Recent Developments in the Bangladesh Economy*

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1 INTRODUCTION AND BACKGROUND

The economy of Bangladesh has experienced significant shifts in trade, fiscal, industrial, agricultural and financial policies over last two decades. Bangladesh is significantly dependent on external resources and at the behest of the World Bank and the International Monetary Fund, Bangladesh adopted a set of structural adjustment policies that impacted on all sectors of the economy and every aspect of the short- and medium-term economic management.

The key sectors embodying the pace of reforms are agriculture industry, external trade, finance and banking and foreign exchange. The reform process has been discussed in detail in the literature (see for example, Jahan, 1998; Hossain and Alauddin, 2005; Sobhan, 1996). This paper does not repeat their arguments. Suffice it to say that reforms under the structural adjustment programme were activated through a set of comprehensive economic policies through which the government (a) acted directly to restructure taxation and the provision of social services, and (b) intervened in the market to change pricing behaviour to create a favourable environment for investment and growth. On the whole, therefore, the reform process represents significant changes in policy direction in almost all spheres of economic activity in Bangladesh. The policy base has shifted primarily from one of state interventionism to one of greater reliance on the operation of the market forces.

This paper provides a broad overview of the recent developments in the Bangladesh economy paying particular attention to the trade liberalization phase. Section 2 examines the performance of the Bangladesh economy in terms of broad economic indicators including growth rates in GDP its composition and stability. Section 3 discusses the performance of the external sector and implications of the changes that it has experienced. It argues that despite significant changes, the Bangladesh economy lacks diversification and rests on a narrow base. Section 4 overviews the environmental implications of growth and change in the Bangladesh economy. Section 5 presents some further observations on the process of development. Section 6 concludes the paper.

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2 AN OVERVIEW OF PERFORMANCE

Table 1 presents an overview of trends in the Bangladesh economy in respect of growth in GDP and it three major components: agriculture industry and services. Since the 1970s, the share of agriculture has lass than halved while the share of industry more than doubled *albeit* from a very low base. The contribution of the services sector seems to be disproportionately high. The significant decline in the share of agriculture in GDP is in contrast to the growth in the services sector rather than the industrial sector, which accounts for only about a sixth of the GDP. The average growth rates in GDP and its components are set out in Table 2. It can be clearly seen that the 1990s have been characterised by higher growth rates in agriculture and industry. The average growth rates in the services sector in all decades and overall seem to be much the same. One noteworthy feature of the growth process is a significantly higher variability during 1974-1990 in respect of the growth rates in GDP, agricultural valued added and industrial value added. Thus the period since the reforms seems to be characterised by a greater degree of stability with higher growth rates.

Table 3 provides some macroeconomic indicators since the late 1990s. This information suggests that during the post reform phase, Bangladesh could be characterised as a low inflation and a low deficit economy. The foreign exchange reserve situation, however, remains a cause for concern since, for much of the period, reserves were equivalent to 3 months imports except for 2001 when these dipped below this threshold.

Since the mid-1980s investment and savings as percentages of GDP have increased steadily (Table 4). However, annual changes in savings and investment have fluctuated considerably with the former showing much higher orders of magnitude compared to those in investment. Rahman (2003, p.37) identifies three factors that might be at work simultaneously. These are:

- Non-conducive social environment for investment;
- High rates of interest intended to encourage savings might itself have arrested the pace of investment; and
- Government borrowing from financial market and the use of borrowed fund for financing non-investment expenditure. This fiscal behaviour may have militated against savings being translated into investment.

Table 1: Growth Rates of GDP and Its Three Major Components, Bangladesh 1974-2001

Year	Percentage change in				Sectoral shares in GDP (per cent)		
	GDP	Value added in agriculture	Value added in industry	Value added in services including construction	Agriculture	Industry	Services including construction
1974	-4.09	-4.56	-10.92	4.57	59.26	7.19	33.55
1975	5.66	8.39	-0.69	4.75	49.81	9.29	40.90
1976	2.67	-3.66	11.66	4.99	45.92	10.62	43.46
1977	7.07	7.83	1.18	5.18	47.48	10.08	42.44
1978	4.80	-0.66	11.19	5.49	44.79	9.87	45.34
1979	0.82	0.16	1.45	5.64	41.22	11.23	47.55
1980	3.39	4.18	-3.05	5.89	40.96	10.88	48.16
1981	1.23	0.16	0.26	6.39	40.37	10.78	48.85
1982	4.89	4.24	1.89	6.53	39.97	11.14	48.89
1983	5.43	3.61	7.50	6.78	41.74	10.62	47.64
1984	3.01	0.69	-1.60	4.74	41.77	9.86	48.37
1985	4.34	3.28	2.60	8.04	40.41	11.93	47.66
1986	4.16	0.40	7.89	6.92	40.76	12.43	46.81
1987	2.89	-0.77	0.63	6.40	38.79	12.26	48.95
1988	2.52	-1.07	2.79	5.30	37.20	12.30	50.50
1989	6.63	10.01	7.25	4.70	36.85	12.52	50.63
1990	3.40	1.61	2.37	4.00	36.03	12.90	51.07
1991	4.23	2.19	7.33	4.60	34.47	13.28	52.25
1992	4.20	2.20	7.30	4.80	28.20	13.82	57.98
1993	4.50	1.80	9.10	5.40	27.30	14.35	58.35
1994	4.60	1.80	9.30	5.80	26.02	15.15	58.83
1995	4.90	-0.30	9.90	5.50	25.68	15.43	58.89
1996	4.60	3.10	7.00	4.30	25.87	15.41	58.72
1997	5.40	6.00	5.80	4.90	25.34	15.88	58.78
1998	5.20	3.20	8.30	4.80	25.28	15.60	59.12
1999	4.90	4.80	4.90	4.90	25.47	15.54	58.99
2000	5.90	7.40	6.20	7.00	25.33	15.84	58.83
2001	5.30	3.10	7.40	5.50	24.10	15.62	60.28

Sources: Based on BBS (1993, pp.66-67; 2003, p.489). ADB (various issues).

Table 2: Growth Rates: Descriptive Statistics

GDP and its components	Mean value			Variance			F-statistic for test of difference in variances in growth rates in 1974-90 and 1991-2001 periods
	1974-90	1991-2001	1974-2001	1974-90	1991-2001	1974-2001	
GDP	3.46	4.88	4.02	6.74	0.27	4.60	24.29 (p=0.0000)
Agriculture	1.99	3.21	2.47	16.46	4.62	11.83	3.56 (p=0.0235)
Industry	2.49	7.50	4.46	30.36	2.39	25.08	12.72 (p=0.0001)
Services including construction	5.66	5.22	5.49	1.11	0.55	0.91	2.02 (p=0.1296)

Source: Based on Table 1.

Table 3: Some recent macroeconomic indicators of Bangladesh

Year	Current Account Balance (% GDP)	International Reserve (US$ million)	Budget Deficit/Surplus (% GDP)	Inflation (%)
1997	-2.1	1719	-2.6	5.59
1998	-1.2	1739	1.0	6.78
1999	-1.4	1523	-1.9	7.79
2000	-0.9	1602	-4.1	2.27
2001	-2.3	1307	-11.8	1.66
2002	0.4	1583	-6.8	2.95

Sources ADB (2003, p.296); Bhattacharya (2003, pp.14, 21).

Table 4: Changes in savings and investment

Year	Investment	Savings	Savings	Investment
1985-86	16.7	12.5	-	-
1986-87	16.0	11.1	24.77	8.15
1987-88	16.3	10.7	-23.33	6.08
1988-89	16.7	12.2	41.74	7.01
1989-90	17.1	12.9	-16.07	6.33
1990-91	16.9	14.6	77.37	1.42
1991-92	17.3	13.9	14.10	4.44
1992-93	17.9	12.3	12.75	9.52
1993-94	18.4	13.1	8.43	9.35
1994-95	19.1	13.1	16.77	9.11
1995-96	20.0	14.7	44.48	10.60
1996-97	20.7	15.9	11.10	11.08
1997-98	21.6	17.3	23.53	12.06
1998-99	22.2	17.6	15.97	9.85
1999-00	22.4	17.8	19.32	7.32
2001-01	23.6	18.0	12.64	6.43

Source: Rahman (2003, p.46).

3. THE EXTERNAL SECTOR

The external sector has experienced significant changes in recent years. Table 5 compares changes in tariff regimes both over time and across other countries in the South Asian region. Significant changes can be noticed in the average rates of tariffs and their variablities between the late 1980s and the late 1990s for Bangladesh and its two South Asian neighbours, India and Sri Lanka.

Table 5: Degree of openness in selected years

Year	As percentage of GDP		
	Export	Import	Trade
1980	5.28	16.96	22.24
1985	5.52	14.28	19.80
1990	7.72	15.78	23.50
1995	8.67	15.28	23.95
2000	12.09	17.23	29.32

Sources: Alauddin (1997, p.103); BBS (2003, p.291).

Table 6: Changes in Tariff Barriers in a South Asian Perspective

Country	*Year*	*All Products*			*Primary Products*			*Manufactured Products*		
		Mean	*St. Dev*	*Weighted Mean*	*Mean*	*St. Dev*	*Weighted Mean*	*Mean*	*St. Dev*	*Weighted Mean*
Bangladesh	1989	114.0	84.9	114.2	85.1	58.7	76.1	123.2	89.8	125.5
Bangladesh	1999	22.1	14.6	19.0	21.1	13.1	21.0	22.4	15.0	18.5
India	1990	81.8	39.4	83.0	74.1	38.4	49.5	84.1	39.4	93.6
India	1999	32.9	12.7	27.6	28.8	21.7	25.9	34.2	8.0	28.0
Sri Lanka	1990	28.3	25.5	24.1	31.4	28.7	30.2	27.5	24.5	12.6
Sri Lanka	1997	20.0	15.4	20.7	23.8	23.0	23.6	19.1	22.2	19.8

Source: Mujeri (2003, p.17).

Table 6 provides evidence on the degree of openness of the Bangladesh economy over the years. The indicators used are shares of export, imports and their sum in GDP for selected years. The changes are more noticeable in exports sector than in imports. On the whole, external trade accounted for nearly 30 per cent of GDP in 2000 compared to around a fifth in the 1980s. This growth has been steady rather than dramatic. Hossain and Alauddin (2005), analyse the ratio of the real effective exchange rate for export and that for import, and confirm the significant outward orientation of the Bangladesh economy.

As can be seen from Table 7, both imports and exports grew at much faster rates during the 1990s compared to the 1980s. The change in the composition of exports is also important. The combined share of food and agricultural raw materials declined from 31 per cent of total exports in 1980 to only 9 per cent in 2000. The share of manufactured items increased from 68 per cent to 91 per cent during the same period. While these changes are apparently significant, they mask the real strength of the export sector. Firstly, more than two thirds of the exports are accounted for by one item in one product group – readymade garments. Secondly, Bangladesh, export trade is concentrated in a limited market area – North America, primarily USA, EU and Japan.

Thirdly, the export of readymade garments is characterised by high import intensity. While the real extent is not known, the value added in readymade garments is no more than one third of the total value of the industry output (Alauddin,1997, p.111).

Table 7: Growth and structural change in merchandise trade

A: Annual average growth in merchandise trade

Year	Exports		Imports	
	Volume	Value	Volume	Value
1980-90	1.0	7.8	-4.3	3.6
1990-99	14.9	11.3	20.5	10.7

B: Structural change

Merchandise Category	Exports			Imports		
	1980	1990	2000	1980	1990	2000
Total ($ million)	793	1671	6500	2353	3618	8360
Per cent of total						
Food	12	14	7	24	19	15
Agricultural raw materials	19	7	2	6	5	5
Fuels	0	1	0	9	16	7
Ores and metals	0	0	0	3	3	2
Manufactures	68	77	91	58	56	69

Source: Mujeri (2003, p.10).

Thus the key objective of export diversification remains has not been attained since exports are still highly concentrated in a few goods, more precisely in one good, textiles and readymade garments. The lack of product diversification together with the present state of low export market diversification may render the Bangladesh external sector vulnerable to external shocks (see, for example, Hossain 2003).

Table 8: Bangladesh's external competitiveness in manufacturing: A South Asian perspective

Country	Annual unit labour cost per worker ($)			Annual value added per worker ($)			Value added-labour cost relativity		
	1980-84	1995-99	% change	1980-84	1995-99	% change	1980-84	1995-99	% change
Bangladesh	556	671	20.68	1820	1711	-5.99	3.27	2.55	-22.10
India	1035	1192	15.17	2108	3118	47.91	2.04	2.62	28.43
Sri Lanka	447	604	35.12	2067	3405	64.73	4.62	5.64	21.91

Source: Adapted from Mujeri (2003, p.16).

Table 8 presents Bangladesh's external competitiveness in manufacturing in a South Asian context. Bangladesh suffers from a low productivity syndrome compared to its neighbours. While value added per worker in Indian and Sri Lankan manufacturing sectors has increased significantly between the early 1980s and late 1990s, that for Bangladesh has increased only by 6 per cent. This is reflected more sharply in the value added-labour cost relativities. For Bangladesh, it has declined by 22 per cent compared to 28 and 22 per cent respectively for India and Sri Lanka. Thus Bangladesh's manufacturing is not underpinned by higher productivity, putting her in a low competitive edge relative to neighbouring countries.

While Bangladesh has experienced significant increase in trade overall, it engaged in little trade with its South Asian neighbours. According to Alauddin (2003a, pp.101-102) as of the late 1990s, less than two per cent of Bangladesh's export is destined for countries of South Asia. In the import trade of course, nearly a sixth of the total originate within the region, almost exclusively India. However, there is a significant incidence of illegal trade across Bangladesh's porous border with India. If one takes this into account, India's contribution to Bangladesh's imports is likely to be at about a quarter (further details are provided in Alauddin 2003a, pp.102-103).

One important feature of the post reform period is the increased inflow of foreign investment as set out in Table 9. Foreign direct investment rose significantly since 1998. However, investments in export processing zones (EPZs) has shown fluctuated, reached a peak in 1999 and then declined in 2000.

Table 9: Net foreign investment (US$ million)

Year	Direct investment	Portfolio investment	Investments in Export Processing Zones (EPZs)
1993	7	9	22
1994	16	53	37
1995	6	61	36
1996	7	-21	31
1997	16	-132	54
1998	249	3	69
1999	198	-6	72
2000	194	0	35

Source: Mujeri (2003, p.14).

4 ENVIRONMENTAL CONSEQUENCES OF ECONOMIC DEVELOPMENT IN BANGLADESH

Major environmental changes have occurred in Bangladesh in recent decades due to the green revolution in agriculture and associated population increases along with spillovers from urbanisation and industrialisation. Figure 1 encapsulates various human activities that have contributed to these environmental changes in Bangladesh. Note that linkages explored in Figure 1 may also apply to other countries of the developing world.

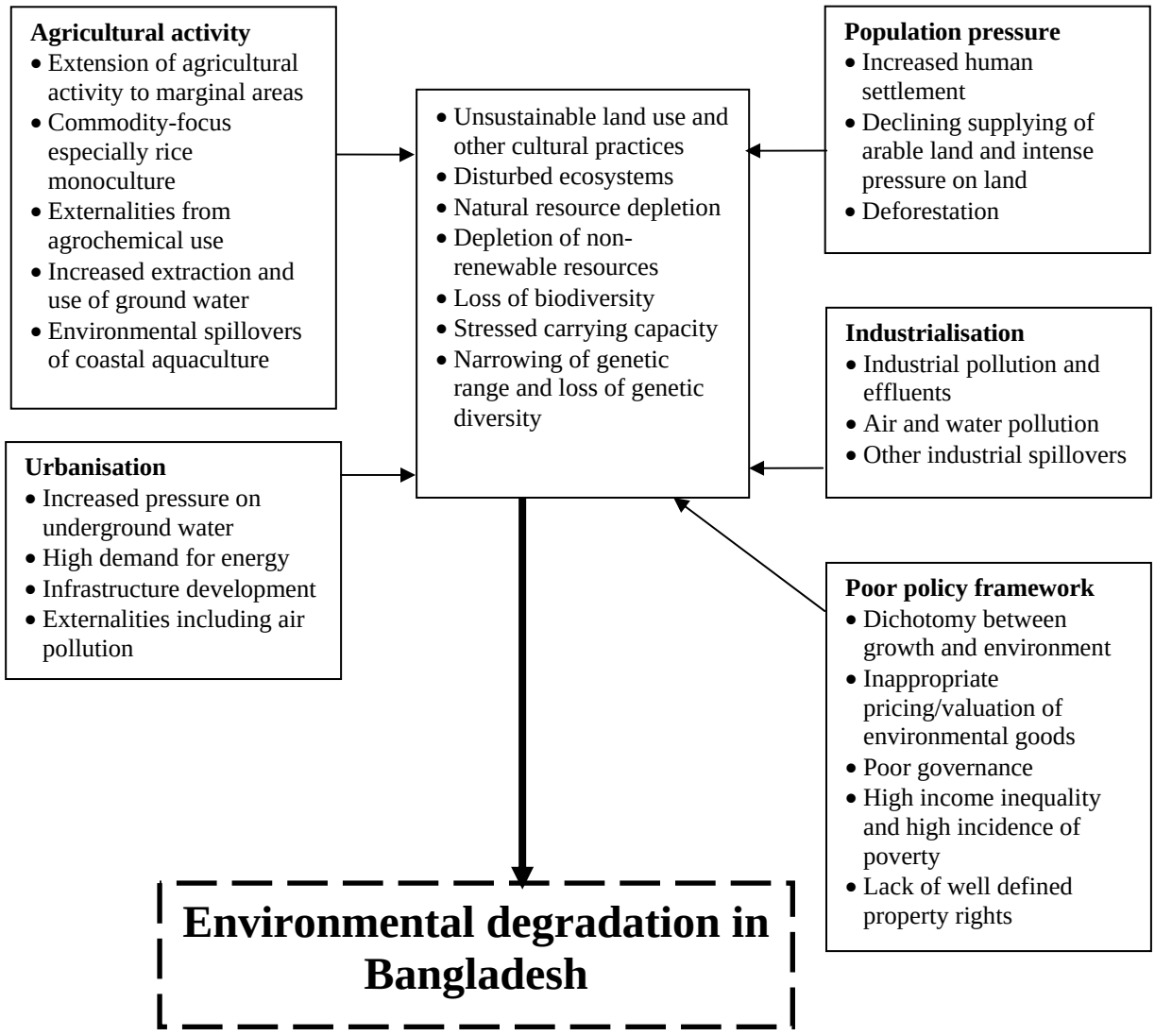

Figure 1: Schematic Representation of the Environmental Consequences Development: Insights from Bangladesh (*Source*: Adapted from Alauddin 2004).

Environmental problems in rural Bangladesh have manifested themselves in the form of degradation in the land and water resource systems. Due to intense population pressure the net cropped area (the area actually cultivated) has declined over the years while the effective (gross cropped) area has increased significantly due to increased frequency of cropping during one calendar year (for further details see Alauddin 2004).

The introduction of the new agricultural technology has led to a considerable increase in water use for crop production. The phenomenal increase in land area irrigated has been due primarily to increases in the use of both surface water and groundwater. The use of surface water for irrigation has increased only slowly from just over 1 million hectares in the late 1960s to around 1.2 million hectares over a period of three decades, to the late 1990s. Over the same period, the area under groundwater irrigation has registered a spectacular 76-fold increase from 32,600 hectares to about 2.5 million hectares.

Closely related to the increased pattern of ground–surface water use in Bangladesh is the phenomenal increase in the area irrigated by modern methods (shallow and deep tube wells, low-lift pumps and large-scale canal irrigation). As a consequence, the ratio of the area irrigated by modern methods (labour-saving) to the area irrigated by traditional methods (labour-using) has shown a spectacular increase from about 53 per cent in 1969–70 to more than 900 per cent in 1996–97.

To a significant extent underground water is a non-renewable resource. While irrigation is regarded as an internal land-augmenting input that enhances land quality (Peterson 1987; Hayami and Ruttan 1985), wastage and overuse is likely to limit the capacity to use this vital resource and sustain land quality in the longer term given the disturbing trend of the extraordinary growth in groundwater irrigation in absolute terms as well as relative to surface-water irrigation and land degradation (see for example, Prescott-Allen 2001, pp.198-200).

On the whole, therefore, agricultural growth in Bangladesh has entailed significant environmental damages. It seems clear that Bangladesh has failed to fully appreciate the value of environment as a factor of production. This may have resulted from both market failure and policy failure (Alauddin and Hossain 2001; see also Figure 1 above). The dominant discourse has assumed a very high degree of substitutability between environmental capital and man-made capital. While this may be consistent with the conditions of weak sustainability, there is little

evidence to support this position. The high environment environment-intensity of agricultural production in Bangladesh is reminiscent of factor proportions problems espoused by Eckaus (1955, pp.539-40). The fragility of the physical environment exposed by the growth process has the potential to limit output to sustain a growing population. Unless corrective measures are taken in the near future the production function may shift inward typifying an outward shift of the production isoquant requiring more inputs to for the same level of output or less output for the same level of inputs (Alauddin 2003b, p.449). Preliminary evidence from Bangladesh indicates considerable loss of potential output of rice due to environmental degradation (see for example, Pagiola 1995, p.31-32, Aasaduzzaman and Toufique 1997, p.460-64).

Table 10 sets out the extent and sources of water pollution in South Asia over the 1980-97 period. Throughout South Asia, emissions of organic pollutants have increased significantly. India emits nearly five times organic pollution as the rest of South Asia. During the period under consideration, Bangladesh experienced the fastest rate of growth with a trebling of the emissions of organic pollutants.

Table 10: The extent and sources of water pollution in South Asia, 1980-97

A: Extent of water pollution

Country	Emissions of organic pollutants			
	Kilograms per day		Kilograms per day per worker	
	1980	1997	1980	1997
Bangladesh	66 713	186852	0.16	0.16
India	1422564	1664150	0.21	0.19
Nepal	18692	26550	0.25	0.14
Pakistan	75125	114726	0.17	0.18
Sri Lanka	30086	55665	0.18	0.17

B: Sources of water pollution

Country	Percentage shares of industry in emissions of organic water pollutants (1997)							
	Primary metals	Paper & pulp	Chemicals	Food & beverage	Stone ceramics & glass	Textiles	Wood	Others
Bangladesh	2.8	6.8	3.5	34.2	0.1	50.9	0.6	1.1
India	15.5	7.5	8.2	51.5	0.2	11.6	0.3	5.2
Nepal	1.5	8.1	3.9	43.3	1.2	39.3	1.7	1.0
Pakistan	14.1	5.8	7.3	39.5	0.2	30.1	0.3	2.7
Sri Lanka	1.2	8.9	7.2	42.2	0.2	38.3	0.7	1.3

Source: World Bank (2000, pp.134-37).

In South Asia with the exception of Bangladesh and India, food and beverage industry is the greatest source of water pollution. For Bangladesh, textiles are the singularly responsible for more than 50 per cent of the industry emission of organic water pollutants followed closely by the food and beverage industry. In India, textiles contribute more than 11 per cent of the same. In South Asia (India excepted) major export earners, textiles, are also the greatest contributor to water pollution. This underscores South Asia's development dilemma. Bangladesh is no exception.

5 FURTHER OBSERVATIONS

Tables 11 to 14 present information on some socio-economic indicators of recent development in the Bangladesh economy. In terms of human development indices Bangladesh is almost at the bottom of the ladder. The incidence of human poverty index is quite high in Bangladesh and has changed only marginally in the late 1990s. There has been a higher decline of poverty in urban areas as compared to rural areas. Thus the urban sector appears to have benefited more from the development process than the rural sector. As Tisdell and Alauddin (2003, p.198) observe:

> Bangladesh's market-oriented reforms have not been associated with a reduction in the incidence of rural poverty. At the same time, however, there may have been a reduction in the incidence of urban poverty. … Furthermore, even if a reduction in the incidence of urban poverty happened to be associated with the increasing openness of Bangladesh's economy, it would be necessary to specify the nature of the association, that is, to what extent a causal relationship exists and the nature of the causal connection, if any.

Table 11: Human development related indicators

Year	Human Development Index (HDI)	Human Poverty Index (HPI)
1990	0.412	
1991	0.364	
1992	0.309	
1993	0.365	
1994	0.368	48.3
1995	0.371	46.5
1997	0.440	44.4
1998	0.461	43.6
1999	0.440	43.3
2000	0.478	42.4
2001	0.502	42.6

Source: Tisdell and Alauddin (2003, p.196); UNDP (various issues).

Table 12: Percentage of rural and urban population in poverty in Bangladesh for selected years

Year	Rural	Urban
1973-74	47.7	32.3
1976-77	62.3	37.4
1983-84	53.8	40.9
1985-86	45.9	30.8
1988-89	49.7	35.9
1991-92	52.9	33.6
1995-96	51.1	26.3
2000		

Source: BBS (1998, p.638; 2003, p.697); Tisdell and Alauddin (2003,p.196).

Table 13: Percentage share of population below poverty line by size of owned land (acres) in rural Bangladesh

Size of owned land	Absolute poverty (2122 kcal/day/person)		Hard-core poverty (1805 kcal/day/person)	
	1995-96	1991-92	1995-96	1991-92
Landless	66.0	69.7	44.3	54.5
0.01-0.49	58.0	59.4	32.2	36.8
0.50-1.49	40.8	43.6	20.4	23.9
1.50-2.49	33.7	37.4	14.9	19.0
2.50-7.49	32.1	33.0	113.2	17.7
7.50 +	20.5	19.5	7.1	9.7
All groups	47.1	47.6	24.6	28.3

Source: Adapted from Tisdell (2003, p.198).

Table 14: Food, calorie and protein intakes in Bangladesh (selected years)

Year	Per capita daily intakes			
	Food (grams)	Fish (grams)	Calorie (kcal)	Protein (grams)
1985-86			2196	63.50
1991-92	886.2	34.5	2266	62.72
1995-96	913.8	43.8	2244	64.96
2000	893.1	38.5	2240	62.50

Source: Adapted from Tisdell and Alauddin (2003, p.198).

Further indicators of the incidence of rural poverty are provided in Table 13. While the incidence of hard-core poverty has declined for all classes between the early and mid-1990s, the decline in absolute poverty is relatively slow. As for nutrition, calorie and protein intakes the results are mixed (Table 14).

6. CONCLUDING COMMENTS

The overall impact of the changes stemming from the reforms has been mixed (see for example, Sobhan 1996; Jahan 1998; Hossain and Aauddin 2005). The transition from state-run monopoly to privatisation may have led to a more rational allocation of resources in the agricultural sector. However, the distributional consequences of these changes in this sector have not necessarily been equitable (Jahan 1998). As for export performance, while results seem encouraging in terms of its growth, exports are highly concentrated. The manufacturing sector has shown few signs of increases in productivity. The lack of product diversification together with the present state of low export market diversification may, however, render the Bangladesh external sector vulnerable to serious external shocks. There is evidence of reduction in hard-core poverty even though there is little evidence of improvement in human development and related indices. Furthermore, the development process has entailed significant environmental costs exposing the fragility of Bangladesh's physical environment. This chapter also finds evidence of significant environmental damage originating from the export oriented industries in Bangladesh.

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