimated rice demand would have fallen by between 4.2 and 6.3 percent, assuming an own-price elasticity of rice demand of -0.2 to -0.3 , and rice imports would have declined by approximately 700 thousand to 1 million MTs.

Similarly, if private sector imports were unavailable (or banned) from any source, then, with no change in government imports, total supply would have been 12.1 percent less (apart from private stock changes) and rice prices could have risen by 40 to 60 percent, to an average of between 18.7 Tk/kg and 21.3 Tk/kg. Such an increase in the rice price level would likely have been unacceptable to the Government of Bangladesh and public sector imports would likely have been increased.

But during the 1998 calendar year alone, private sector imports reached 2.26 million MTs. Government imports and subsidized sales of this magnitude were simply not feasible. Had the government of Bangladesh imported this grain itself, the average cost of the imported rice delivered to local delivery points would have been approximately 14.9-15.9 Tk/kg, 1.0 to 2.0 Tk/kg above the private sector import costs, due to additional marketing costs totaling 50 to 100 million dollars. And, if the government received a net price of 11.5 Tk/kg (equal to the Open Market Sales price of 12.0 Tk/kg less 0.5 Tk/kg OMS dealer's commission), the total unit subsidy would have been 3.4 to 4.4 Tk/kg, and the total fiscal cost would have been 160 to 210 million dollars.

Table 4.1 — Private Sector Rice Imports, January through September 1998

Date	Number of Contracts	Weekly Quantity in Metric Tons	Average Quantity / Contract (MT)	Weekly Value Million Tk	Average Price (Tk/kg)
January					
1st week	81	12896	159.2	131.6	10.20
2nd week	116	16593.18	143.0	174.2	10.50
3rd week	98	27102.63	276.6	282.1	10.41
4th week	88	18826.19	213.9	201.7	10.71
Sub -Total	383	75418	196.9	789.5	10.47
February					
1st week	83	18079	217.8	190.0	10.51
2nd week	119	33657	282.8	390.0	11.59
3rd week	27	3311	122.6	33.0	9.97
4th week	31	23108	745.4	271.0	11.73
Sub -Total	260	78155	300.6	884.0	11.31
March					
1st week	182	23348	128.3	241.9	10.36
2nd week	380	58151	153.0	621.8	10.69
3rd week	294	57901	196.9	619.4	10.70
4th week	258	40140	155.6	434.8	10.83
Sub -Total	1114	179,540	161.2	1917.9	10.65

Table 4.1 — Private Sector Rice Imports, January through September 1998 (Cont.)

Date	Number of Contracts	Weekly Quantity in Metric Tons	Average Quantity / Contract (MT)	Weekly Value Million Tk	Average Price (Tk/kg)
April					
1st week	163	83228	510.6	958.9	11.52
2nd week	163	30419	186.6	324.8	10.68
3rd week	73	15533	212.8	167.7	10.80
4th week	66	12951	196.2	139.0	10.73
Sub -Total	465	142,131	305.7	1590.4	10.93
May					
1st week	51	17371	340.6	186.3	10.72
2nd week	58	25639	442.1	263.6	10.28
3rd week	32	12470	389.7	125.1	10.03
4th week	20	5837	291.9	56.7	9.71
Sub -Total	161	61,317	380.9	631.6	10.19
June					
1st week	21	5230	249.0	52.6	10.05
2nd week	22	4631	210.5	47.8	10.33
3rd week	64	43122	673.8	489.8	11.36
4th week	102	32595	319.6	332.8	10.21
Sub -Total	209	85,578	409.5	923.0	10.49

Table 4.1 — Private Sector Rice Imports, January through September 1998 (Cont.)

Date	Number of Contracts	Weekly Quantity in Metric Tons	Average Quantity / Contract (MT)	Weekly Value Million Tk	Average Price (Tk/kg)
July					
1st week	53	14089	265.8	148.9	10.57
2nd week	103	33094	321.3	341.2	10.31
3rd week	83	19710	237.5	208.7	10.59
4th week	16	2995	187.2	31.7	10.58
Sub -Total	255	69,888	274.1	730.4	10.51
August					
1st week	107	25578	239.0	268.3	10.49
2nd week	88	20532	233.3	217.7	10.60
3rd week	130	27476	211.4	293.6	10.69
4th week	180	46950	260.8	500.0	10.65
Sub -Total	505	120,536	238.7	1279.6	10.61
September					
1st week	151	40188	266.1	432.5	10.76
2nd week	48	31680	660.0	355.0	11.21
3rd week					
4th week					
Sub -Total	199	71,868	361.1	787.5	10.98
Total	3291	806,276	245.0	8649.92	10.68

Source: FPMU, Letters of Credit data base (sample available to DG Food as of 14th September, 1998), and author's calculations, from Dorosh (1999a)

Table 4.2 — Total Production of Aman and Kharif Rice In Bangladesh and India and Percentage Deviation from Trend, 1981-99

Year	BANGLADESH				INDIA			
	Aman Prod 000 MT	Percentage Deviation	Total Prod 000 MT	Percentage Deviation	Kharif Prod 000 MT	Percentage Deviation	Total Prod 000 MT	Percentage Deviation
1980/81	7962	6.08%	13880	2.69%	50090	2.43%	53630	0.68%
1981/82	7208	-5.23%	13629	-1.57%	49245	-2.09%	53250	-3.20%
1982/83	7603	-1.33%	14215	0.28%	42697	-17.40%	47120	-16.98%
1983/84	7937	1.68%	14509	0.02%	55052	3.70%	60100	2.73%
1984/85	7931	0.32%	14623	-1.43%	53782	-1.29%	58340	-3.16%
1985/86	8540	6.67%	15038	-0.84%	59392	6.28%	63830	2.97%
1986/87	8267	1.99%	15406	-0.57%	53561	-6.49%	60560	-4.98%
1987/88	7689	-6.30%	15413	-2.60%	49049	-16.41%	56860	-13.16%
1988/89	6857	-17.44%	15544	-3.77%	63376	5.50%	70490	4.86%
1989/90	9202	9.47%	17856	8.33%	65878	7.17%	73570	6.67%
1990/91	9167	7.77%	17852	6.18%	66317	5.49%	74290	5.06%
1991/92	9269	7.70%	18252	6.47%	66368	3.28%	74680	3.07%
1992/93	9680	11.19%	18341	4.98%	65243	-0.63%	72868	-1.80%
1993/94	9419	6.96%	18041	1.35%	70724	5.47%	80298	5.73%
1994/95	8504	-4.51%	16833	-7.16%	72603	6.07%	81814	5.31%
1995/96	8790	-2.40%	17687	-4.19%	67879	-2.82%	76975	-3.10%
1996/97	9552	4.90%	18883	0.50%	71415	0.24%	81312	0.16%
1997/98	8850	-3.87%	18850	-1.41%	72500	-0.19%	83500	0.69%
1998/99	7600	-16.87%	18853	2.34%	71450	-2.97%	82450	-2.62%

Note: Trend Values have been derived from Linear Regression

Source: Dorosh (1999c)

In spite of the potentially high costs of massive government imports, such expenditures might be deemed necessary if there was evidence that private traders were manipulating the market. One indication that the rice market was competitive in Bangladesh was that the margin between wholesale prices in Dhaka and India remained relatively low and stable. Data from letters from both 1994-95 and 1998 suggest that a large number of traders participated in rice imports, another indication of a competitive market. Letter of credit data from January through mid-September 1998 indicate an average quantity of only 268.7 metric tons per letter of credit for the 3291 letters of credit issued (Table 4.1). Moreover, these letters of credit were opened by 793 different traders, with an average amount of imports per trader of only 1115.3 MTs of rice. The largest ten traders (in terms of total imports) imported 142,369 tons, 16 percent of the total.

THE RELIABILITY OF THE INDIAN RICE MARKET

Large-scale private imports from India were possible in 1998/99 because with large government stocks of foodgrain and a good rice harvest, the Government of India was willing to allow exports. Production of India's kharif rice crop was 70 million MTs, only about 2.6 percent below the 1997/98 bumper crop. Moreover, Food Corporation of India rice stocks on 1 October, 1998 were quite high (8.7 mn MTs), nearly three million MTs above the buffer stock norm of 6 million MTs for that date. Wheat stocks were even higher: 15.8 million MTs on 1 September, 1998.

In recent years, rice production shortfalls in Bangladesh and India have not been highly correlated. From 1971/72 through 1998/99, total production of rice in Bangladesh fell below five percent or more below trend in only four years: 1971/72, 1972/73, 1994/95 and 1998/99 (Table 4.2). India's production has been more variable over the period as a whole, with six years below trend, though all these years were before 1988/89. Comparing only aman production in Bangladesh with kharif production in India, since 1980/81, only once did both India and Bangladesh have a bad aman /

kharif crop in the same year (1986/87). In the two most recent years of very low aman harvests in Bangladesh (1988/89 and 1998/99), India's kharif production has been 5.50 percent above and 3.49 percent below trend.

Agronomic factors help explain the lack of correlation in the harvests. India's kharif rice production is spread over a much wider area than Bangladesh aman rice production, reducing the risk of weather-related failure to the entire crop. In particular, high rainfall or excessive snow melt in the Himalayas that cause flooding in Bangladesh and parts of eastern India do not necessarily correlate with poor weather in other regions of India.

PRIVATE RICE IMPORTS SINCE 1999

Following the excellent boro harvest in May/June 1999, domestic coarse prices in Bangladesh fell sharply, from 14 Tk/kg in April to only 12.40 Tk/kg in June. With import parity prices of rice from India remaining about 14.0 Tk/kg, there were no longer price incentives for large-scale private sector imports of coarse rice from India. A small amount of rice trade did continue, however. Delays in arrivals of earlier arranged shipments of rice may have accounted for much of the trade in May, June and July 1999.

Four other factors may account for the small volume of trade thereafter. First, price incentives for imports of medium and fine quality rice, including aromatic rice, may have remained even though large-scale trade in coarse rice was no longer profitable. Second, localized trade from Indian markets near the border to nearby Bangladesh markets may have contributed to the import total. Third, some of the reported rice trade may reflect false customs declarations rather than actual rice imports. Finally, lower-quality rice, some of which may have originated from Food Corporation of India godowns, was reported to have been imported in early 2001.

Even though large-scale imports of coarse rice from India were not profitable from mid-1999 through early 2001, rice imports from other sources were feasible

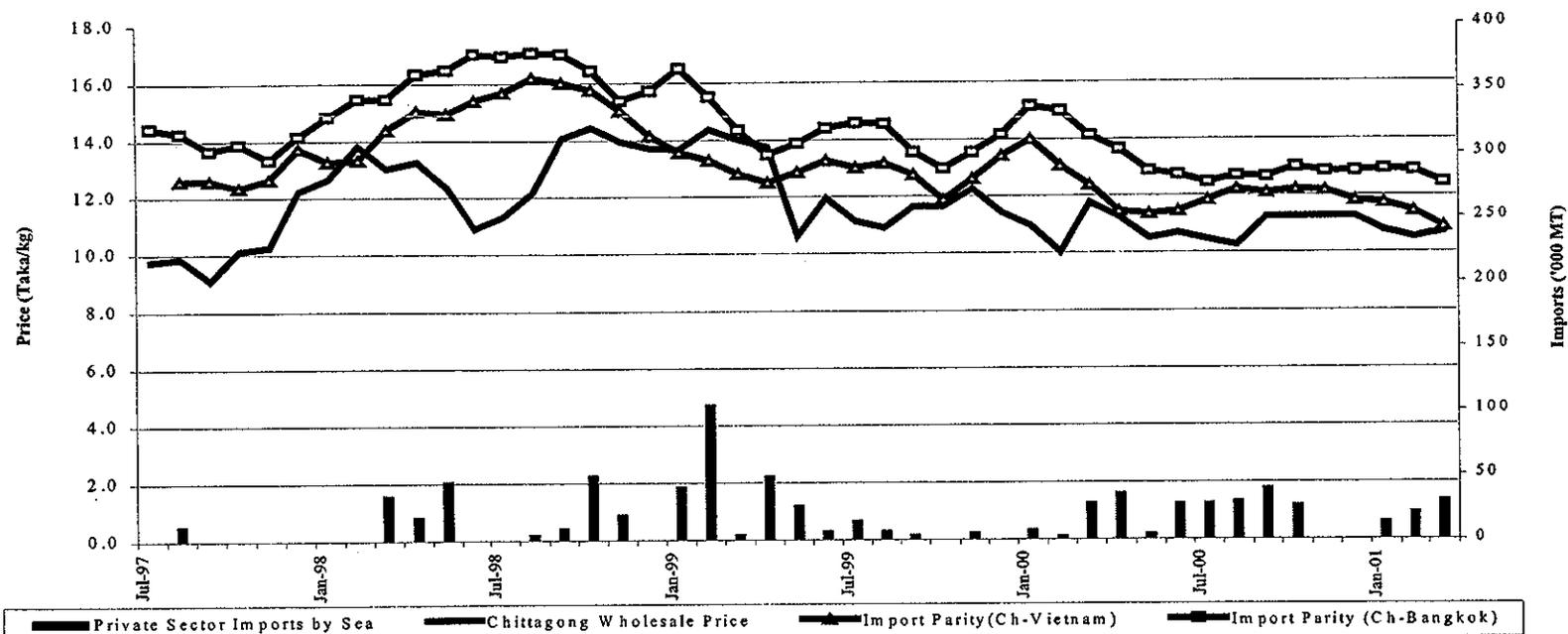
because of a sharp drop in world prices. The import parity price of rice in Bangkok, which had been about 17.0 Tk/kg in July 1998 (about 3 Tk/kg above the import parity price of rice ex: Delhi) fell to only about 12.5 Tk/kg by July 2000, (about 3 Tk/kg below the import price of rice ex: Delhi). Prices of rice from Vietnam were even lower, and in 2000/2001 approximately 300 thousand MTs of white (i.e. non-parboiled) rice were imported from Vietnam (Figure 4.2), apparently destined for consumers in Chittagong and Sylhet divisions who prefer white rice.

TRADE RESTRICTIONS ON RICE IMPORTS

In early 2001, subsidized rice from India's public stocks and some poor quality rice were imported by the private sector. These subsidized imports could have an effect on local markets. The effect on national markets was minimal, though, as total imports through land ports for 2000/2001 (including low quality, coarse, medium and fine rice) were only about 300 thousand MTs, about 1.5 percent of total rice supply.

Several measures have been proposed to stop the import of low quality rice, including credit restrictions on importers or banning rice imports altogether. However, such measures risk long-term disincentives on the private sector rice trade – a source of supply that greatly added to national food security in 1998 and 1999. Increases in tariff rates, announced at least one month in advance (so as to not affect contracts in process), would be preferable to quantitative restrictions or credit restrictions, in terms of avoiding long-term disincentives on private trade.

Figure 4.2 — Rice Prices and Quantity of Private Rice through Sea Ports Imports in Bangladesh, 1997-2001



Source : FPMU, MIS(DG Food) and CMIE

5. IMPLICATIONS FOR BANGLADESH FOOD POLICY

Several key aspects of private sector imports from India enabled them to make a large contribution to national food security in Bangladesh in 1998 and 1999. First, India's good harvests and ample rice stocks made large-scale exports not only possible, but actually welcome for India. Second, the private sector trade was competitive, involving many hundreds of traders importing small quantities of rice. Third, the Government of Bangladesh gave the private sector clear signals that it supported this trade, removing all tariffs and surcharges on rice imports and instructing customs officials to expedite clearance of rice imports, particularly following the floods in mid-1999. Finally, Bangladesh had ample foreign exchange reserves and access to lending to pay for rice imports, (unlike during the 1974 famine when shortages of foreign exchange severely constrained the government's ability to import).

These factors may not necessarily be in place if major shortfalls in Bangladesh production occur in the future. Moreover, the success of private rice imports in stabilizing prices and augmenting supplies in recent years in no way implies that less attention should be devoted to encouraging domestic production through appropriate price incentives and public investments, ensuring supplies of inputs, and agricultural research and extension. Chronic food deficits, if a result of a stagnant agriculture and rural economy, might be supplied by private sector imports, but would likely be accompanied by increasingly large segments of the population living in poverty and without access to sufficient food.

The large expansion of the rice trade between India and Bangladesh is also a reminder of the far-reaching consequences of macro-economic and trade policy reforms. India's exchange rate depreciation was a major factor in making Indian rice competitive in Bangladesh rice markets. For Bangladesh, a substantial appreciation of the real

exchange rate, caused by domestic inflation in excess of the rate of nominal exchange rate depreciation, could make Bangladesh a consistent importer of rice, as the import parity price of rice falls and sets a low ceiling on domestic prices. In the absence of offsetting trade policy (import tariffs), the resulting low real prices of agricultural goods could result in *slow agricultural and rural economic growth*.

Nonetheless, the most important lesson from the Bangladesh experience with private sector rice imports in recent years is that trade liberalization can enhance national food security. By providing an automatic mechanism to increase domestic supply and stabilize prices, the trade liberalization in Bangladesh helped to ensure the availability of food grain and stabilize prices. Combined with *targeted public distribution programs* that enhanced the access to food by the poor, private sector imports helped prevent a food crisis and saved government resources for future productive investments. Though increased food security may not be a primary objective of trade liberalization, the Bangladesh experience shows that the two can in fact be compatible.

REFERENCES

- Dorosh, Paul A. 1999a. "The Determination of Rice Prices in Bangladesh: Supply Shocks, Trade Liberalization and Cross-Border Trade." Food Management and Research Support Project (FMRSP) Working Paper No. 2.
- _____. 1999b. "Food Grain Markets and Policy in the Aftermath of the 1998 Flood." Food Management and Research Support Project (FMRSP) Working Paper No. 7.
- _____. 1999c. "Trade Liberalization and Food Security in Bangladesh: The Role of Private Sector Imports." Food Management and Research Support Project (FMRSP) Working Paper No. 16.
- Goletti, Francesco. 1994. The Changing Public Role in a Rice Economy Approaching Self-Sufficiency: The Case of Bangladesh. International Food Policy Research Report 98, IFPRI Washington, D.C.
- Murshid, K. A. S. 1999. "Liberalization of Foodgrain Imports: The Evolution and Conduct of the Border Trade with India." Food Management and Research Support Project (FMRSP) Working Paper No. 11.
- Pinckney, Thomas C. 1988. Storage, Trade and Price Policy Under Production Instability: Maize in Kenya. International Food Policy Research Report 71, IFPRI Washington, D.C.