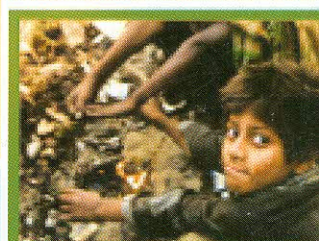
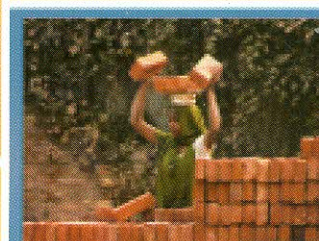
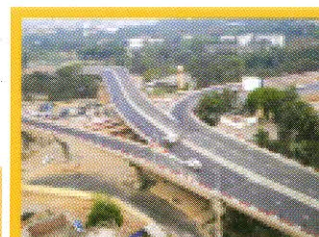
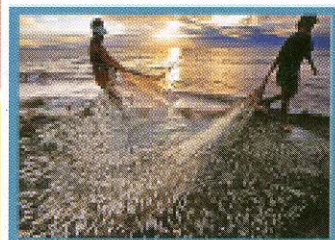
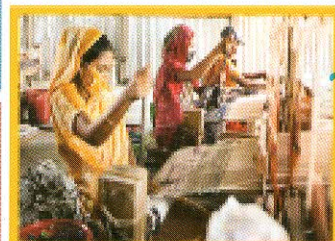
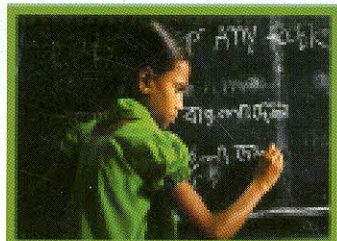
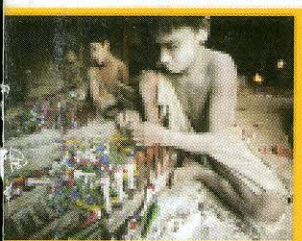
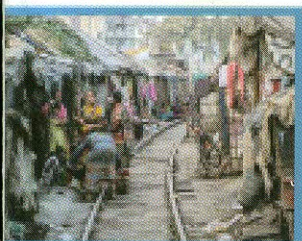
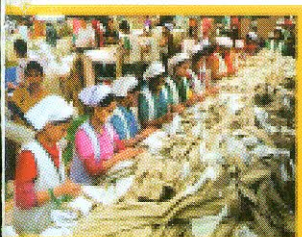




Poverty and Inequality in Bangladesh:

Journey Towards Progress

(2014-2015)



Macroeconomic Wing
Finance Division, Ministry of Finance
Government of the People's Republic of Bangladesh

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Foreword

The booklet titled 'Poverty and Inequality in Bangladesh: Journey towards Progress' is being placed for the second time in the budget session of Parliament. In this booklet, an attempt has been made to present elaborately the state of poverty, growth, social disparity and inequality in allocation of resources in Bangladesh by analyzing relevant information and data with respect to domestic and international perspective.

The present government has placed alleviation of poverty and elimination of all forms of disparity at the forefront of its development strategy. In order to graduate Bangladesh to a middle income country, the government is working towards achieving high growth with income and human poverty brought to the minimum level. To this end, a long term Perspective Plan (2010-2021) has been prepared to be implemented through two five-year plans, of which implementation of the Sixth Five-Year (2011-15) Plan is already underway. Besides, each of the budgets placed by the government also served as a tool for reaching these goals.

Poverty in Bangladesh has witnessed significant decline under the inclusive growth strategy embraced by the government. Growth in a developing economy usually contributes toward widening the gap between the rich and poor. Mainstreaming this backward section of the population in economic prosperity, therefore, is a big challenge. Bangladesh has been fairly successful in confronting that challenge.

Increased investment is a precondition for economic development. The government has taken up many initiatives to invest more and to create employment. At the same time, it is working relentlessly to develop physical infrastructure and human capital along with technological advancement to facilitate private investment. Side by side, scope of social safety net, both in the number of beneficiaries and their diversity, has been considerably widened to bring down poverty rate to a tolerable limit. Efforts to reduce regional disparity are continuing. According to the Household Income and Expenditure Survey, 2010 of Bangladesh Bureau of Statistics, about 24.5 percent of the total population has been brought under the social safety net programs.

People below the poverty line decreased from 56.7 percent in 1991-92 to 48.9 percent in 2000. Hereafter the decline was at faster rate, in 2010, it came down to 31.5 percent. In other words, while poverty decreased at an average rate of 1.8 percent in the 90s, it decreased at an average rate of 4.3 percent during the last decade. Particularly, the rates of

economic growth during these two decades were 4.9 percent and 5.8 percent respectively. Substantial improvement took place in the indicators of both poverty gap and squared poverty gap; poverty gap is the average shortfall of the total population from the poverty line and indicates the gap between poverty line and the average income of the poor population while squared poverty gap indicates the income gap among the income of the poor themselves. Poverty gap decreased from 17.2 percent in 1991-92 to 12.8 percent in 2000, and in 2010, it stood at 6.5 percent. Similarly, squared poverty gap decreased from 6.8 percent to 4.6 percent respectively, and stood at 2 percent in 2010. Consumption Gini Coefficient came down from 0.33 in 2000 to 0.32 in 2010, which is indicative of reduction in social disparity. During the same period, the average rates of economic growth were 5.4 percent and 6.2 percent respectively. We can surmise from these statistics that economic growth played a strong role in poverty reduction in Bangladesh.

In addition to analyzing the state of poverty at national and regional levels, this booklet presents government's policy strategy for the reduction of poverty and inequality as well as Bangladesh's performance compared to other developing economies. I hope this booklet will make important contribution in devising poverty reduction plans and their implementation in both public and private sectors.

I cordially thank all organizations including the World Bank and Bangladesh Bureau of Statistics (BBS) for the use of their data in this booklet. Finally, I put on record my sincere appreciation for the officers and other members of the staff at Finance Division who were engaged in preparing this informative booklet.



Abul Maal Abdul Muhith
Minister
Ministry of Finance

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1.0 Introduction and Background

- 1.1 The present government is firmly committed to building a hunger-free humane society by eradicating the shame of poverty. The main objective of Vision-2021 is to build a happy, prosperous and caring Bangladesh by establishing an exploitation and poverty free society where any social disparity is non-existent. The economy then has to be on a trajectory of higher growth dependent on improved technology. As a result, income poverty and human poverty will come down to a minimum level. These aspirations for building hunger and poverty- free country have been elaborated in Vision-2021 and the Sixth five-year plan. The election manifesto, in fact, clearly states bringing down the poverty rate to 13 percent as the main goal of the poverty strategy. In Vision -2021, the target for bringing down poverty rate by 2021 has been set at 13 percent, which will be accompanied by 10 percent economic growth. The annual rate of reduction of poverty in Bangladesh has already risen from 1.7 percent to 2.4 percent. Unprecedented improvement in economic as well as social indicators has contributed to the speedy reduction of poverty. Acknowledging this development, Amartya Sen, the Bengali Nobel Laureate economist, has profusely lauded Bangladesh's achievement in various social indicators in his book 'Uncertain Glory: India and its Contradictions'.¹
- 1.2 Bangladesh has made remarkable progress in the MDG targets of halving the rate of extreme poverty and hunger. The poverty rate which was 56.6 percent in 1990 dropped to 31.5 percent in 2010. Hopefully, the target of reducing poverty to 29 percent by 2015 will be reached ahead of the 2015 deadline. It is noteworthy that the estimated national poverty for 2014 already stands at 24.3 percent which implies Bangladesh has already achieved this MDG target. In fact, poverty gap has dropped to 6.5 percent by 2010 as against the target of 8.0 percent set for 2015. Persistent initiatives of government since independence not only consistently accelerated poverty reduction, but also helped narrow down the gap between rich and poor by ensuring equitable distribution of income.
- 1.3 The Vision-2021 has set the target of bringing down the number of people below poverty line to 25 million from the current 46 million. In addition, targets have also been set up to ensure a minimum intake of 2,122 k.cal/person/day of food for all and standard nutritional food to at least 85 percent of the population by 2021.

¹ "Over the last two decades India has expanded its lead over Bangladesh in terms of average income (it is now twice as rich in income per capita as Bangladesh), and yet in terms of many typical indicators of living standards (other than income per head), Bangladesh not only does better than India, it has a considerable lead over it (just as India had, two decades ago, a substantial lead over Bangladesh in the same indicators)"

- 1.4 A variety of researches on poverty and inequality in Bangladesh have been conducted by different organizations and institutions engaged in economic and social research. However, there was hardly any government initiative in exploring the nature of poverty and inequality. Last year Finance Division brought out a booklet to present briefly achievements so far made in reducing poverty and inequality along with the reasons that made those achievements possible. This booklet is in continuation of that effort. In this version, while comparing the state of poverty in Bangladesh against global perspective, data of 146 countries has been considered, instead of 109 countries' previously used. Besides, a new chapter titled 'Characteristics of Poverty and Inequality in Bangladesh' has been added. Definitions and measurement methods of poverty have been described in simple language in a new box added to the second chapter. With all other chapters remaining the same, the contents have been presented in a new style. This implies that the present booklet is a revised and updated version of the previous publication.
- 1.5 Data and statistics published in different "Household Income and Expenditure" surveys of Bangladesh Bureau of Statistics have been used throughout the booklet. For analyzing poverty from global perspective, the World Bank's 'World Development Indicator, 2013' data bank has been used. Besides utilizing standard techniques of poverty economics and statistical measures such as central tendency, standard deviation etc. modern econometric approach has been adopted in analyzing poverty in this booklet.

2.0 Measuring Poverty in Bangladesh

- 2.1 Bangladesh Bureau of Statistics (BBS) assesses the current state of poverty and inequality by Household Income and Expenditure Survey (HIES). The first Survey was conducted in 1973-74 and the latest one was done in 2010. Bangladesh Bureau of Statistics prepares various indicators to measure poverty and inequality on the basis of data collected through HIES. Bangladesh Bureau of Statistics has been using Cost of Basic Needs (CBN) method to measure poverty since 1995-96. In this method, two poverty lines, namely lower poverty line and upper poverty line, are measured in three stages. In order to measure these poverty lines, at the first stage, food poverty line is determined by calculating the cost of a fixed bundle of foodstuff (11 items of foodstuff, viz., rice, wheat, pulse, milk, edible oil, meat, sweet water fish, potato, vegetables, sugar and fruits) which provides the minimal nutritional requirements for a diet corresponding to 2122 k.cal per day per person. At the second stage, two different income lines capable of meeting the minimum demand for non-food consumptions are computed. The first one is lower non-food allowance and the second one is upper non-food allowance. The median amount spent on non-food items by households whose total consumption is approximately to their food poverty line is known as lower non-food allowance. On the other hand, the amount spent on non-food items by households whose food consumption is approximately equal to their food poverty line is known as upper non-food allowance. At the final stage, lower poverty line is estimated by adding food poverty line with lower non-food allowance while upper poverty line is estimated by adding food poverty line with upper non-food allowance.
- 2.2 The position of the families whose total consumption expenditure is equal to, or, below food poverty line is considered equal to or below lower poverty line. Similarly, the position of the families whose food consumption equals food poverty line and total expenditure equals or below upper non-food allowance is considered equal to, or, below upper poverty line. Therefore, in terms of consumption, all the families falling below upper poverty line are considered poor, while families falling within or below lower poverty line are considered extreme poor.
- 2.3 In addition to quantitative measurement of poverty, Bangladesh Bureau of Statistics also prepares indices of poverty gap and squared poverty gap to explain the qualitative aspect of poverty. Headcount index basically gives us the number of poor families in a given population without revealing the depth or severity of poverty. The depth of poverty can be understood with the help of poverty gap indicator while squared poverty gap indicator explains the severity of poverty.

Box 1: Definition and Measurement of Poverty

Definition of Poverty

Generally, poverty occurs when people cannot obtain adequate resources to support a minimum standard of living that is considered acceptable in society. In fact, poverty is a multi-dimensional concept, not easy to define. According to World Bank (2000), "Poverty is pronounced deprivation in well-being". However, there exists extensive debate on what brings human well-being. The command over goods and services is an important indicator of a person's well-being; in other words, well-being is positively associated with greater command over resources by a person or household. On this account, income or expenditure of a person or household is compared with a defined amount of income or expenditure in measuring poverty. This analysis considers poverty only as a monetary phenomenon.

Another indicator of well-being is whether a person is capable of obtaining any specific type of goods or services. In other words, whether he/she has adequate food, shelter, health, and education services at his/her disposal. Amartya Sen (1987) has given a comprehensive framework for conceptualizing human well-being as well as poverty. He argues that a person's welfare comes from his engagement in social activities, and dearth of capabilities begets poverty. Indeed, when an individual lacks capabilities, he feels deficiency of adequate income, education, health services, security, self-confidence, morale, and freedom of speech. In this view, poverty has been identified as a multi-dimensional phenomenon and no easy solution exists. Therefore, enhancing average income accompanied with measures for empowering the poor is indispensable for poverty reduction. In addition, the poor need to be made capable of addressing any risks or specific shortcomings.

Measurement of Poverty

Poverty needs to be measured to ensure proper follow-up of poverty, implement targeted programmes on poverty reduction by identifying poor households, evaluate projects for poverty reduction, and assess effectiveness of associated organizations. The first step of measuring poverty is to set a yardstick of welfare. Per capita income or consumption expenditure can be used as a benchmark for measuring welfare. Information on individual's welfare is available through surveys. In a developing country, income of an individual is considered equal to total consumption expenditure and change in net worth for a certain period of time. However, this income is seriously understated in this case. On the other hand, consumption expenditure in least-developed countries is almost equal to permanent income, thereby is not undervalued much. However, it requires that for valuing durable goods implicit rental costs are included. Household needs vary from family to family size and on account of family members' age composition. On this ground, while using per capita consumption or income as an indicator of welfare, it is sensible to use adult equivalents based on an appropriate scale. Other popular measures of welfare include calorie consumption per person per day; food consumption as a proportion of total expenditure; and nutritional status. As there is no ideal measure of well-being in true sense, whatever indicators are used to measure poverty we need to be aware of their strengths and weaknesses while using them for poverty analysis.

- 2.4 Bangladesh Bureau of Statistics publishes a detailed picture of income distribution for understanding indices relating to absolute poverty as well as relative poverty. At the same time, it measures consumption Gini index and income Gini index. In this report, poverty and inequality situation of Bangladesh is analyzed using trends of poverty indices for national and regional level (by administrative divisions) with rural and urban break down.

Box 2: Key Poverty Indices

Aggregate measures on poverty can be determined if per-capita consumption of the whole population and the poverty line income are known. Following the World Bank Poverty Manual, 2005, some important measures of poverty indices are discussed below:

1. **Headcount Index:** It measures the proportion of the population that is counted as poor. Let's assume P_0 is headcount index of a country. Then

$$P_0 = \frac{N_p}{N} \dots\dots\dots(1)$$

where N_p is the number of poor and N is total population. For example, 150 families are poor in a survey that samples 500 family, then P_0 is 0.30 or 30 percent. We can also write equation 1 in the following way

$$P_0 = \frac{1}{N} \sum_{i=1}^N I(y_i < z) \dots\dots\dots(2)$$

Here $I(.)$ is an indicator function which takes on a value 1 and 0. If the bracketed expression is true, then it takes on a value 1 and 0 otherwise. Therefore, if expenditure (y_i) is less than the poverty line (z), then $I(.)$ equals to 1 and the household would be counted as poor. The headcount index is simple to measure and easily understandable, however it has at least three weaknesses. Firstly, it does not take depth of poverty into account which can be easily understandable using the following table.

Headcount rates in Country A and B (Poverty line=500)					
	Expenditure of each household				Headcount Poverty Rate (P_0)
Country A	100	150	600	600	50%
Country B	495	498	600	600	50%

It is clear that depth of poverty is higher in country A, though headcount rate is the same in both countries. Secondly, the headcount index does not indicate how poor the poor are, in other words, headcount rate does not change even when the poor households become poorer. Thirdly, headcount index is mostly calculated for households. If 30 percent households are poor, then 35 percent of the population might be poor (if poor households are relatively large in size).

- 2.0 **Poverty Gap:** This index measures the extent to which average expenditure of poor households falls short of the poverty line. It is expressed as a percentage of the poverty line. More specifically, poverty gap is defined by subtracting actual income of poor households from the poverty line and the gap will be zero for everyone else. Using the index function, it can be expressed as:

$$G_i = (z - y_i) \cdot I(y_i < z) \dots\dots\dots(3)$$

In this case, the poverty gap index (P_1) can be written as

$$P_1 = \frac{1}{N} \sum_{i=N}^N \frac{G_i}{z} \dots\dots\dots(4)$$

Poverty gap index is 'mean proportionate' where non-poor have zero poverty gap. The poverty gap index helps measure the minimum cost of eradicating poverty; in other words, the sum of poverty gaps of the poor population is equal to total required transfers for eradicating poverty completely. Yet, the undesirable feature of this index is it ignores the severity of poverty. Generally, income transfer from a poor household to a less poor household should effect the poverty measurement indices; though, poverty gap index ignores such transfer..

3. **Squared Poverty Gap:** In order to remove the drawbacks of poverty gap index, the squared poverty gap index is calculated. This index shows inequality in income distribution among the poor. This is simply a weighted sum of poverty gaps where the weights are the poverty gaps themselves. In other words, a poverty gap of (say) 10% of the poverty line is given a weight of 10% while one of 50% is given a weight of 50%. Therefore, by squaring the poverty gaps, the measure gives more weight on observations that fall well below the poverty line. The following formula represents poverty severity or squared poverty gap index:

$$P_2 = \frac{1}{N} \sum_{i=N}^N \left(\frac{G_i}{z}\right)^2 \dots\dots\dots(5)$$

These three measures of poverty basically originated from the following general index proposed by Foster, Greer, and Thorbecke (1984)

$$P_\alpha = \frac{1}{N} \sum_{i=N}^N \left(\frac{G_i}{z}\right)^\alpha, (\alpha \geq 0) \dots\dots\dots(6)$$

where α is a measure of the sensitivity of the index to poverty, and z is the poverty line. If the income or expenditure of i -th household is x_i , then the poverty gap for household 'i' is $G_i = z - x_i$ ($G_i = 0$ when $x_i > z$). If $\alpha = 0$, P_0 is the head-count index. When $\alpha = 1$, the index is 'poverty gap' or P_1 , and when α is equal to 2, then P_2 represents the poverty severity index. In this way, poverty gap and poverty severity as complementary to headcount rate help understand overall poverty situation of a country

3.0 Trends in Poverty Reduction in Bangladesh

- 3.1 Bangladesh has set an example of unprecedented success in poverty reduction in the whole world. Indeed, the progress began with the restoration of democracy in 1990. In 1992, Bangladesh had a population size of 112.4 million. Of which 63.7 million or 56.7 percent were poor and 41.1 percent or 46.2 million people were extreme poor. Subsequently, every year on an average 1.60 percent and 3.02 percent people were able to rise above the poverty and extreme poverty lines, respectively. Eventually, in 2010, the number of poor people dropped to 47.6 million (or 31.5 percent of the total population) and that of extreme poor people to 26.6 million (or 17.6 percent of the total population). Notably, annual population growth during this period was 1.66 percent per annum. Yet, the vigorous pace of poverty reduction led to gradual fall in the number of people living below the poverty line.

Headcount Index

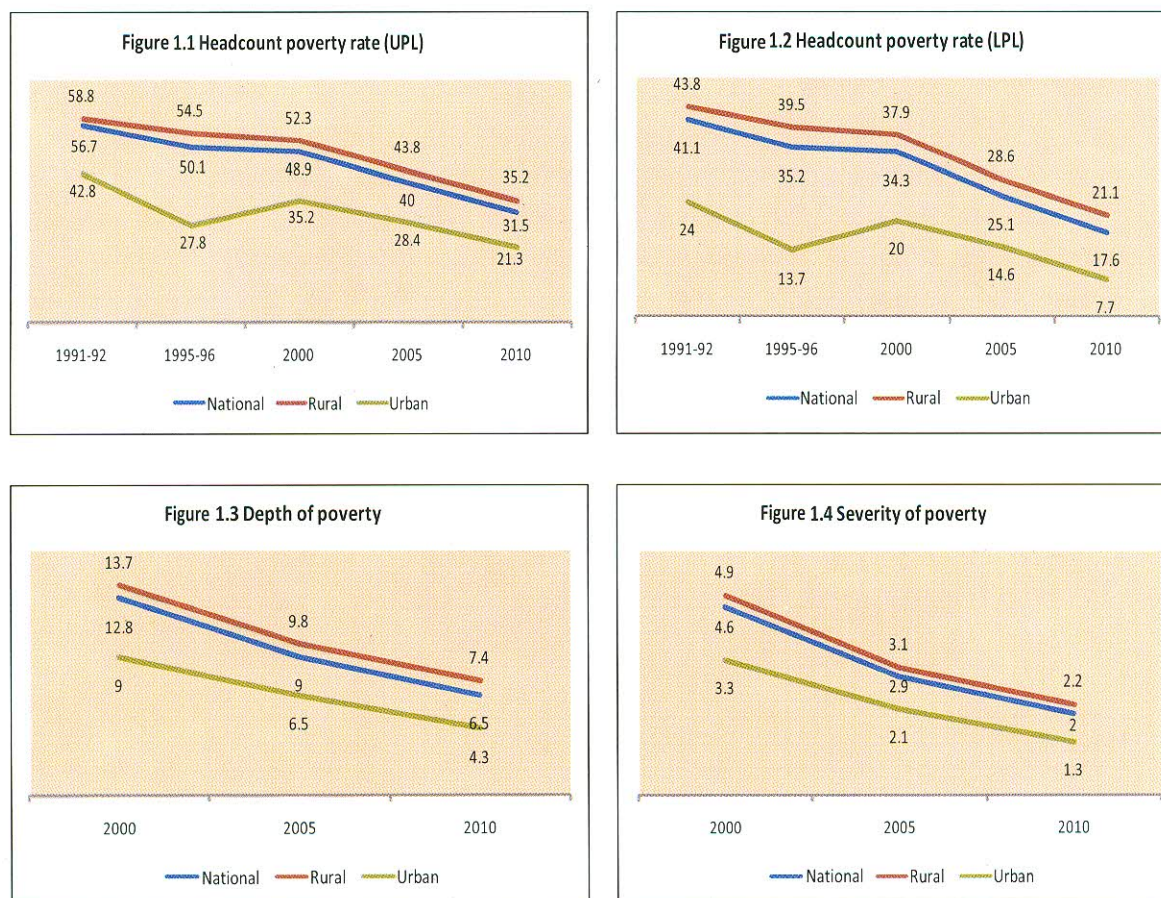
- 3.2 **National Level:** According to Bangladesh Bureau of Statistics, the number of people living below the upper poverty line was 56.7 percent of total population in 1991-92 whereas 41.1 percent of the total population was living under the lower poverty line. In 2010, these proportions came down to 31.5 and 17.6 percent respectively. Indeed, during 1991-2010, headcount index fell by on average 3.21 percent per year in case of Upper Poverty Line, and it was 4.6 percent per year for Lower poverty line. According to HIES 2010, for the period 2005-10, annual rate of poverty reduction were 4.67 percent and 6.85 percent, for upper and lower poverty lines respectively. These annual rates are higher than the long-term (1992-2010) average rates of 3.21 percent and 4.60 percent respectively.
- 3.3 **Rural Level:** In terms of upper poverty line, about 58.8 percent population in rural areas was poor in 1991-92, which fell to 35.2 percent in 2010 at 2.81 percent average annual decline. In terms of lower poverty line, headcount index fell from 43.8 percent to 21.1 percent at an annual rate of 3.98 percent. During 2005-2010, poverty and extreme poverty rates declined by 4.28 and 5.90 percent respectively both of which were higher than long-term (1991-2010) averages (i.e., 2.81 percent and 3.98 percent respectively).

Table 1: Headcount Poverty Rate (CBN Method)

Year	Upper Poverty Line			Lower Poverty Line		
	National	Rural	Urban	National	Rural	Urban
2010	31.5	35.2	21.3	17.6	21.1	7.7
2005	40.0	43.8	28.4	25.1	28.6	14.6
2000	48.9	52.3	35.2	34.3	37.9	20.0
1995-96	50.1	54.5	27.8	35.2	39.5	13.7
1991-92	56.7	58.8	42.8	41.1	43.8	24.0

Source: HIES, 2005 and 2010, Bangladesh Bureau of Statistics

Figure 1: Trends in Poverty Reduction



Source: Bangladesh Bureau of Statistics

3.4 Urban Level: Poverty headcount rate has always been lower in urban areas in comparison with rural areas. In 1991-92, about 42.8 percent of families in urban areas were living below upper poverty line which declined at an annual rate of 3.80 percent and dropped to 21.3 percent in 2010. On the other hand, with respect to lower poverty line, poverty headcount rate declined from 24.0 percent in 1991-92 to 7.7 percent in 2010 at an annual rate of 6.12 percent. During 2005-2010, poverty and

extreme poverty rates dropped by 5.59 and 12.01 percent respectively. In other words, poverty declined at record-high rates during this period.

Table 2: Annual Percentage Change in Headcount Index

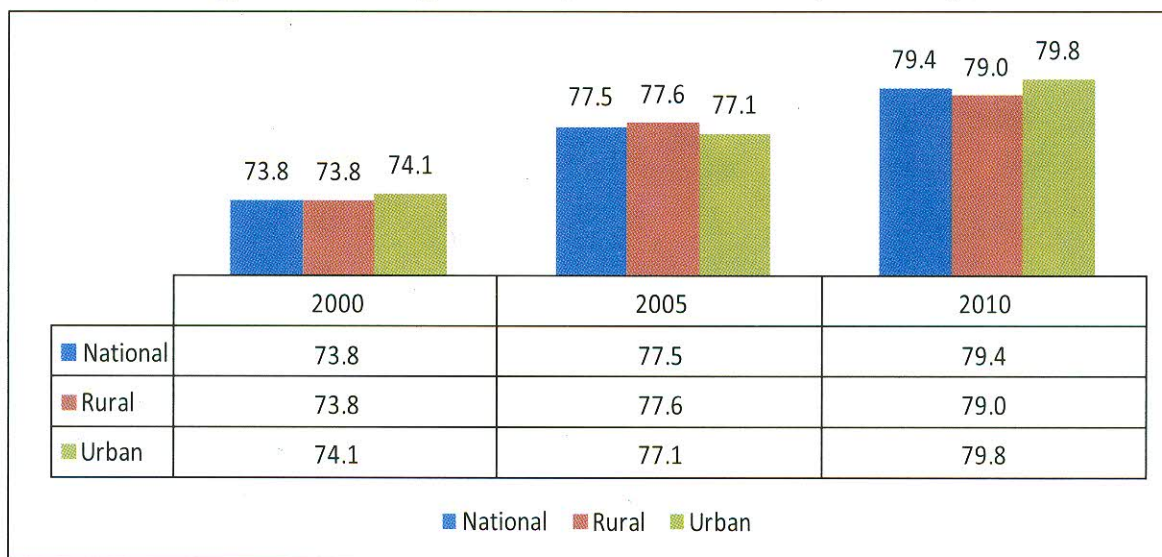
Poverty line	Region	1992-1996	1996-2000	2000-2005	2005-2010	1992-2010
Upper poverty line	National	-3.05	-0.60	-3.94	-4.67	-3.21
	Rural	-1.88	-1.02	-3.49	-4.28	-2.81
	Urban	-10.23	6.08	-4.20	-5.59	-3.80
Lower poverty line	National	-3.80	-0.65	-6.05	-6.85	-4.60
	Rural	-2.55	-1.03	-5.48	-5.90	-3.98
	Urban	-13.08	9.92	-6.10	-12.01	-6.12

Source : Estimated from Bangladesh Bureau of Statistics data

Poverty Gap: Depth of Poverty

- 3.5** Apart from the decline in poverty headcount ratio, depth of poverty has also declined in both rural and urban areas. In other words, the dispersion of average income (from the poverty line) of the poor also reduced. The following Figure 2 depicts a comparative situation of poor household's consumption expenditure vis a vis the upper poverty line.

Figure 2: Average Consumption of the Poor (% of UPL)



Source: Bangladesh Bureau of Statistics

The figure shows that at the national level, average consumption of the poor was 73.8 percent of the upper poverty line in 2000 which elevated to 77.5 and 79.4 percent in 2005 and 2010, respectively. In the same way, during this period, average consumption expenditure of poor households increased in comparison with poverty line income in both rural and urban areas.

- 3.6 **National Level:** In recent times, the depth of poverty has declined considerably in Bangladesh. In terms of lower poverty line, poverty gap declined from 7.5 percent in 2000 to 4.6 percent in 2005. It further reduced to 3.1 percent in 2010. In terms of upper poverty line, poverty gap was 12.8, 9.0, and 6.5 percent in 2000, 2005 and 2010 respectively. The poverty gap in Bangladesh was halved between 2000 and 2010 (Table 3 and Figure 3.1). At the national level, it was 16 percent in 1990, and an important MDG target was to bring it down to 8 percent by 2015. In fact, Bangladesh attained this target five years ahead of the deadline.
- 3.7 **Rural Level:** The poverty gap in rural areas has declined at a substantial rate. In 2005, it was 9.8 and 5.3 percent respectively with respect to upper and lower poverty lines, which gradually dropped to 7.4, and 3.7 percent respectively in 2010 (Table 3 and Figure 3.2).
- 3.8 **Urban Level:** The poverty gap in urban areas also narrowed remarkably. The poverty gap in urban areas, in terms of upper and lower poverty lines, was 6.5 and 2.6 percent respectively in 2005, which dropped to 4.3 and 1.3 percent respectively in 2010 (Table 3 and Figure 3.3). It is noteworthy that the depth of poverty in urban areas has declined at a faster rate than in rural areas.

Squared Poverty Gap: Severity of Poverty

For a more holistic understanding of poverty incidence, severity of poverty must be understood along with its depth. The severity of poverty is measured by the squared poverty gap index. This index reflects changes in inequality among the poor. A decline in the index value over a specific period indicates a reduction in income inequality among the poor (Figure 3).

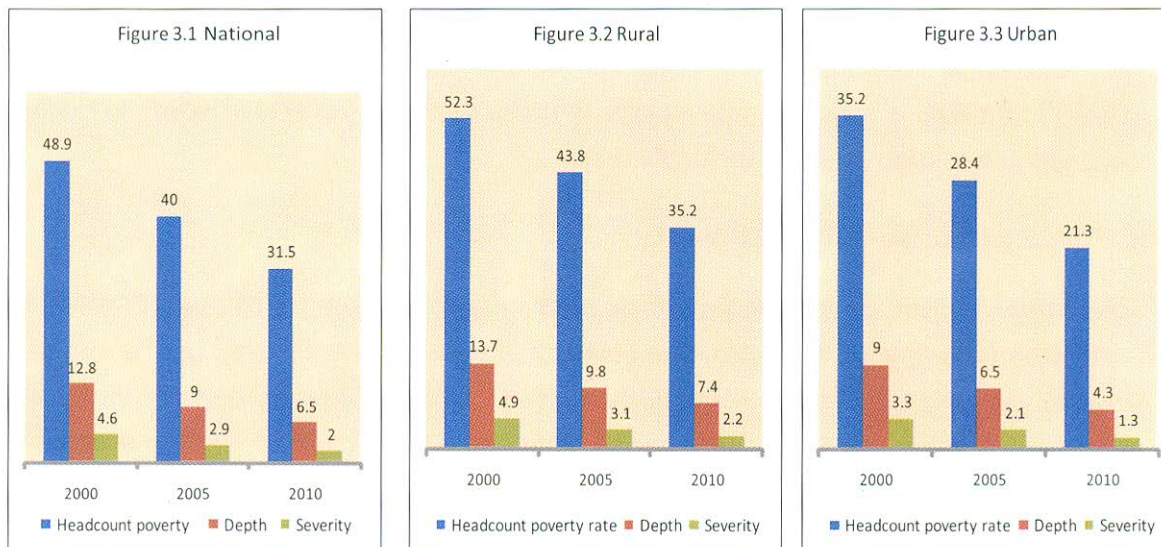
- 3.9 **National Level:** The severity of poverty has seen drastic reductions in recent times. In terms of the lower poverty line, the severity of poverty has declined from 1.3 percent in 2005 to 0.8 percent in 2010. With respect to the upper poverty line, it was 2.9 and 2.0 percent respectively (Table 3 and Figure 3.1).
- 3.10 **Rural Level:** Poverty severity fell significantly in rural areas. In the rural areas, it was 3.1 and 1.5 percent with respect to the upper and lower poverty lines which eventually declined to 2.2 and 1.0 percent respectively in 2010.
- 3.11 **Urban Level:** The poverty severity in urban areas has also decreased remarkably. In 2005, in terms of upper and lower poverty lines, poverty severity was 2.1 and 0.7 percent, respectively which further came down to 1.3 percent and 0.4 percent, respectively in 2010.

Table 3: Depth and Severity of Poverty (Upper poverty line)

Poverty line	Level	Poverty gap			Square poverty gap		
		2000	2005	2010	2000	2005	2010
Upper poverty line	National	12.8	9.0	6.5	4.6	2.9	2.0
	Rural	13.7	9.8	7.4	4.9	3.1	2.2
	Urban	9.1	6.5	4.3	3.3	2.1	1.3
Lower poverty line	National	7.5	4.6	3.1	2.4	1.3	0.8
	Rural	8.3	5.3	3.7	2.6	1.5	1.0
	Urban	4.1	2.6	1.3	1.2	0.7	0.4

Source: HIES, 2005 and 2010, Bangladesh Bureau of Statistics

Figure 3: Depth and Severity of Poverty (UPL)



Source: HIES, 2005 and 2010, Bangladesh Bureau of Statistics

4.0 Regional Poverty in Bangladesh

- 4.1 Regional disparity is evident in the incidence of headcount poverty. The regional poverty headcount ratio measured in upper poverty line ranged from 39.4 percent (Barisal) to 26.2 percent (Chittagong) in 2010 though it was 31.5 percent at the national level. In rural areas, headcount rate ranged from 39.2 percent (Barisal) to 30.5 percent (Sylhet), whereas it varied from 39.9 percent (Barisal) to 11.8 percent (Chittagong) in urban areas. It is worth mentioning that regional variation in headcount ratio is higher in urban areas than in rural areas.
- 4.2 The estimates of headcount rate by administrative divisions have been shown in Table 4. The estimates using the upper poverty line reveal that incidence of poverty was the highest in Barisal in 2010. It was followed by other divisions as shown below: Rajshahi, Khulna, Dhaka, Sylhet, and Chittagong. However, if the data of newly constituted Rangpur Division was separately considered, it would have topped the list.² As for rural poverty, headcount index using the upper poverty line was the highest in Barisal Division in 2010. The divisions next in order were: Dhaka, Rajshahi, Khulna, Chittagong, and Sylhet. As for urban poverty, headcount index using the upper poverty line was also the highest in Barisal Division in 2010. The divisions placed next were: Khulna, Rajshahi, Dhaka, Sylhet, and Chittagong Division.

Table 4: Incidence of Poverty by Division Based on CBN Method (Headcount Rate)

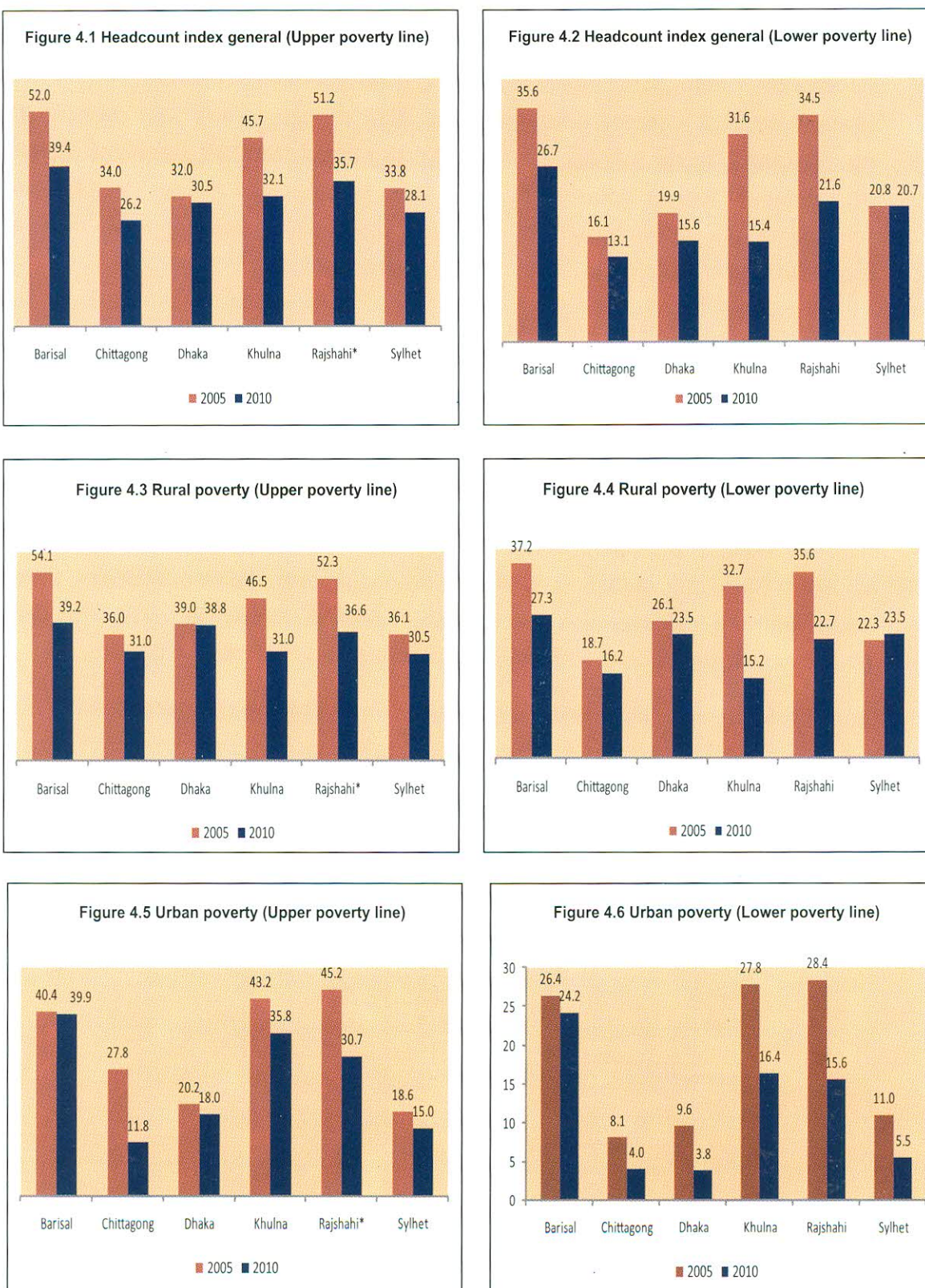
Poverty line	Division	2010			2005		
		National	Rural	Urban	National	Rural	Urban
1. Lower poverty line	National	17.6	21.1	7.7	25.1	28.6	14.6
	Barisal	26.7	27.3	24.2	35.6	37.2	26.4
	Chittagong	13.1	16.2	4.0	16.1	18.7	8.1
	Dhaka	15.6	23.5	3.8	19.9	26.1	9.6
	Khulna	15.4	15.2	16.4	31.6	32.7	27.8
	Rajshahi	21.6	22.7	15.6	34.5	35.6	28.4
	Sylhet	20.7	23.5	5.5	20.8	22.3	11.0
2. Upper poverty line	National	31.5	35.2	21.3	40.0	43.8	28.4
	Barisal	39.4	39.2	39.9	52.0	54.1	40.4
	Chittagong	26.2	31.0	11.8	34.0	36.0	27.8
	Dhaka	30.5	38.8	18.0	32.0	39.0	20.2
	Khulna	32.1	31.0	35.8	45.7	46.5	43.2
	Rajshahi*	35.7	36.6	30.7	51.2	52.3	45.2
	Sylhet	28.1	30.5	15.0	33.8	36.1	18.6

* Rajshahi includes Rangpur division

Source: HIES, 2005 and 2010, Bangladesh Bureau of Statistics

² The headcount index was 46.2 and 30.1 percent in Rangpur Division in 2010 respectively for the upper and lower poverty lines. If data of Rangpur division is separated from Rajshahi division, the headcount index stood at 29.8 and 16.8 percent in Rajshahi respectively while measuring with the upper and lower poverty lines.

Figure 4: Poverty Incidence by Division



Source: HIES, 2005 & 2010, Bangladesh Bureau of Statistics

Change in Headcount Poverty during 2005-2010

- 4.3 According to the estimates of poverty headcount using the lower poverty line, national poverty declined at a faster rate in Khulna Division during 2005-2010 (13.39 percent per annum) and the decline was also the highest in that division. Among the other divisions, the annual poverty reduction was 8.94 percent in Rajshahi, 5.49 percent in Barisal, 4.75 percent in Dhaka, 4.04 percent in Chittagong, and 0.10 percent in Sylhet.

Table 5: Annual Percentage Change in Regional Headcount Index during 2005-10

Division	Lower poverty line			Upper poverty line		
	National	Rural	Urban	National	Rural	Urban
National	-6.85	-5.90	-12.01	-4.67	-4.28	-5.59
Barisal	-5.59	-6.00	-1.73	-5.40	-6.24	-0.25
Chittagong	-4.04	-2.83	-13.16	-5.08	-2.95	-15.75
Dhaka	-4.75	-2.08	-16.92	-0.96	-0.10	-2.28
Khulna	-13.39	-14.21	-10.02	-6.82	-7.79	-3.69
Rajshahi	-8.94	-8.61	-11.29	-6.96	-6.89	-7.44
Sylhet	-0.10	1.05	-12.94	-3.63	-3.32	-4.21

Source: HIES 2005 & 2010, Bangladesh Bureau of Statistics

As per estimates based on both upper and lower poverty lines, poverty headcount rates at national and urban level declined in all the divisions. However, the headcount index using the lower poverty line has slightly increased (1.05 percent) in rural areas of Sylhet Division. The annual decline of rural headcount poverty was 14.2 percent in Khulna Division which was also the highest among the divisions. The annual rate of poverty reduction was 8.6 percent in Rajshahi, 6.0 percent in Barisal, 2.8 percent in Chittagong, and 2.0 percent in Dhaka.

Decline in headcount rate measured by the lower poverty line was the highest in Dhaka Division which was about 16.9 percent during 2005-2010. The reduction in poverty was the lowest in Barisal Division, at 1.7 percent annually. Among the other divisions, headcount index fell annually by 13.2 percent in Chittagong, 12.9 percent in Sylhet, 11.3 percent in Rajshahi, and 10.0 percent in Khulna. Headcount poverty measured by the upper poverty line reduced more or less in all areas of Bangladesh. However, the reduction rate was the highest in Rajshahi and the lowest in Dhaka Division during this period.

Depth and Severity of Poverty at Regional Level

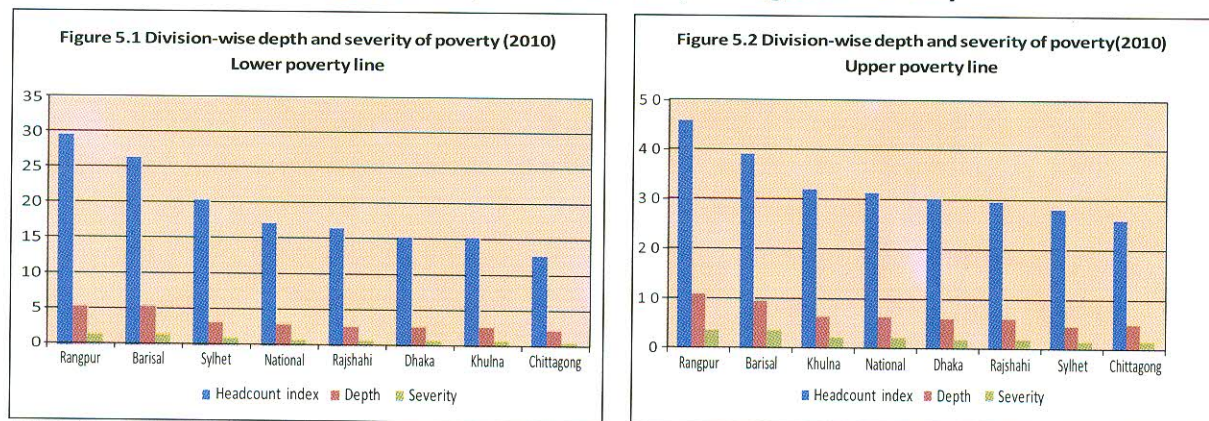
- 4.4 Similar to headcount index, some regional differences can be observed in poverty gap and its severity (Table 6). In 2010, depth and severity of poverty measured by the upper poverty line were the highest in Rangpur Division and the lowest in Sylhet Division. However, an analysis of the ratio of poverty gap to headcount rate reveals that average consumption of poor relative to the poverty line income was the lowest in Barisal Division (Table 7).

Table 6: Depth and Severity of Poverty at Regional Level

Division	Lower poverty line						Upper poverty line					
	Poverty gap			Square poverty gap			Poverty gap			Square poverty gap		
	National	Rural	Urban	National	Rural	Urban	National	Rural	Urban	National	Rural	Urban
National	3.1	3.7	1.3	0.8	1.0	0.4	6.5	7.4	4.3	2.0	2.2	1.3
Barisal	5.4	5.4	5.2	1.6	1.6	1.7	9.8	9.2	12.6	3.4	3.0	5.2
Chittagong	2.2	2.7	0.8	0.6	0.7	0.2	5.1	6.1	2.1	1.5	1.8	0.6
Dhaka	2.7	4.1	0.5	0.7	1.1	0.1	6.2	8.1	3.3	1.8	2.4	0.9
Khulna	2.7	2.7	2.6	0.8	0.8	0.7	6.4	6.1	7.4	2.0	1.9	2.3
Rajshahi	2.8	2.9	2.3	0.7	0.7	0.6	6.2	6.4	5.6	1.9	1.9	1.7
Rangpur	5.5	5.6	4.0	1.4	1.4	1.0	11.0	11.3	8.6	3.5	3.6	2.7
Sylhet	3.3	3.7	1.2	0.9	1.0	0.4	4.7	5.0	2.7	1.3	1.3	0.9

Source: Bangladesh Bureau of Statistics

Figure 5: Depth and Severity of Regional Poverty



Source : Hies, 2005 & 2010, Bangladesh Bureau of Statistics

Table 7: Division-Wise Average Consumption and Average Deficit Relative to Poverty Line (2010)

Division	Barisal	Rangpur	Rajshahi	Dhaka	Khulna	Chittago	Sylhet	National
Poverty line income	100	100	100	100	100	100	100	100
Average consumption of poor	75.13	76.19	79.19	79.67	80.06	80.53	83.27	79.37
Average deficiency	24.87	23.81	20.81	20.33	19.94	19.47	16.73	20.63

Source: HIES, 2010, Bangladesh Bureau of Statistics

5.0 Poverty and Inequality in Bangladesh - the International Perspective

- 5.1 This chapter presents a comparative analysis of the state of poverty in Bangladesh between 2003 and 2012 in comparison with other 146 countries of the world. A detailed list of the countries has been annexed in the Appendix-1.

Headcount Poverty (Headcount Index)

- 5.2 The national poverty headcount rate in Bangladesh declined to 31.5 percent in 2010 from 40 percent in 2005. From 2003 to 2012, average per capita GNI in Bangladesh was 482.9 US dollar³. Very few countries in the world, with such low per capita GNI, could achieve this level of success in reducing headcount poverty. Notably, during the same time, Mexico with per capita GNI of 8,066 US\$ had 42.9 percent headcount poverty (Table 8). In Africa, a relatively well-to-do country Gabon with per capita income of 6,315 US\$ had 32.7 percent headcount poverty. Likewise, neighboring India was experiencing 21.9 percent headcount poverty despite having a per capita income of 880.9 US\$.

Table 8: Headcount Poverty in Bangladesh in Comparison with other Countries of the World (2003-2013)

Name of the Country	Average Real Per Capita Income ⁴	Headcount Poverty	Poverty Gap	Gini Co-efficient
Bangladesh	482.9	31.5	6.54	32.12
India	880.9	21.9	4.0	33.4
Mexico	8066	42.9	-	46.05
Gabon	6315	32.7	10	41.45
Dominican Republic	4225	40.4	-	47.2
Honduras	1471	58.3	-	56.2

Source: World Development Indicator, 2013, World Bank

In terms of per capita income Bangladesh ranked 25th (in ascending order) among the countries listed in appendix-1. Only Uganda, Nepal, Tanzania and Ethiopia with relatively lower per capita GNI were in a better position than Bangladesh. The rest 19 countries were ranking below Bangladesh. On the other hand, with higher per capita GNI than Bangladesh, countries like Swaziland, Sao Tome and Principe, Zambia, Honduras, Lesotho, Bolivia, Guatemala, Timor-Leste, Chand, Senegal, Sudan, Congo, Nigeria, Kenya, Comoros, Mexico, Ivory Coast, Nicaragua, Mauritania, Dominican Republic, Papua New Guinea, Cameroon, Angola, Fiji, Yemen, Benin, Colombia, Gabon and Paraguay were experiencing higher poverty rates.

³ Constant US\$ in 2005

⁴ Constant US\$ in 2005, and average of 2003-2012

Poverty Gap

- 5.3 Between 2003 and 2012, average poverty gap index of 79 countries was 11.92 whereas median, highest and lowest values were 9.3, 37.9 (Paraguay) and 0.40 (Ukraine) respectively. During this period, average value of poverty gap index in Bangladesh was 6.54 - lower than the average and median poverty gap indices of those 79 countries. Within the sample of 79 countries, in ascending order, Bangladesh ranked 28th i.e. the poverty gap of 27 countries was lower than Bangladesh. Yet in 2012-13, 26 out of these 27 countries had per capita income higher than Bangladesh. It is generally assumed that countries with higher per capita income possess better capacity to reduce poverty gap. Nevertheless, a large number of countries despite having higher per capita income have been less successful than Bangladesh in reducing poverty gap. Some of these countries are- Benin, Kenya, Timor-Leste, Ghana, Comoros, Chad, Zambia, Sudan, Mauritania, Sao Tome and Principe, Senegal, Yemen, Nigeria, Papua New Guinea, Cameroon, Ivory Coast, Solomon Islands, Paraguay, Angola, Swaziland, Kosovo, Cape Verde, Peru, Fiji, Colombia, Namibia, South Africa, Botswana, Gabon and Seychelles. No other country except Nepal, having lower per capita income, was more successful than Bangladesh in reducing poverty gap. On the other hand, countries more successful than Bangladesh in reducing headcount poverty but with lower success rate in reducing poverty gap and severity include Uganda, South Africa, Peru, Kosovo, Solomon Islands, Ethiopia, Cape Verde, Namibia, Seychelles, Ghana and Botswana. The outstanding success of Bangladesh in reducing poverty gap along with headcount poverty has, therefore, made its poverty reduction trend unique in the world.

Inequality Situation

- 5.4 An analysis of Consumption Gini Index of 113 countries reveals that the level of inequality in Bangladesh is much lower than other countries. Average Gini Index of 113 countries during 2003 - 2014 was 39.94, while the median, highest and lowest values were 38.73, 65.77 and 24.24 respectively (Table-9). During the same period Gini index of Bangladesh was 32.12 which was lower than the world average and median values. In ascending order, Bangladesh's position was 20th, while India and Sri Lanka were in 27th and 44th positions respectively. Except Ethiopia, Afghanistan and Tajikistan, other 13 countries with better Gini index had higher per capita income than Bangladesh. In terms of per capita income, therefore, , Bangladesh's position with respect to Gini index was commendable among the comparator countries.

Table 9: Inequality Situation of the World (2003-13)

Index	Number of countries	Mean	Median	Maximum	Minimum	Standard Deviation	Bangladesh (Average)
Gini index	113	39.94	38.73	65.77	24.24	8.71	32.12
Income share held by the lowest 10 percent	112	2.50	2.64	4.14	0.52	0.93	3.99
Income share held by the highest 10 percent	112	32.85	31.26	60.16	22.18	7.17	27.57

Source: Estimated from world development indicators, 2013, World Bank

5.5 The share of national income held by the lowest 10 percent population is one of the vital indicators for gauging inequality status in a country. By analyzing the data of 113 countries it can be seen that about 4.0 percent of national income in Bangladesh is concentrated in the hands of the lowest 10 percent people. Notably, among the 112 countries, 107 are lagging behind Bangladesh. Summary statistics of inequality measures presented in Table 9 shows that in the said 112 countries, lowest 10 percent people held, on an average, 2.5 percent share in the total income of these countries, with highest 4.14 percent in Burundi and lowest 0.52 percent in Bolivia. This analysis shows that very few countries in the world have national income as fairly distributed as Bangladesh.

5.6 The extent of inequality of a country can also be realized by examining the share of national income at the disposal of the highest 10 percent people. If the highest 10 percent of population take home larger share of national income, then the society is assumed to be suffering from acute inequality. Statistics of sampled 112 countries reveals that, on average, highest 10 percent people enjoyed 32.85 percent share in the total income. But, this value ranges from highest 60.16 percent in Seychelles to lowest 22.18 percent in Belarus with median value of 31.26. In Bangladesh, income share of highest 10 percent people is 27.57 percent, which is lower than the average and median values of those 112 countries. Basically, in ascending order, Bangladesh's position is 24th whereas India, Sri Lanka and Nepal are in 35th, 59th and 61st position respectively. Thus, in terms of income share held by the highest 10 percent people, inequality in Bangladesh is quite low as well.

6.0 Inequality Trends in Bangladesh

6.1 According to Kuznets's hypothesis (1955), in developing economies, as per capita income increases, income inequality also increases at first but then, after some turning point, starts declining. In Bangladesh, after independence this tendency prevailed up to 1996. Between 1996 and 2000, although per capita income was rising, inequality situation remained unchanged. But during 2000 to 2010 along with the rise in per capita income inequality reduced to some extent. Measurements like distribution of income and consumption by decile group, income and consumption based Lorenz curve and concept of GINI index are used for analyzing the income distribution structure of a country. The poverty state of an individual depends on his or her capability to access to the bundle of minimum food and non-food commodity. Hence, in the case of poverty analysis consumption distribution pattern seems more relevant than income distribution pattern. Therefore, for the sake of meaningful analysis of poverty and inequality in Bangladesh consumption based inequality indices are being highlighted.

Inequality Scenario in Bangladesh: Distribution of Income & Consumption by Decile Group

6.2 In order to analyze recent inequality scenario in Bangladesh, decimal-based income distribution in 2005-2010 has been presented in the Table below:

Table 10: Percentage Share of Income of Households by Decile Group and Gini Coefficient

Household income group	2010			2005			Percent change between 2005-2010		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
National	100	100	100	100	100	100	Total	Rural	Urban
Lowest 5%	0.78	0.88	0.76	0.77	0.88	0.67	1.3	0	13.4
Decile-1	2.00	2.23	1.98	2	2.25	1.8	0	-0.9	10
Decile-2	3.22	3.35	3.09	3.26	3.63	3.02	-1.2	-7.7	2.3
Decile-3	4.10	4.49	3.95	4.1	4.54	3.87	0	-1.1	2.1
Decile-4	5.00	5.43	5.01	5	5.42	4.61	0	0.2	8.7
Decile-5	6.01	6.43	6.31	5.96	6.43	5.66	0.8	0	11.5
Decile-6	7.32	7.65	7.64	7.17	7.63	6.78	2.1	0.3	12.7
Decile-7	9.06	9.31	9.3	8.73	9.27	8.53	3.8	0.4	9
Decile-8	11.50	11.5	11.87	11.06	11.49	10.18	4	0.1	16.6
Decile-9	15.94	15.54	16.08	15.07	15.43	14.48	5.8	0.7	11
Decile-10	35.85	33.89	34.77	37.64	33.92	41.08	-4.8	-0.1	-15.4
Top 5%	24.61	22.93	23.39	26.93	23.03	30.37	-8.6	-0.4	-23
Income Gini Coefficient	0.458	0.431	0.452	0.467	0.428	0.497	-1.9	0.7	-9.1

Source: Household Income and Expenditure Survey, 2005 and 2010, Bangladesh Bureau of Statistics

Table 10 shows that in Bangladesh, poorest 5 percent's share in the national income was 0.77 percent in 2005 which increased to 0.78 percent by 2010. This implies that between 2005 and 2010, poorest section of the society managed to raise their share in the national income by 1.3 percent. Although the relative status of the poorest 5 percent rural population has not changed during this time, their share in the income of similar urban poor increased by 13.4 percent. Likewise, at the national level income share of decile-1 did not increase, share of decile-2 decreased by 1.2 percent, share of decile-3 and 4 remained unchanged and the share of decile-5 to decile-10 increased. In 2005, the richest 10 and 5 percent's share were 37.64 and 26.93 percent respectively. In 2010, these shares were reduced by 4.8 and 8.6 percent to 35.85 and 24.61 percent respectively. Increase in income share of the poorest and decrease in share of the richest during 2005 to 2010 made income distribution a bit fairer. In the same way, income share of the richest, both in the rural and urban area reduced. As a whole, between 2005 and 2010 urban income inequality reduced remarkably. As a whole, despite a small reduction in income share of the poorest 10 percent, income inequality of the country declined to some extent.

Between 2005 and 2010, equality in consumption distribution was better than that in income distribution which is easily understandable from Table-11. At the national level, consumption share of decile-1 remained unchanged, while the consumption

Table 11: Percentage Share of Consumption of Households by Decile Group and Consumption Gini-Coefficient

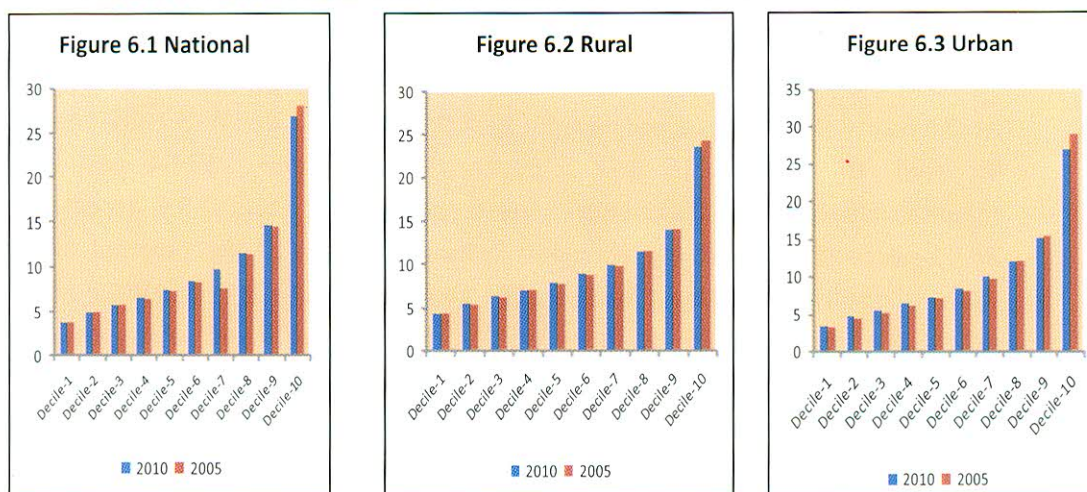
Household income group	2010			2005			Percent change between 2005-2010		
	Total	Rural	Urban	Total	Rural	Urban			
National	100	100	100	100	100	100	Total	Rural	Urban
Decile-1	3.85	4.36	3.4	3.85	4.37	3.15	0.00	-0.23	7.94
Decile-2	5.00	5.57	4.66	4.91	5.49	4.31	1.83	1.46	8.12
Decile-3	5.84	6.41	5.54	5.71	6.3	5.14	2.28	1.75	7.78
Decile-4	6.63	7.22	6.42	6.47	7.08	6.07	2.47	1.98	5.77
Decile-5	7.48	8.03	7.37	7.31	7.92	7.14	2.33	1.39	3.22
Decile-6	8.48	8.97	8.48	8.28	8.8	8.09	2.42	1.93	4.82
Decile-7	9.73	10.01	10.01	7.58	9.97	9.71	28.36	0.4	3.09
Decile-8	11.49	11.63	12.03	11.37	11.56	12.03	1.06	0.61	0
Decile-9	14.59	14.07	15.06	14.52	14.15	15.39	0.48	-0.57	-2.14
Decile-10	26.9	23.63	27.03	27.99	24.36	28.96	-3.89	-3	-6.66
Consumption Gini Coefficient	0.321	0.275	0.338	0.332	0.284	0.365	-3.31	-3.17	-7.4

Source: HIES, 2005 and 2010, Bangladesh Bureau of Statistics

share of decile-2 to decile-9 increased. Supported by a 3.89 percent decline in the consumption share of richest 10 percent, consumption distribution between 2005

and 2010 became considerably fair. As a whole, consumption distribution became more equitable both in rural and urban areas, although the rate was comparatively better on the urban side.

Figure 6: Percentage Share of Household Consumption by Decile Group



Source : Bangladesh Bureau of Statistics

Inequality Scenario in Bangladesh: Lorenz Curve

6.3 Lorenz curve (1905) introduced by American Economist Max Otto Lorenz is useful in analyzing the wealth distribution of a country. In this graph 45° diagonal line indicates perfect equality in the distribution of wealth. The curve below the 45° straight line, representing actual wealth distribution, is Lorenz curve. One axis of the curve shows the cumulative population and the other axis shows cumulative income of the respective country. The more curvature the line is the more unequal the distribution will be. Basically, area between diagonal straight line and the Lorenz curve gives the measurement of the inequality in the distribution of wealth. Lorenz curve can also be used for measuring consumption inequality.

Figure 7: Consumption Lorenz Curve

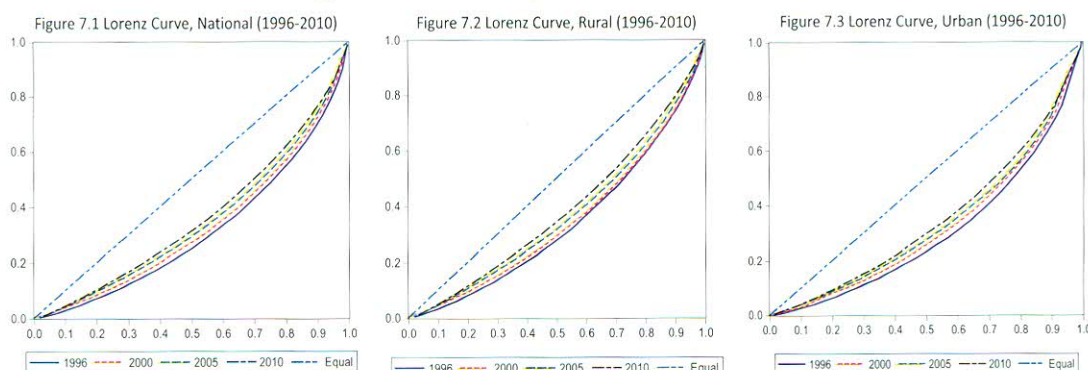
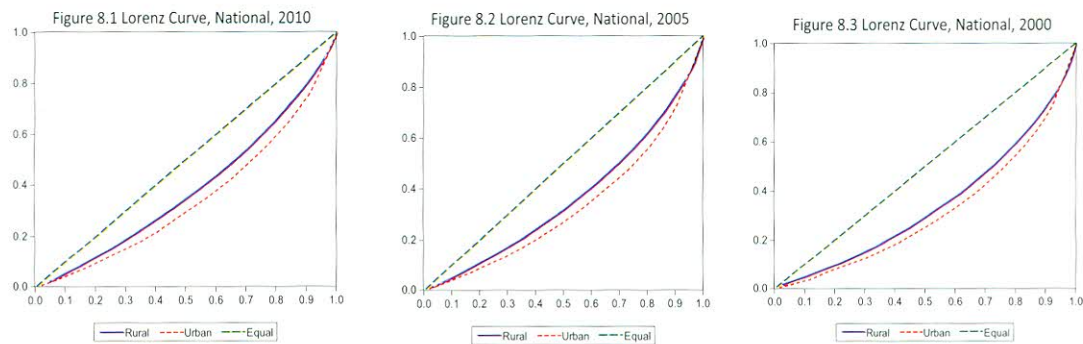


Figure 7 shows the consumption Lorenz curve of Bangladesh from 1996 to 2010. At the national level, consumption Lorenz curve in 1996 was most curvature (marked by blue line) which indicates the least equality in consumption distribution. Degree of curvature decreases gradually through 2000, 2005, and 2010. From this scenario it can be assumed that, in each year between 1996 and 2010, consumption inequality at the national level reduced gradually.

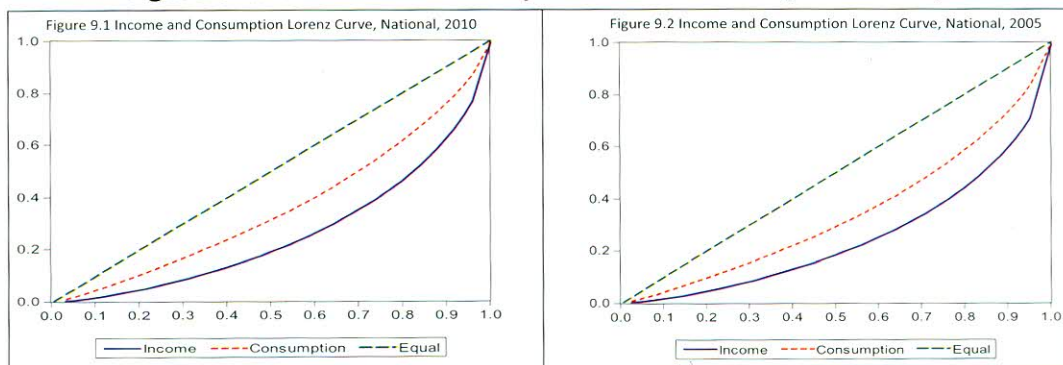
Compared with urban area, inequality in rural area is less severe which can easily be seen from the Lorenz curves of these two regions. Figure 8 shows that the Lorenz curve of rural area (marked by blue color) is less bent than that of urban area (marked by red color) which is indicative of relatively fairer consumption distribution in rural area.

Figure 8: Lorenz Curve, Rural and Urban (2000-2010)



Tables 10 and 11 show that in Bangladesh, inequality is more acute in the case of income distribution than consumption distribution which is also manifested through the Lorenz curve. It is specifically noteworthy that consumption Lorenz curve (red line) is closer than income Lorenz curve to equality line which is indicative of more equitable consumption distribution compared to income distribution.

Figure 9: Income and Consumption Lorenz Curve (2005-2010)

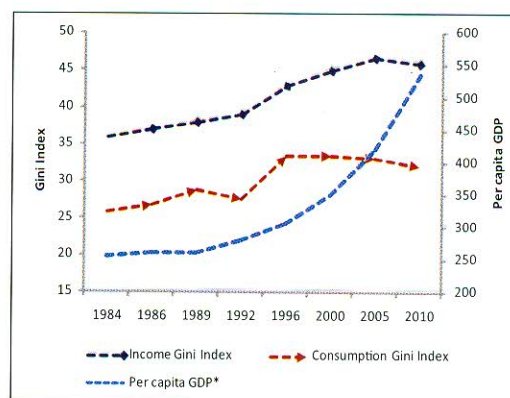


Inequality Scenario in Bangladesh: Gini Index

6.4 Gini index is a composite index which gives a brief idea about the income and consumption distribution of a country. It measures the deviation of actual income distribution of a society from the absolute equality position. The area between the Lorenz curve and the assumed 45° equality line gives the numerical value of Gini index which ranges from 0 (perfect equality) to 1 (perfect inequality). If the Gini index of a country increases over time, it can be assumed that the income distribution of that country is becoming more and more unequal. Figure 10 shows a long run relationship between per capita income and consumption distribution of Bangladesh. Between 1984 and 1996, consumption Gini increased with the increase in real per capita GDP i.e. income distribution became more unequal. Between 1996 and 2000 Gini index remained unchanged. After that, from the middle of 2000 and 2010, Gini index reduced gradually with the increase in real per capita income. Noteworthy that, income share of lowest 10 percent of population didn't reduce that much, rather remained unchanged at 4 percent of total income. It is worth mentioning that between 2003 and 2012, on average, lowest 10 percent people of 112 countries of the world held 2.50 percent of total income of these countries. During the same period average Gini index of these countries was 39.94 which was much higher than the consumption Gini of Bangladesh (Table 9). This indicates that inequality, especially consumption inequality, in Bangladesh, has remained at tolerable level.

Figure 10: Per Capita Income and GINI Index

	Per capita GDP*	Income Gini Index	Consumption Gini Index	Lowest 10% household**
1984	254.4	36.0	25.9	4.13
1986	259.5	37.0	26.9	4.47
1989	260.8	38.0	28.9	4.16
1992	279.5	39.0	27.6	4.13
1996	306.8	43.0	33.5	3.91
2000	349.5	45.0	33.5	3.91
2005	421.1	46.7	33.2	3.98
2010	535.3	45.8	32.1	3.99



* Constant 2005 dollar price ** Income share of lowest 10% of household

Source: World Bank

6.5 Although the income Gini in Bangladesh remained a bit high, it did not pose any adverse impact on absolute poverty⁵ reduction. In fact, during this expansionary phase of capitalism, having a slightly higher income Gini is not that unusual. But,

⁵ People below the poverty line are generally considered absolute poor.

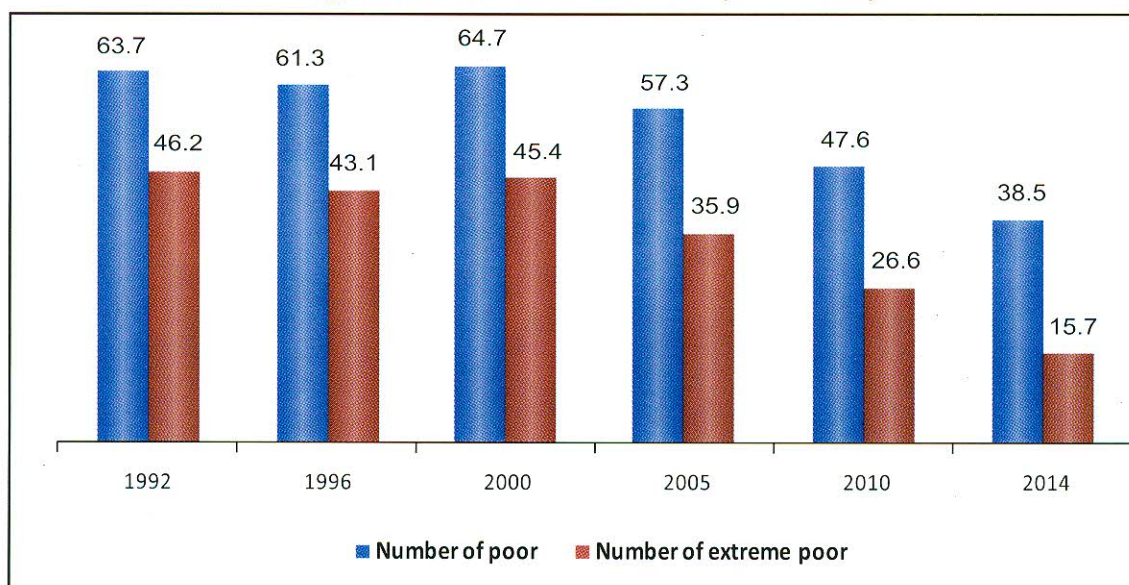
excessive inequality of wealth distribution among the non-poor might have some adverse impact on relative poverty⁶. But in the present reality, poverty reduction initiative based on income re-distributive activities might hinder growth due to reduced flow of resources to growth facilitating sectors. Ravallion and Chen (1997) in their research based on 1981-84 data from 67 developing and transitional economies found that inequality and polarization in poverty are more or less un-correlated. They also found that negative growth creates more inequality than positive growth and growth as whole reduces poverty. If the present positive growth trend in Bangladesh persists then there is no reason for any different outcome.

⁶ A situation when an individual feels relative deprivation due to inequality in income distribution may be termed relative poverty. People irrespective of their income status may suffer from relative poverty due to inequality in income distribution.

7.0 Characteristics of Poverty and Inequality in Bangladesh

- 7.1 Poverty in Bangladesh is declining at an increasing rate, which is its key feature. The rate of reduction in consumption-based poverty increased gradually over time. The headcount ratio of poverty at national level decreased continuously at an average annual rate of 0.60 percent, 3.94 percent and 4.67 percent during 1996-2000, 2000-2005 and 2005-10, respectively. Headcount indices of the extreme-poor, measured in lower poverty line, dropped by 0.65 percent, 6.06 percent and 6.85 percent during the same periods, respectively.

Figure: 11 Number of the Poor (in millions)



- 7.2 Due to variation in the rate of population growth, the number of poor people did not fall steadily over time. The average annual population growth rate was 2.06 percent during 1992-2000. As a result, even though the upper and lower poverty indices decreased by 7.8 and 6.8 percentage points respectively, the number of poor people rather increased at that time (Figure-11). On the other hand, during 2000-2010, population growth rate declined to 1.33 percent. At the same time, poverty rate declined significantly as well (the upper and lower poverty indices declined by 17.4 and 16.7 percentage points). As a result, during this decade, the number of poor people declined continuously. The number of poor people in 2000 was 64.7 million, which declined to 57.3 million in 2005 and to 47.6 million in 2010. The number of extreme-poor people in 2000 was 45.4 million, which declined to 35.9 million in 2005 and to 26.6 million in 2010. This trend in poverty reduction is expected to be continuing and in 2014, the numbers of poor and the extreme-poor have been estimated to be 38.5 million and 15.7 million, respectively.

- 7.3 One of the central features of Bangladesh's poverty reduction strategy is the successful achievement of both the poverty related targets of MDGs ahead of the schedule. The capability of Bangladesh in reducing poverty has been well-demonstrated vis-à-vis prior assumption in this regard as it has attained poverty gap and headcount poverty rate targets five years and two years ahead of MDG schedule, respectively.
- 7.4 However, wide gap exists between the poverty rates of urban and rural areas despite significant reduction in poverty rate at national level. The rate of poverty in urban areas in 2000 was 32.2 percent whereas the same rate of poverty existed in the rural areas in 2010. The high prevalence of extreme-poor is evident now in rural areas only. In 2010, only 7.7 percent people living in the urban areas were extreme-poor whereas it was 21.1 percent in rural areas.
- 7.5 An analysis of HIES 2010 shows that due to the advantage of geographical location, the eastern region (Chittagong, Dhaka and Sylhet) of Bangladesh has developed more than the western (Barisal, Khulna and Rajshahi) region. Specially, a review of headcount poverty rate illustrates that poverty has been reduced significantly in almost all divisions of the eastern region from 2000 to 2005. The state poverty in the divisions of the western region was largely stagnant. However, during 2005 to 2010, backward regions made considerable progress. Review of regional poverty situation of 2010 reveals that not only did poverty in the western region reduce significantly; the rate of poverty reduction also came closer to that of the eastern divisions. This is a sign of an equitable development of the country across the regions.
- 7.6 Along with poverty reduction, the living standard of the poor has also improved. The quality of construction materials used by the poor families in building their houses improved from 2000 to 2005. During this period, a significant number of poor families used CI sheet, steel and cement in building roofs and walls of their houses. At the same time, most of the families have come under the coverage of improved sanitation facility and electrification. Alongside the progress made in the use of construction materials, the quality of their household appliances has also improved – more families have added standard furniture, bathroom, TV, refrigerator, cell phone etc. to their lifestyle.
- 7.7 During 2000-2010, the land ownership - poverty relationship has also undergone significant change. From 2000 to 2005, poverty of the families owning relatively more land (1.5 acres) reduced at an increased rate. But, from 2005 to 2010, poverty of the families owning less land reduced at an increasing rate. This is, however, true in the case of change in the extent of poverty. The relationship between the level of land owned and reduction of poverty has remained negative all along, i.e. higher the quantity of land owned, lower the level of poverty.

- 7.8 The demographic characteristics of the poor families have not changed much. The average size of the poor families is large, dependency ratio is high, number of children is also high, the heads of poor families are on average three years younger than those of non-poor families and they are either illiterate or semi-literate.
- 7.9 Literate people, as a group, are always less poor than the illiterate section of the population. Yet from 2005 to 2010, the illiterate section of the population has made better progress than the literate one in reducing poverty. In 2005, according to the national upper poverty line, 23 percent of literate and 54.7 percent of illiterate families were poor which reduced to 19 percent and 42.8 percent in 2010, declining at an annual rate of 3.7 percent and 4.8 percent, respectively. The key factor behind this development was the rise in relative wage of unskilled labour. Basically, due to rise in food prices, real wage of the labour force in the agricultural sector increased which played a role in reducing their poverty.
- 7.10 During 2005-2010, Bangladesh's achievement in ensuring health services for its population was noteworthy. The gap between the rich and poor in receiving vaccination services have significantly been narrowed down. However, progress in providing nutrition support is relatively slow. Bangladesh may not be able to meet the MDG target of reducing moderate food deficiency (2,122 kcal/person/day) to 24 percent. In 2010, 38 percent people experienced moderate food deficiency which declined by only 6 percentage points in a decade. Low dietary diversity measured by *Household Dietary Diversity Score (HDDS)* is an on-going problem in Bangladesh. Though Bangladesh reduced regional diversity in poverty reduction, it could not connect the HDDS score in 2005 and poverty reduction during 2005-2010. It demonstrates that regions with high rates of poverty in 2005 could alleviate it at an increasing rate during 2005-2010 vis-a-vis a very little change in the HDDS score.
- 7.11 Labour income and adult household members played a major role in alleviating regional poverty. However, these had more impact in the western region compared to the eastern region. The change in consumption-income ratio was more linked to reducing poverty in the eastern region and increasing it in the western region. A reasonable explanation of this phenomenon is that compared to 2000, in 2010 the households of the western region consumed less and saved more that increased their poverty at the given income level. Transfer, remittance and ratio of adult working members to total family members of the households played a larger role in reducing poverty in the eastern region than in the western region.

- 7.12 The purchasing power of the urban workers decreased relative to their rural counterparts. The self-employed labour force working in the rural farm sector earned the highest pay rise during 2005-2010. The rural day labourers' income also increased. In case of urban labour force, pay rise was less encouraging in comparison with their counterparts in the rural areas. The income of urban daily labourers and salaried workers remained stagnant throughout 2005-2010. On the other hand, real wage of the non-farm self-employed workers in urban areas declined. It should be noted that still, the rural workforce is always migrating to the urban areas.
- 7.13 Ensuring participation of women in the labour force still remains a challenge. During 2000-10, male participation in the labour force remained stable at 80 percent. On the contrary, women's participation rose from 25 percent to 35 percent. Similar to the most developing countries, the rate of increase in the educated female participation in the labour force is higher in Bangladesh as well.
- 7.14 Early marriage and premature motherhood are the main obstacles for women participation in the labour force. In 2010, one-third of women between the ages of 20 and 24 years were married at the age of 15. The rate of married women's participation in the labour market is 22 percent less than other categories of women. On the other hand, the share of participation of women with small children in the labour force is also less. It is presumed that women will enter the workforce in a larger number if early marriage and premature motherhood can be prevented. Not only that, motherhood at mature age will ensure that children will be healthy.
- 7.15 The demographic feature during 2000-2010 indicates the possible opportunities and challenges for future growth and poverty reduction. During the last 30 years, population growth rate has slowed down. That is, the annual average population growth rate of 2.7 percent in the 1980s has declined to 1.4 percent in the 2000s. However, despite the decline in population growth rate - the population increased by 19 million (15 percent increase during 2000-2010 period) from 2000 to 2010. Nevertheless, the upside is that the rate of increase in working population (15-64) is higher than population growth rate (2.3%).

8.0 Role of Government in Poverty Reduction, Budget Allocation and Programmes

- 8.1 During the tenure of the present government, the public expenditure in social safety net and social empowerment has recorded a significant rise. A number of new programs have been introduced along with different on-going social safety net programs such as eradicating unemployment of the youths by introducing National Service in the *Monga*-hit Districts, Fund for assisting the lactating working mothers, employment for the Extreme-Poor, Children Development Centre, upgrading the Foundation for the Physically Challenged to a Directorate to render services and assistance to them and creation of alternative employment for rehabilitation of the people engaged in begging. A number of programs, such as construction of colony for the municipal cleaning staff and improving living standards of the backward population including dalits/harizons, *gypsies* and *hermaphrodites* have also been undertaken. In addition, for welfare of the freedom fighters the existing rate of allowance has been considerably increased, and rationing has been introduced for the martyred and war-wounded freedom fighter families from 2010.

Table 12: Government's Poverty Reduction Expenditure

FY	Total revised budget (million taka)	Expenditure in poverty reduction (million taka)	Percentage of revised budget in expenditure in poverty reduction	Percentage of GDP in expenditure in poverty reduction
2006-07	668350	374980	56.11	8.02
2007-08	860850	491330	57.07	9.18
2008-09	941400	560950	59.58	9.12
2009-10	1105230	618080	55.92	8.95
2010-11	1300110	736800	56.67	9.36
2011-12	1612130	815760	50.60	8.92
2012-13	1917380	974400	50.82	9.36
2013-14	2162220	1093560	50.58	9.26

Source: RCGP⁸ Model, Ministry of Finance

- 8.2 Public investment is directly channeled through various projects targeted for poverty reduction. Besides, public investment in many other projects may indirectly help alleviate poverty. Table-12⁹ depicts the expenditure for poverty reduction in million taka and its share of the total revised budget and GDP from FY07 to FY12. From FY09

⁸ The RCGP (Recurrent, Capital, Gender and Poverty) model of financial management explains the percentages of public expenditure spent for poverty reduction and women development. In this account, Finance Division of the Ministry of Finance publishes annual accounts of public expenditure directly and indirectly related to poverty reduction and development of women.

⁹ iBAS (Integrated Budgeting and Auditing System) of Finance Division and the website: www.finance.gov.bd

onwards, the percentage of revised budget allocation for poverty reduction has continued rising. In FY14, 9.36 percent of GDP has been spent for poverty alleviation which is the highest so far. Overall, half of total public expenditure is allocated, directly or indirectly, for poverty reduction, which for the last few years was hovering in the neighborhood of 8-9 percent of GDP. The next section briefly describes what kind of programs, activities and projects the government has taken up for poverty alleviation and how much public money is being spent.

8.3 Poverty Alleviation Programmes

a. Cash transfer (different allowances) and other activities

In order to keep our economy vibrant in the face of global recession and strengthen poverty reduction and social safety net programs, allocation for social protection sector was increased as part of immediate steps under the fiscal stimulus package of FY09. Immediately after assuming office, the present government has gradually increased the allocation for social protection sector. The actual spending for this sector was Tk. 230.98 billion in FY13 which stood at Tk. 221.93 billion in the revised budget of FY14. In order to achieve the target of poverty alleviation, as part of MDGs, a total of Tk. 952.28 billion was allocated in the revised budget of FY14, under cash transfer and other activities for 14 social safety net programs including Tk. 9.80 billion for old age allowances, Tk. 3.64 billion for widows and destitute women divorced by their husbands, Tk. 7.20 billion as honorarium for insolvent freedom fighters, Tk. 1.32 billion for insolvent handicapped, Tk. 1.21 billion for martyred families and freedom fighters and Tk. 260 million for ration of martyred families and war-wounded freedom fighters. The budget allocation for the following programs in social safety and social empowerment sector has been increased to alleviate poverty, directly or indirectly, with a view to implementing some additional programs including programs mentioned above:

Table 13: Social Security and Social Empowerment Sectors (in million taka)

Activities	Budget 2012-13 (revised)	Budget 2013-14 (revised)	Proposed budget 2014-15
Cash (various allowances) and other programmes	76314.1	95228.2	123628.7
Cash(special) programmes: social empowerment	591.20	621.5	671.5
Food security programmes: social security	70725.50	82299.6	86384.7
Micro-credit programmes	3427.00	3460.00	2420.00
Various funds	31929.60	19002.40	17713.90

Source: Bangladesh Economic Review, 2013 and IBAS database, Finance Division

Under social empowerment, Tk. 97 million and Tk. 58 million, respectively, was allocated in the revised budget of FY14 as education stipend and grants for the schools of the handicapped. In addition, Tk. 140 million and Tk. 620 million was allocated for construction of housing and for agricultural rehabilitation, respectively, which are playing major role in poverty alleviation and stimulating the rural economy.

b. Food safety programmes

Beside cash transfer, many other programs were already in place to ensure food safety for the extreme-poor and thereby alleviate poverty which include OMS, VGD, VGF, TR (Food), GR (Food), Food For Work (FFW), Food Assistance (Chittagong Hill Tracts). Food safety and distribution directly help alleviate poverty of the people living below the poverty line while contributing to poverty reduction indirectly as well. These types of activities ensure food safety in the *Monga*-affected districts, eradicate disguised unemployment by creating employment and control food inflation by increasing food supply in local markets in times of disaster-induced adversity. Under the revised budget of FY13, the government spent Tk. 707.26 billion which has been increased to Tk. 823 billion in FY14.

c. Microcredit programmes

Government's microcredit operation is mainly conducted through the programs such as - microcredit for women's self-employment by Jatio Mohila Sangstha, microcredit programmes of PKSF, SDF and NGO Foundation, employment for the unemployed youth by Karmasangsthan Bank, etc., for which Tk. 3.43 billion was allocated in the revised budget of FY13. The allocation for microcredit in the revised budget of FY14 was Tk. 3.46 billion and the budget estimate for FY15 is Tk. 2.42 billion.

d. Funds under different ministries

Along with different programs under several Ministries/Divisions, the Government has created a number of funds for social empowerment and social safety nets among which *Fund for Rehabilitation of the Acid-Burnt Women and the Physically Challenged*, *Fund for Assisting the Disaster-Affected Small and Poultry Farmers* and *Training Program for Self-Sufficiency* are important. For these Funds, Tk. 742.40 million was allocated in the revised budget of FY12; it was increased to Tk. 1.26 billion in the revised budget of FY13. An allocation to the tune of Tk. 1.31 billion was estimated in the budget of FY15.

e. Other funds

The government has also created a number of important funds as part of social safety nets. One of these important funds is the *Climate Change Trust Fund*. Poor women and children and, above all, poor population were affected most by the devastation of dreadful cyclones Sidr and Aila that hit the coastal districts in 2007 and 2009. Moreover, Bangladesh has drawn the attention of the developed world as one of the most vulnerable country to threats due to global warming and climate change. In this backdrop, in the revised budget of FY12, the Climate Change Trust Fund was created with an allocation of Tk. 7 billion. So far, an amount of Tk. 25.55 billion has been poured into this Fund. In addition, for the welfare of working lactating mothers a fund was created in the last financial year and in the revised budget of the current financial year Tk. 411.9 million has been allocated and the allocation has been raised to Tk. 600 million for the next financial year. One of the most important and poor-friendly programs is the *National Service*. For employing the poor unemployed youths, provision for creating 42,000 man-months of work for the youths of the districts of Kurigram, Lalmonirhat, Borguna and Gopalganj has been made, which will incur a cost of Tk. 2.35 billion in the revised budget of FY14. Moreover, in FY14's budget, Tk. 32 million for *Children Development Centre*, Tk. 125 million for *Centre for Services and Assistance to the Handicapped*, Tk. 10 million for rehabilitation and creation of alternative employment for the people engaged in begging and Tk. 115 million for launching pension scheme have been allocated. Additionally, Tk. 122.6 million for implementing some programs for backward communities including dalits-harizons and gypsies and Tk. 100 million for constructing a colony for municipal cleaning staff has been earmarked in the budget of FY14.

- 8.4 Among other on-going programmes/projects of the government that are playing vital role in poverty alleviation and HCR of poverty include *Returning Home* program, microcredit programs of BRDB, *Comprehensive Village Development Prograes* (CVDP), *Char Livelihood Program* (CLP), *One House One Farm* project, *Small Farmers Development Project*, and the programs implemented by *Palli Daridra Bimochan Foundation* (Foundation for Alleviation of Rural Poverty). Besides, the NGOs play an important role. There is no denying the fact that the NGOs at national level and other NGOs registered with different ministries are playing a key role in poverty alleviation and women empowerment by providing microcredit. No detail discussion on this issue, however, has been incorporated in the limited space of this booklet. In the following chapter, we have comprehensively described the determinants that have influenced poverty alleviation.

9.0 Driving Forces of Poverty Reduction in Bangladesh

- 9.1 The discussion in this chapter centers around the factors those are active as determinants or driving forces in reducing poverty in Bangladesh.
- 9.2 Inclusive economic growth has remained the main driving force behind poverty reduction in Bangladesh. A large body of empirical research supports the view that direct relationship exists between economic growth and poverty reduction. Ravallion and Chen (1997) and Adams (2003) are noteworthy among them. Adams (2003) in his research based on data from 50 developing countries has shown that poverty rate reduces by 25.9 percent if people's average income rise by 10 percentage point. The study of Roemer and Gugerty (1997) reveals that GDP growth of 10 percent is associated with 10 percent income growth of the poorest 40 percent and 9.21 percent income growth of the poorest 20 percent people of the society. However, the aggregate increase in per capita income of a country does not necessarily ensure poverty reduction¹⁰. The income distribution pattern in a country may change with growth in per capita income. The poor could not reap the benefits of income growth, and, in some cases, even poverty may rise when income distribution pattern, in high growth scenario, reveals a pro-rich bias¹¹. When high growth takes place with income distribution remaining constant, a part of that growth trickles down to the poor, thereby, reducing poverty by increasing their absolute income level. When income distribution pattern changes in favor of the poor overall growth becomes more effective in poverty reduction.
- 9.3 A country's growth is *pro-poor* or *inclusive* when that growth plays a key role in reducing poverty. The poor will benefit more from growth than the non-poor if pro-poor growth is ensured in a country. Economic growth in Bangladesh is pro-poor or inclusive. Many arguments can be put forward in favor of this statement. Basically, this claim can be established by reviewing percentage reduction in poverty rates with

¹⁰ According to the World Bank database, during 2000-2010 period per capita income in Dominican Republic increased by 3.62 percent and also the HC (measured by national poverty line) poverty indices increased by 2.07 percent at the same period. According to the same measure, in Egypt during 2000-2011 per capita income rose by 2.84 percent and poverty indices increased by 3.81 percent, in Guatemala during 2006-2011 per capita income rose by 0.70 percent and poverty indices rose by 1.04 percent, in Guinea during 2002-2012 per capita income rose by 0.13 percent and poverty indices rose by 1.18 percent, in Mexico during 2006-2012 per capita income rose by 0.79 percent and poverty indices rose by 3.36 percent and in Mozambique during 2006-2012 per capita income rose by 4.51 percent and poverty indices rose by 0.79 percent.

¹¹ The benefits of growth are defeated to evils of inequality if economic growth increases inequality. Bhagwati (1988) termed this type of growth as *immiserizing growth*. For example, sometimes prices of grains fall if using high yielding varieties improved technology increases the production. Many marginal farmers are not able to adopt new technology. As a result, their production does not increase rather they become pauperized due to selling their produce at lower prices. In this situation, economic growth may increase overall poverty.

respect to percentage change in per capita income (growth elasticity of poverty), calculating elasticity of major poverty indicators with respect to mean aggregate income of the society, analyzing the Growth Incidence Curve, disaggregating changes in poverty between growth and redistribution components over time and above all, by measuring the extent of social mobility. All these have been discussed in the following sections.

- 9.4. Growth in per capita income has played a major role in reducing poverty in Bangladesh. By comparing data of per capita income growth in Bangladesh with trends in poverty reduction, it is observed that 1 percent per capita income growth at the national level led to 0.86 percent decline in head count poverty between 1992 and 2010 and 0.92 percent decline between 2005 and 2010 (Table-14). Apart from the national level, poverty decreased as well in urban and rural areas, from 2000 onwards, as per capita income increased. It appears from this that growth in Bangladesh remained pro-poor since 2000.

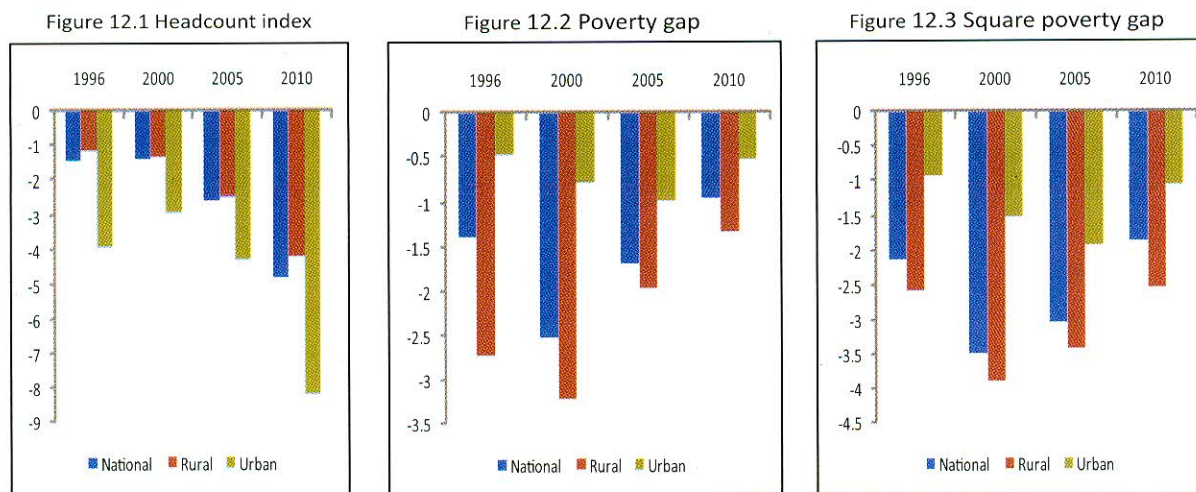
Table 14: Growth Elasticity of Poverty

Time period		1992-96	1996-00	2000-05	2005-10	1992-10
Percentage change in per capita income		2.35	3.31	3.80	5.06	3.72
Annual change in headcount poverty	National	-3.05	-0.60	-3.94	-4.67	-3.21
	Rural	-1.88	-1.02	-3.49	-4.28	-2.81
	Urban	-10.23	6.08	-4.20	-5.59	-3.80
Growth elasticity of poverty	National	-1.29	-0.18	-1.04	-0.92	-0.86
	Rural	-0.80	-0.31	-0.92	-0.84	-0.76
	Urban	-4.34	1.84	-1.11	-1.10	-1.02

Source: Estimated from the BBS data

- 9.5. Pattern of inclusive growth may also be understood from the elasticity of poverty indicators with respect to aggregate consumption of the country. Such elasticity should always be negative in the presence of inclusive growth. In Bangladesh, poverty indicators were always negatively elastic to increase in consumption-expenditure (Figure 12) reflecting the downward trend of poverty rates with increase in consumption. Figure 12.1 shows that head count poverty reduction accelerated with increase in aggregate consumption-expenditure from 1996 to 2010. The depth and severity of poverty also declined at a diminishing rate with in the same period (Figures 12.2 and 12.3). From the downward trend of poverty indices against increasing consumption-expenditure it, therefore, has been established that economic growth in Bangladesh is pro-poor.

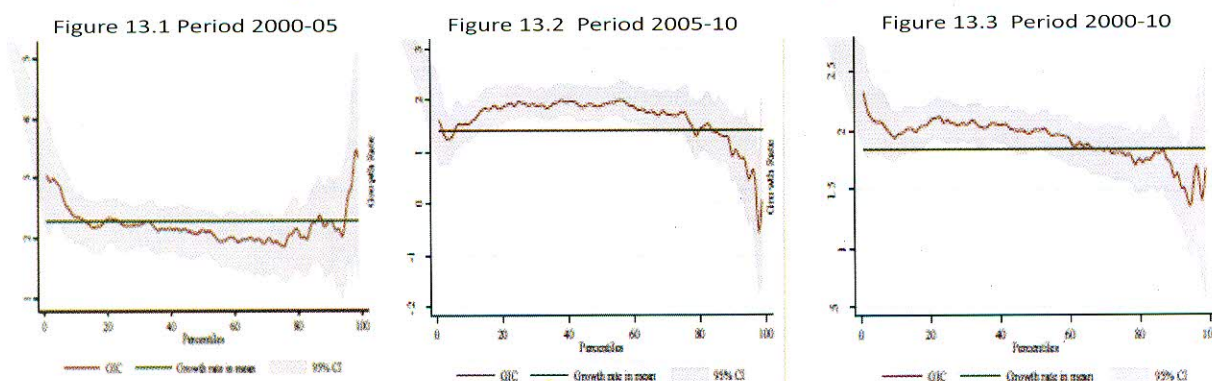
Figure 12: Elasticity of Poverty Indices with Respect to Mean Consumption



Source : Calculated by author from HIES data of Bangladesh Bureau of Statistics

- 9.6. Growth incidence curve is a very useful tool to examine the pro-poor nature of Bangladesh's growth. This curve shows growth rate at each percentile of consumption distribution in a country. The distribution of growth across the spectrum of rich and poor can easily be grasped with the help of this curve. The World Bank has recently constructed the growth incidence curve for Bangladesh for the period of 2000-2010 (Figure-13). The Figure shows that everyone (rich or poor) enjoyed the benefits of the increase in the per capita consumption equally between 2000 and 2005. It is, however, important to note that the extreme poor and the extreme rich grew faster than average pace (Figure 13.1). During 2005-2010, consumption growth was more pro-poor, especially, consumption of people above 5th percentile and below 80th percentile was far higher than the average consumption-expenditure of the society at large (Figure 13.2). Growth incidence curve during 2000 – 2010 reveals that consumption-growth was favorable for the poor throughout the decade. During this period, consumption growth of all families ranging from the poorest percentile to the 70th percentile was pro-poor.

Figure 13 : Growth Incidence Curve of Bangladesh

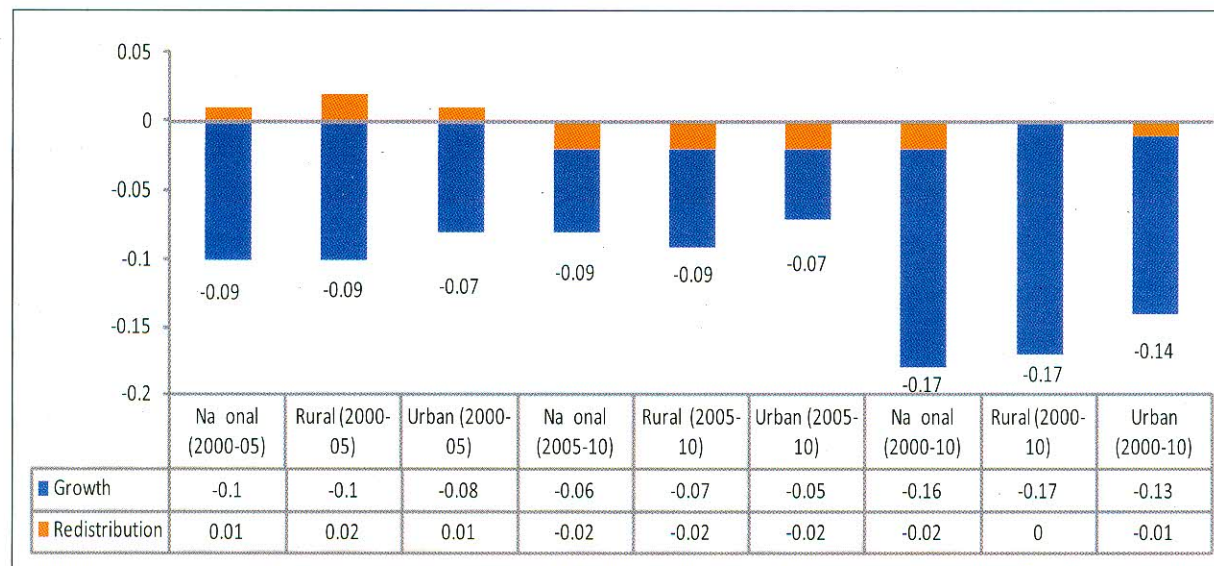


Source ; World Bank

9.7. Generally, two important factors could be responsible for changes in headcount poverty measure of a country over two distinct periods. One of them is growth in mean consumption expenditure which is called the Growth Component of *Changes in Poverty* and the other one is change in consumption distribution structure¹² which is known as Redistribution Component of Changes in Poverty. Datt and Ravallion(1992) devised a mechanism to decompose of changes in poverty into growth and redistribution components for two distinct periods. The growth component of a change in poverty measure is defined as the change in poverty due to a change in the mean consumption while holding the inequality (Lorenz curve) constant at some reference level. On the other hand, the redistribution component is the change in poverty due to change in the distribution structure or inequality while keeping the mean consumption constant at a reference level. Following the methods devised by Datt and Ravallion(1992), the World Bank has recently decomposed the changes in the headcount poverty indices into growth and redistribution components for the periods of 2000-2005, 2005-2010 and 2000-2010, which has been presented in Figure 14. It is found that in 2000-2005, headcount poverty at the national level has changed -0.09 point of which contribution of growth is -0.10 while that of redistribution is 0.01. It means that had consumption–distribution structure remained unchanged, the overall growth of the country would change poverty by -0.10 point, i.e. poor population could be reduced to 38.9 percent instead of the actual 40 percent. On the other hand, had the average consumption remained unchanged, and the consumption- distribution structure changed, then rate of poverty would have increased by 0.01 point, i.e. the rate of poverty in 2005 would have been 49.9 percent. Since growth and redistribution work in tandem in bringing changes in poverty, a part of the positive impact of growth has been obviated by the negative impact of inequality (redistribution). However, as the impact of growth was more dominant, ultimately poverty was reduced. In the same manner, between 2000 and 2005, growth played a positive role in poverty reduction in both rural and urban areas. On the contrary, redistribution process has, to some extent, increased poverty. So, it appears from this analysis that economic growth was not entirely pro-poor in 2000-2005 period.

¹² Change in consumption distribution structure means the change of Lorenz Curve in two distinct time periods, which has been discussed in paragraph 6.3.

Figure-14: Decomposition of Changes in Poverty into Growth and Redistribution Components



Source : World Bank

- 9.8. Growth and redistribution components complemented each other in reducing poverty at all levels (national, rural and urban areas) between 2005 and 2010. In this period poverty at national level changed by -0.09 point where contribution of growth was -0.06 point while that of redistribution was -0.02 point¹³. This period has witnessed redistribution of resources in favor of the poor, reducing inequality in consumption. This has substantially reduced rural poverty by -0.09 point of which contribution of growth was -0.07 point and of redistribution -0.02 point. On the other hand, urban poverty was reduced by -0.07 point with the contribution of growth and redistribution respectively being -0.05 point and -0.02 point. This data conclusively affirms that economic growth was totally pro-poor during 2005-2010. Taking the full 2000-2010 period into consideration, both components of changes in poverty indicate decline of poverty. During this period, growth component contributed single-handedly in poverty reduction in rural areas. Redistribution component, although did not make any positive contribution, had by no means any negative impact on poverty reduction.
- 9.9. Social mobility has largely contributed to make growth inclusive in Bangladesh. Corak (2012) shows that the more the society is mobile, the less would be the inequality. A society is considered mobile where a change in an individual's socio-economic status does not significantly depend on the socio-economic condition of the parent. In a stagnant society, children of a rich family remain rich, which increases intergenerational inequality. If the state can ensure equal opportunity for all citizens through its policy, then the society does not remain stagnant anymore. In such a society, each citizen enjoys equality of opportunity and can succeed in life by making optimum use of their capability.

¹³ The remaining -0.01 point was residual.

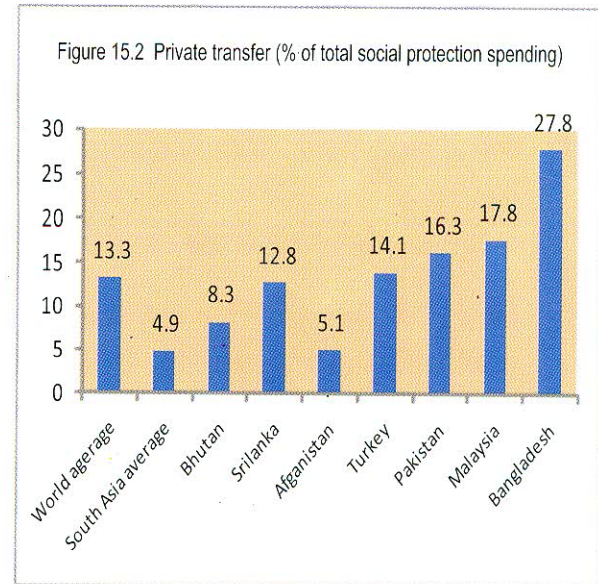
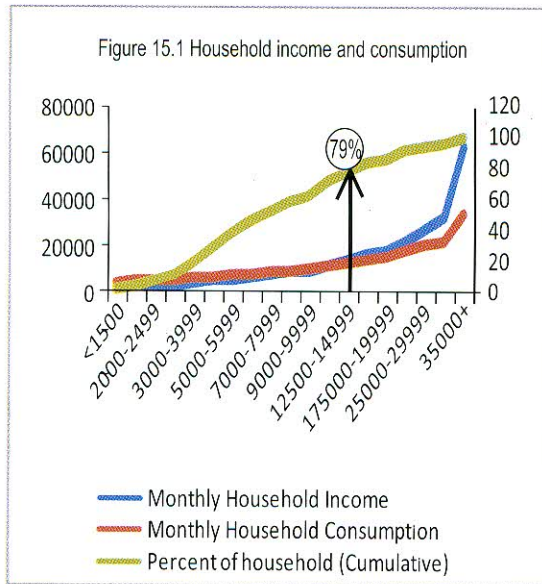
That is what has happened in Bangladesh. A number of drivers have contributed to the increasing social mobility in Bangladesh, *inter alia*, families' efforts to spare money and time for the development of human capital for their offspring, adequate government investment in health and education to develop human capital, government's infrastructure investment in building roads and bridges even in the remote corners of the country through which they have been connected with growth centers, government's social transfer, government's policy to ensure equality of opportunity in all walks of life, flexibility in labour market, employment of a huge number of women in readymade garments industry, micro-credit¹⁴ facility sponsored by government and NGOs, and expansion of mobile network throughout the country and rise in the use of information technology. This has facilitated the emergence of many entrepreneurs in industrial and business sectors and other successful persons in both public and private sectors who hailed from poor families during the post-liberation period. Many people have abandoned family businesses to establish themselves independently at home and abroad and thus helped to build material and human capital of the country. In fact, equal opportunity for all citizens irrespective of gender, economic status and caste and creed to engage in national, economic and social activities helped to rein in the distributional disparity in income in Bangladesh.

- 9.10 It is important to understand the quantitative measurement of social mobility in order to analyze the whole issue more precisely. For this purpose, a representative method of measurement is estimation of intergenerational elasticity in earnings which is the percentage difference in earnings in the child's generation associated with the percentage difference in the parental generation. The elasticity may assume the maximum value of 1 which means children from the poor (rich) families will remain poor (rich), i.e. the level of social mobility is zero. A lower elasticity means a society with more social mobility. There is no reliable estimation of intergenerational earnings elasticity in Bangladesh. An attempt has been made in this booklet to draw an indirect inference for Bangladesh by analyzing the correlation existing between intergenerational elasticity in earnings and income inequality of different countries of the world (Appendix-2). From the analysis made in Appendix -2, it appears that the assumed value of intergenerational earnings elasticity in Bangladesh is roughly 0.35. It goes to show that the income of roughly 35 percent of the total population of Bangladesh is somehow connected with that of their forefathers. The remaining 65 percent of population have trudged a long way towards prosperity without any significant backing from the family, which indicates a high level of social mobility in Bangladesh. In fact, all tangible changes in social life evident from post-liberation time to date support this perception.

¹⁴ Micro credit activities are playing a significant role in women empowerment.

- 9.11 Because of the continuous redistribution efforts made by government, the poor also have reaped the benefits of growth, which has ensured relative equality in consumption-expenditure. In post-liberation Bangladesh, income-distribution inequality grew in tandem with rise in per capita income but inequality in consumption-distribution was relatively low. It has been mentioned earlier that from 1984 till 1996 consumption Gini co-efficient kept growing in non-linear manner but remained stable from 1996 to 2000. But later, during 2000 and 2010 it went down again (Figure-10). In 2005-2010 period, both consumption Gini co-efficient and income Gini co-efficient have reduced respectively by 3.4 percent and 1.9 percent. In other words, the inequality which was persistently present from right after liberation changed towards a positive direction since 2005. Simply put, income distribution is more equitable now. Moreover, the income share of the lowest 10 percent of population has not been reduced. It can be inferred from this analysis that the poor also have equally enjoyed the benefits of GDP growth, and this relative equality in consumption distribution has made growth more pro-poor.
- 9.12. An analysis of consumption structure as per income group in 2010 reveals that consumption expenditure of 79 percent families of the country is higher than their income. There may be more than one reason for this. But there is no denying the fact that the significant amount of transfer payment through social safety net programs at government level and remittances, zakat and other gifts at private level contributed quite enormously to this progress. Figure-15.2 shows that private transfer as percent of total social protection spending in Bangladesh is higher than that of many neighboring countries of Bangladesh; this rate is even higher than the South Asian and World average.
- 9.13 Since headcount poverty, its depth and severity in Bangladesh are largely dependent on economic growth and income as well as consumption distribution structure, the determining factors of per capita income growth including the components of changing distributional structure of income and consumption have been considered as the main driving forces behind poverty reduction. GDP growth depends primarily on increased productivity. With the increase in labour productivity, the real wage of workers increases which ultimately liberates them from poverty. Factors like current technology, capital-labour ratio, health and education of labour are important for the increase in the marginal productivity of labour.

Figure 15: Household Income, Consumption and Private Transfer



- 9.14 According to the much talked about Endogenous Growth Theory, both the level and composition of government expenditures matter to economic growth. Although the issue is still debatable, economists have reached a consensus that overall increase in government expenditure as percent of GDP up to a certain level results in GDP growth. It is also broadly agreed that certain kinds of public expenditure like capital expenditure and expenditure for human capital formation such as spending on health and education sectors directly contribute to economic growth. The argument in favor of this is that the public goods produced by government spending such as transport and communication network, gas, water, electricity and other utilities promote economic growth by raising productivity of the factors (labour and capital) of production. Optimum spending on establishment of good governance such as ensuring rights to keeping private property facilitates proper functioning of market mechanism which is also growth enhancing. In addition, productive public expenditure has some positive externalities, which accelerate growth up to a point by preventing the trend of diminishing marginal productivity of labour and capital.
- 9.15 Robert Barro (1998) showed that at the early stage of increase in productive public expenditure as percent of GDP, both savings and growth increase. If it continues, saving and growth at one stage maximize and then start reducing. Thus the relationship between the size of government spending and economic growth can be represented by a parabola with inverted U shape. It can be assumed that in countries where the size of government expenditure is smaller than the optimum, the relation between government expenditure and growth will be linearly positive. The government size as percent of GDP was on average 14.16 in Bangladesh between

1976 to 2010 while this was on average 24.53 percent of GDP in the low income countries during the same period. It is clearly evident that the size of public expenditure in Bangladesh was far smaller than that of other comparator countries. Thus, according to Barro's assumption, as the relatively small public sector in Bangladesh increased gradually over the last decade, it triggered economic growth as well. It is expected that this trend will continue until government expenditure as a share of GDP reaches the optimum level¹⁵.

- 9.16. Figure 16 shows the relationship between increase in per capita income and public expenditure as percentage of GDP. Notably, per capita income increase is directly related to government expenditure, i.e., increase in government expenditure prompts increase in per capita income. Government expenditure in health and education sectors also positively impacts per capita income.

Figure 16: Government Spending (Percent of GDP) and Per Capita Income Growth (1976-2010)

Figure 16.1 Total government spending

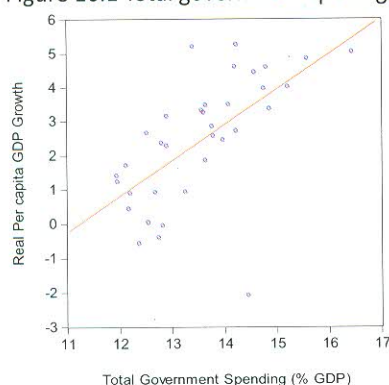


Figure 16.2 Spending in education

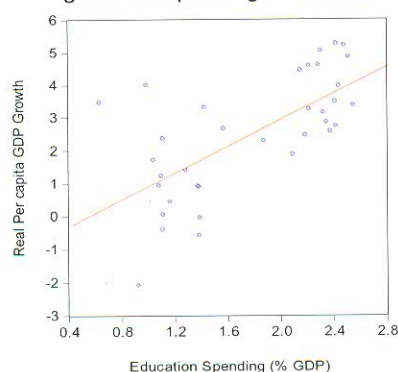
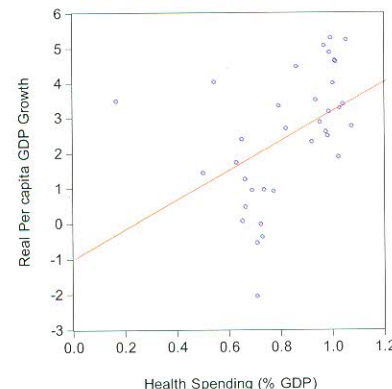


Figure 16.3 Spending in health



Government expenditure induced to foster output growth in one hand, by increasing aggregate demand from the demand side, and on the other hand, by enhancing the productivity of the factors of production from the supply side. Table 15 reveals that some leading indicators of health and education sectors in Bangladesh have changed remarkably in the positive direction in the period spanning from 1976 to 2012. These improvements would otherwise be impossible without appropriate government intervention.

- 9.17 Many studies revealed positive relation between government expenditure and growth. Ram (1986) in a cross-section and time series study of 115 countries for the period 1960-80 found a positive relation between growth and overall public expenditure. Similarly, Barro (1989) in a cross-section study of 72 countries for the 1960-1980 period, Ramirez (1997) in a time series study on Mexican data from 1950

¹⁵ According to our calculation, during 2000-10, the average size of growth maximizing public sectors in developing countries was 26.70 percent of GDP.

to 90, Cashin (1995) in a panel study of 23 OECD countries from 1971-1988 period, and Fuente (1997) in a panel study of 21 OECD countries for 1995-96 period found positive relation between government investment spending and economic growth. Few scholars such as Romar (1989) and Devarajan et al. (1996) also found a link between public consumption expenditure and income growth. Barro and Sala-i-Martin (1995), Russek (1997) and Bleaney et al (2001) found a direct relation between growth and education spending. Bleaney et al (2001) also found a positive impact of health spending in OECD countries.

Table-15: Changes in Selected Indicators of Health and Education Sectors

	1976	1992	2000	2010	2012
Age dependency ratio (% of working-age population)	92.65	81.94	69.59	56.92	54.53
Birth rate, crude (per 1,000 people)	45.03	33.33	27.03	20.93	20.31
Death rate, crude (per 1,000 people)	17.05	9.40	7.24	5.90	5.74
Depth of the food deficit (kilocalories per person per day)	..	230.00	148.00	..	114.00
Fertility rate, total (births per woman)	6.76	4.20	3.12	2.28	2.21
Immunization, DPT (% of children ages 12-23 months)	..	66.00	82.00	94.00	97.00
Improved sanitation facilities (% of population with access)	..	35.70	44.50	55.00	57.00
Improved water source (% of population with access)	..	69.70	76.00	83.40	84.80
Life expectancy at birth, total (years)	50.43	61.06	65.32	69.49	70.29
Infant mortality rate (per thousand live birth)	143.50	92.00	64.20	37.50	33.10
Under 5 Infant mortality rate (per thousand live birth)	214.40	131.70	87.70	47.20	40.90
Population growth rate (annual change)	2.30	2.25	1.84	1.08	1.19
Literacy rate, adult total (% of people ages 15 and above)	29.23	35.32	47.49	57.73	..
Literacy rate, adult female (% of females ages 15 and above)	17.97	25.84	40.82	53.41	..

Source: World Bank

9.18 Existing capital-labour ratio has changed over the years due to a reduction in population growth rate. Figure 17(1) reveals that per capita income has gone up significantly with the reduction of population growth rate. Reduction of population growth rate, thus, is one of the major determinants of per capita income rise. If population growth rate falls below capital stock growth, then per capita capital increases which in turn increase wages through increase in labour productivity. There are examples of this scenario in Bangladesh. From 1992 to 2010, highest and lowest population growth rate was respectively 2.5 percent and 1.12 percent vis-a-vis the growth of permanent capital which was on an average 7.9 percent. Higher capital growth has significantly contributed towards accumulation of capital stock which has gone up from 16.9 percent of GDP in 1991 to 24.4 percent of GDP in 2010. In each sector of the economy, therefore, real wage has increased; especially real wage in the industrial sector doubled in this period {Figure 17(3)}

- 9.19. According to the World Bank, labour income has made the biggest contribution to poverty eradication. Remittances, both domestic and international, too play a pivotal role in this regard. Per capita income has gone up in families with more adult members. Depth and severity of poverty in those families have also gone down. Labour income has increased mainly due to increase in farm income. Family income and consumption depends mostly on the members' educational qualifications, age, gender, occupation, and on geographical distribution of labour. The World Bank has recently measured the contribution of these factors in bringing about changes in the income and consumption of families. The study suggests that it is the higher return of private and family endowment which contributed to the increase in labour income. In other words, increase in the relative value of labour and productivity accelerates poverty reduction. The World Bank research shows that 64 percent poverty reduction has taken place due to the increase in farm and non-farm endowment, most of which has taken place in rural areas. The extent of poverty was severe in the agriculture-intensive rural areas so that agricultural farm income rise has substantially reduced poverty in those areas. The World Bank also observed that labour wage increase in the non-farm sector has positively impacted poverty reduction in the first half of 2000-2010. In addition, labour structure underwent three types of changes that played a conducive role in poverty reduction. These are: (1) migration of labour from agriculture sector to industry and service sector, (2) migration of a large part of day labourers and self-employed workers into regular jobs, (3) improvement of educational qualifications of the labour force. In the second half of 2000-2010, poverty had declined mostly in the agricultural farm sector. This, however, was not dependent either on the qualifications of labour force or their change of occupation. It happened only because of the increase in labours' real wage.
- 9.20. Labour wage increase, however, is not enough for poverty reduction unless there is an increase in employment generation. It is heartening to note that from 2002- 2003 till 2010, unemployment rate in Bangladesh stayed within 4.3-4.5 percent¹⁶. Labour wage increase coupled with low unemployment rate opened up a door of prosperity for Bangladeshi labour force which eventually decreased the depth and severity of their poverty and created an opportunity to continuing this process in the future.
- 9.21 Growing remittance inflows over the years has played an important role in the capital formation of the economy. As shown in Figure 17(2), both remittance inflow and capital formation as percentage of GDP have increased simultaneously since 1990. But the correlation between the remittance growth and capital formation is not very significant. This is probably due to the fact that remittance usually influences capital formation with a time lag. But, it has helped reduce poverty through increasing consumption expenditure. Robust growth in remittance and its consumption multiplier effect has boosted the aggregate demand and influenced higher production in all sectors of the economy contributing to the reduction of poverty.

¹⁶ Labour Force Survey, 2010, BBS

Figure 17: Per Capita Capital Formation and Real Wages

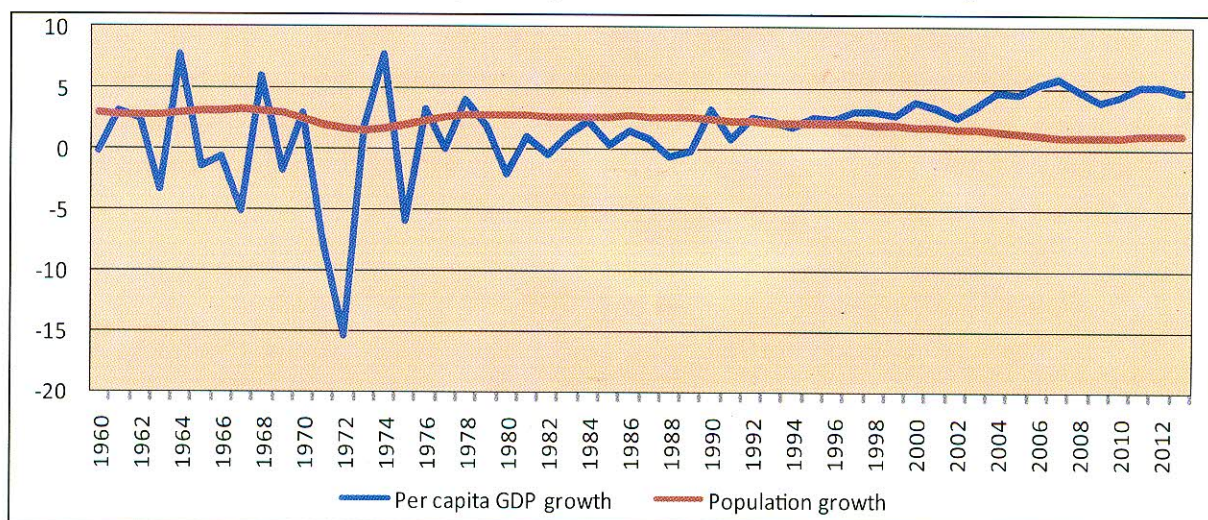


Figure 17.1 Fixed capital formation and foreign remittances

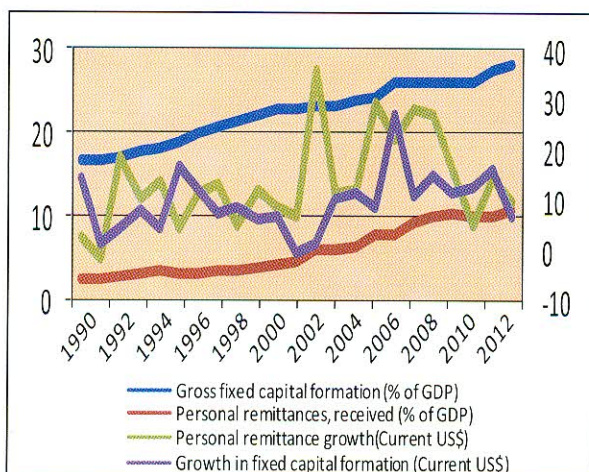
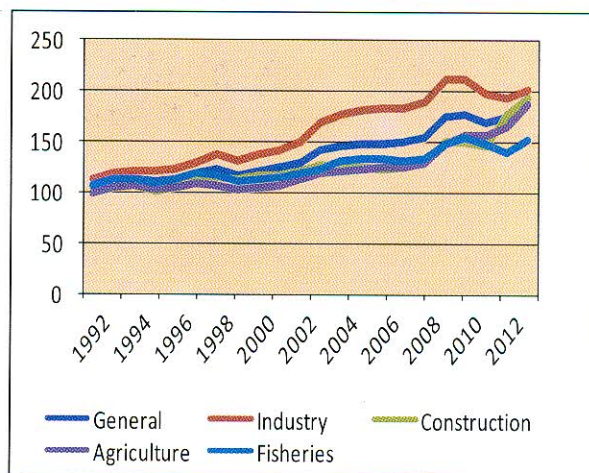


Figure 17.2 Real wage indices (1969-70=100)



Source : World Bank and Bangladesh Bureau of Statistics

9.22 Both the production structure and the composition of national output in Bangladesh have changed significantly between 1990 and 2010. Share of agriculture in the national income gradually declined and has been replaced by industry and service sectors. As result, a significant part of the productive labour force has moved from non-formal sectors to more formal and wage-based sectors. As shown in Figure 18(2), the contribution of agriculture, industry and service sector in national income was 30.25%, 21.47% and 48.28% respectively in 1990 which has been changed to 18.59%, 28.46% and 52.95% respectively in 2010. Consequently, the structure of sources of household income has also changed significantly. Income from agriculture as percentage of household income was 33.4% in 1991-92, but it decreased to 20.44% in 2010. On the other hand, income from professional wages and salary has increased

from 24.3% to 35.6% during the same period. Due to a rapid expansion of service sector, income from trade and commerce has reached 19.16% of the total household income in 2010 which was 14.8% in 1991-92. As income from industry and service sector is increasing compared to agriculture, monthly income of the households is becoming more uninterrupted and stable which is one of the most critical drivers of poverty reduction.

Figure 18: Changes in Composition of GDP and Household Income

Figure 18.1 Composition of GDP

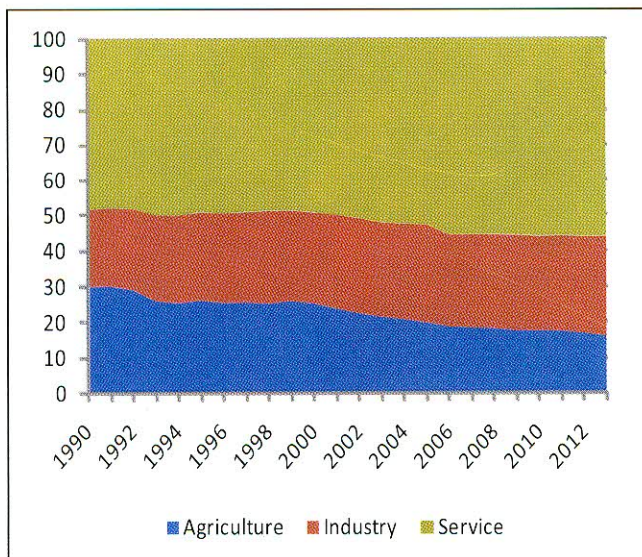
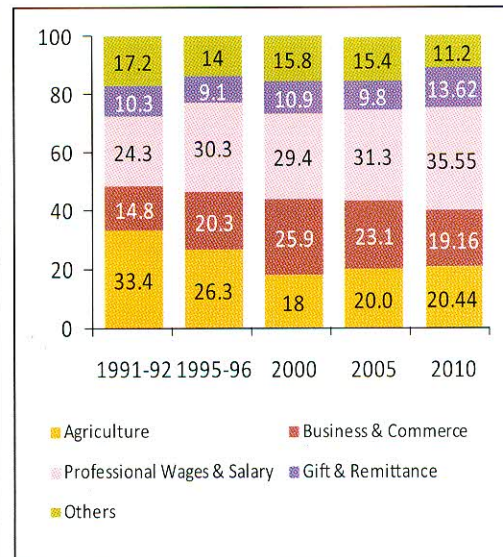


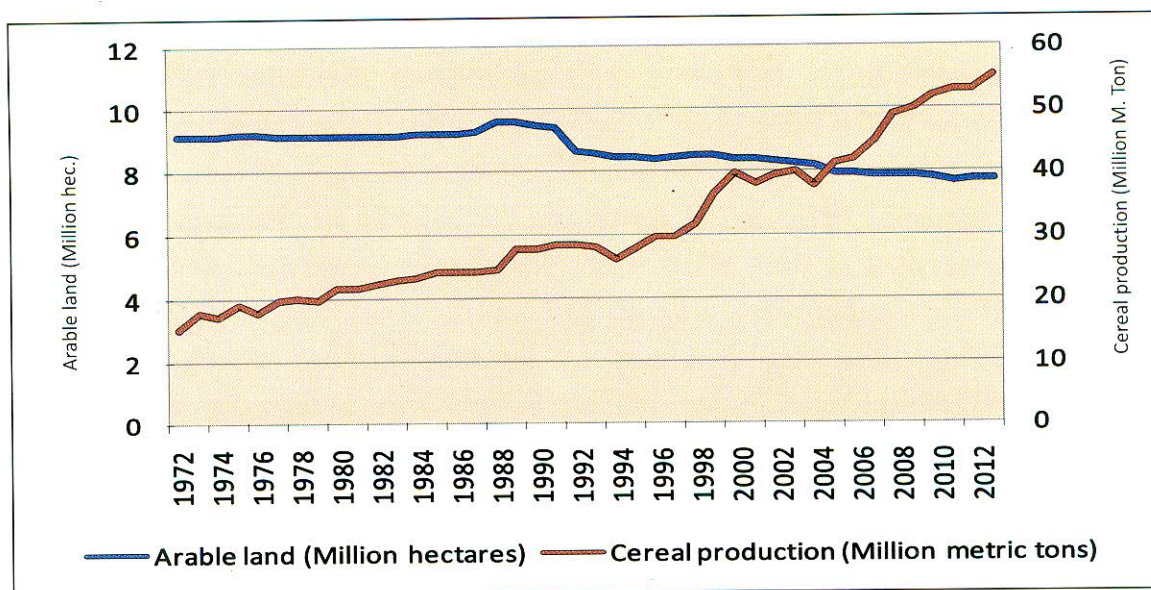
Figure 18.1 Composition of household income



Source : Bangladesh Bureau of Statistics

- 9.23 Although with urbanization and construction of housing and other infrastructure for a growing a population the total amount of arable land has decreased from 9.46 million hectares in 1990 to 7.62 million hectares in 2011, the total agricultural production has not declined, rather it has increased. Annual crop production in Bangladesh has increased from 27.75 million metric ton in 1990 to 52.63 million metric ton in 2011 (Figure 19). According to the World Bank, although the agriculture sector shrunk moderately during 2000-2010 period, there was growth in agricultural income in the last part of that decade. Agriculture sector's contribution to total employment came down from 51% to 48% during 2000-2005, but the annual income growth of agricultural labour was 1.7% during 2000-2005 and 9.8% during 2005-2010. This proves that agriculture sector continues to play an important role in poverty alleviation. Notably, the current government's policy of providing incentive to this sector contributed largely in the high growth of agriculture sector. The government has provided advance technology and agricultural inputs at a cheaper and reasonable price to the farmers which helped increase both the agricultural productivity and labour income. In addition, increased production of maize in the agricultural sector also opened up a new horizon in this sector.

Figure 19: Agricultural Land and Production

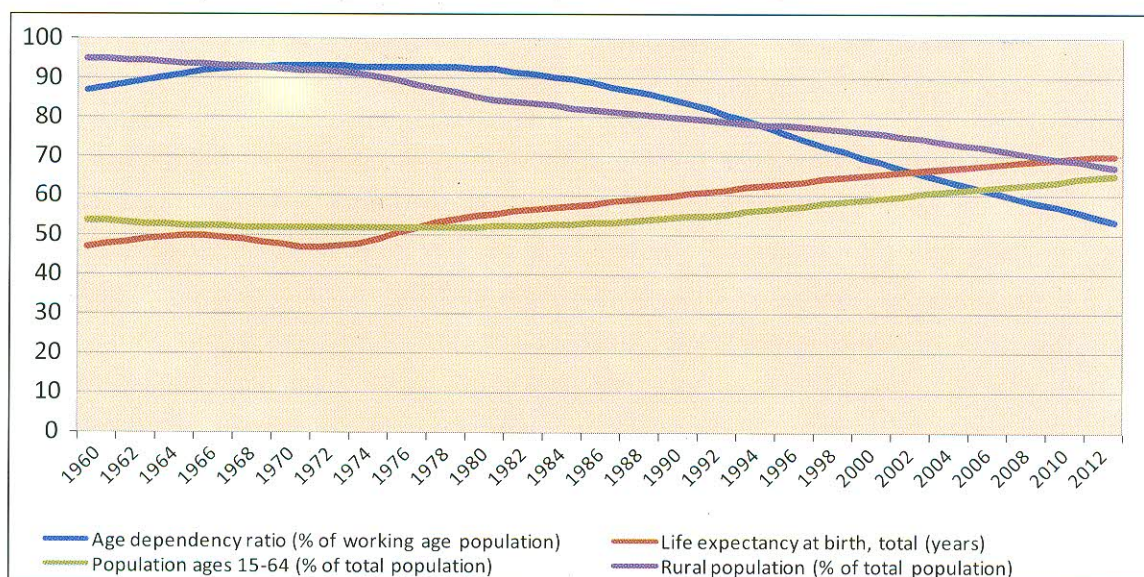


9.24 In the course of time, the favorable demographic changes in Bangladesh have also been a driver of poverty reduction. The dependency rate as percentage of the working age population has reduced to 54.53% in 2012 from 92.89% in 1972. Life expectancy has increased from 46.87 years in 1972 to 70.29 years in 2012. Similarly, the ratio of working age population (population of the age between 15 to 64) has increased from 51.84% in 1972 to 64.71% in 2012. In 1972, 91.51% of the total population lived in rural areas, which came down to 71.11% in 2012. Family size is getting smaller over the years and female education and employment are on the rise. Especially, the rise of employment of women of 15 years and above in the current decade is clearly noticeable. According to the Labour Force Survey 2010, the newly employed women labour was 9.8 million in 2002-03, which increased to 16.2 million in 2010. Women unemployment came down to 5.8% in 2010 from 7% in 2005-06. All these factors are contributing to the income growth of all segments of the society with considerable reduction of poverty in Bangladesh.

9.25 Due to continued implementation of Food for Work program in the rural areas as a part of the Social Safety Net, a large segment of the poor people could be saved from the ravages of the anticipated food inflation. This program has stabilized food supply in the rural markets. Due to this particular intervention, food inflation was kept well within the expectation. As the anticipated and actual food inflation increased, the nominal wage level also increased which helped prevent the erosion of real wages of the labour force. If money were to be distributed instead of food, the rural food distribution system would have been subjected to the influences of the market force

jeopardizing the uninterrupted food supply chain. So, it can be assumed that the Food for Work program not only helped reduce poverty directly, but also helped to reduce poverty indirectly through containing food inflation. It ensures the food security of the country. At the same time, it has helped improve the physical infrastructures of the rural areas. But with the changing scenarios of food sufficiency and increasing labour demands, the need for continuing FWP should be revisited. Corruption and wastage seemed to have taken over this system almost permanently. Free Food Distribution, a supporting program of Food for Work, also needs to be modified. Redesigning these two programs by introducing Food Voucher program for uninterrupted supply of cheaper food to the rural areas is being considered.

Figure 20: Demographic Changes



Source : World Development Indicators 2013, World Bank

10.0 Future Trends

- 10.1 The current rate of poverty reduction will continue in the coming years if the current per capita income growth sustains and there is no significant natural disaster. A projection shown in Table-16¹⁷ indicates that the national headcount poverty rate has come down to 24.3% in the current year. This achievement is well above the MDG target of reducing poverty to 29% by 2015. It is also worth mentioning that the target was set to reduce the poverty gap to 8% by 2015, but the poverty gap has been reduced to 6.5% in 2010.

Table 16: Projection of the Rate of Poverty Reduction

Year	Poverty			Extreme Poverty		
	National	Rural	Urban	National	Rural	Urban
2010	31.50	35.20	21.30	17.60	21.10	7.65
2011	29.90	33.40	19.80	15.72	18.91	5.99
2012	28.10	31.48	18.30	13.85	16.88	4.26
2013	26.20	29.51	16.70	11.93	14.78	2.45
2014	24.30	27.49	15.20	9.95	12.60	0.56
2015	22.40	25.42	13.60	7.92	10.36	-
2016	20.50	23.31	12.00	5.83	8.03	-
2017	18.50	21.15	10.40	3.68	5.64	-
2018	16.50	18.94	8.80	1.48	3.17	-
2019	14.40	16.68	7.20	-	0.63	-
2020	12.30	14.37	5.50	-	-	-
2021	10.20	12.02	3.80	-	-	-
2022	8.10	9.61	2.10	-	-	-
2023	5.90	7.16	0.40	-	-	-
2024	3.60	4.66	-	-	-	-
2025	1.40	2.12	-	-	-	-
2026	-	-	-	-	-	-
2027	-	-	-	-	-	-

- 10.2 In light of the projection shown in Table-16, it can be stated that Bangladesh will be able to eradicate extreme poverty by 2018 at the national level. The urban extreme poverty will be largely eradicated by 2014, but for the rural areas, we will have to wait until 2019. In case of poverty measured in the upper poverty line, the projection shows that Bangladesh will successfully eradicate headcount poverty by 2023 in urban areas and by 2025 in rural areas¹⁸.

¹⁷ Time trend of poverty (polynomials of order 2)

¹⁸ Even if there can be zero rate of poverty in mathematical estimation, no country can be free of poverty in absolute term in reality. Some people remain poor naturally while some others become poor under different risks.

Figure 21: Projection of Poverty Reduction Rate

Figure 21.1 Projection of headcount poverty rate

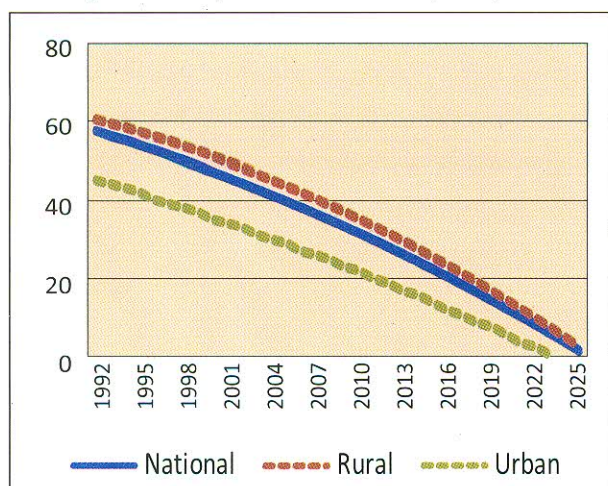
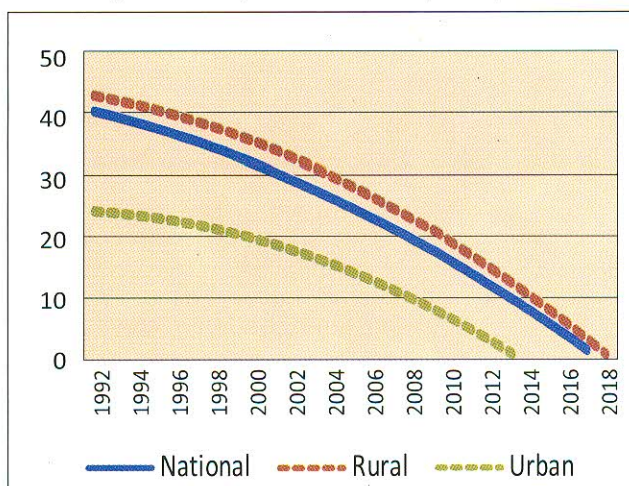


Figure 21.2 Projection of extreme poverty rate



10.3 The future dynamics of poverty in Bangladesh will depend on economic growth and income distribution structure. If growth accelerates, Bangladesh will be able to eradicate hunger and poverty well ahead of the projected period shown in Table-16. In case the existing income distribution structure prevails, the poor population will certainly be benefited from the growth.

11.0 Way Forward

- 11.1 As the economic growth in Bangladesh is pro-poor, there is no alternative but to achieve high growth for faster reduction of poverty. To boost growth, annual investment needs to be elevated to 35 percent of GDP within the next 5 years which is currently around 25%. With higher investment, labour productivity also needs to be improved which plays an important role in poverty alleviation. At the same time, growth enhancing sectors needs to be chosen carefully for higher investment.
- 11.2 Currently, the total savings is higher than total investment. In a well-functioning market economy, interest rate automatically brings equilibrium between savings and investment which is somewhat missing in case of Bangladesh. Investment decision of the private sector usually depends on the marginal cost of each unit of investment and its expected rate of return. In an ideal market economy, interest rate is considered as the marginal cost of investment. But in the event of market distortion (presence of high interest spread) or the existence of non-economic barriers of investment, private sector adds some non-economic costs while calculating marginal cost of investment for each additional unit. This leads to a sub-optimal level of investment due to market distortion.

It is widely perceived that private investment in Bangladesh is trapped in sub-optimal level which calls for government intervention to reverse the course. The government needs to undertake some specific steps to remove the barriers of investment which include enhancing public investment in productive areas. This will help the economy in two ways. Firstly, with additional public investment, idle savings of the economy will be directed towards productive sector. Secondly, if public investment increases, marginal cost of private investment will come down which will encourage private investment. Private and public investment will complement each other and will enhance the per capita income at a faster rate. This will also increase the capability of savings by the private sector and if this additional savings cannot be absorbed fully by the private sector, the remaining part can be invested by the government initiatives. This process can help the economy to come out of the existing low income level equilibrium trap and find a way towards high income level equilibrium where there will be higher per capita income and consumption.

- 11.3 Stable economic and political environment plays a critical role in boosting private sector investment. Continuation of government policies is also needed. According to 2013 Bangladesh Enterprise Survey¹⁹ conducted by the World Bank, among 15 areas of business environment, firms in Bangladesh are more likely to rate political

¹⁹ The World Bank reviews business environment by conducting a survey on 1,442 representative businesses in four economic regions in Bangladesh. The first survey of this kind was conducted in 2007 and the latest one in 2013. Besides business environment, the survey evaluates working capacity of each of the surveyed firms.

instability to be the biggest obstacle to their daily operations. 37.7 percent of firms in Bangladesh identified it as the biggest business environment obstacle in 2013, while only 11.4 percent of firms rated it as the biggest problem in 2007. Access to finance and access to land were rated relatively lower as significant business obstacle in 2013 compared to that in 2007. But more firms identified corruption and poorly educated workers as significant impediments. Therefore, the political parties and the people of all strata of the society should work together to maintain political stability in the country.

- 11.4 Given the current economic situation, the most effective area for public investment is the physical infrastructure sector. The government needs to invest in the extension and modernization of rail and road infrastructure, expansion and development of port and physical infrastructure along with ensuring uninterrupted power supply. Investment through PPP and FDI in these sectors can be patronized by the government on a priority basis. It may be mentioned that, over the last few years investment under PPP was not up to the expected level. Nevertheless, now that the legislation and necessary institutions are in place, it is expected that infrastructural bottlenecks will be removed, more investment will come and thereby growth will be accelerated. Desired level of infrastructural development will facilitate spreading of industrial outfits across the country which will in turn create massive employment opportunities. With this end in view, it will be appropriate to keep current expenditure at a fixed level of 10 percent of GDP, raise capital expenditure to 12 percent of GDP over the next five years and thus to fix the total government expenditure at 22 percent of GDP.
- 11.5 The second most important sectors for additional public investment could be education and health. Improvement in health and education necessarily increases labour productivity and accelerates growth. In addition, spending in health and education influences social mobility and helps make growth more inclusive. Emphasis should be placed on technical education than on general education. The curriculum of technical education should be developed keeping in mind skill requirements for overseas employers. Family planning programs of the government needs to be reinforced. One thing should be kept in mind that the current growth of per capita capital owes largely to the population control effort.
- 11.6 The government may think of investing in the following few sectors to promote good governance: ensuring adequate manpower and logistics for the law enforcing agencies to maintain law and order, and strengthening the institutional framework of transferring movable and immovable properties to protect the citizen's right to property etc. Necessary investment has to be increased to establish a truly result-

oriented digital system to steer these reform initiatives efficiently. If digitalization in sectors such as Police, Education, Health and Judiciary etc. is successfully done, it would help to curb corruption. All these government initiatives can be termed as intangible capital²¹ of the country which helps to enhance the productivity of private sector.

- 11.7 Among the major factors of production, land is very scarce in Bangladesh. Without an optimal land use policy and efficient land management system, it would, therefore, not be possible to maintain growth trajectory in a densely populated country like Bangladesh. Hence, emphasis should be given to the introduction of modern technology based land management system like digital land records and land zoning program.
- 11.8 It becomes difficult for the government to implement poverty alleviation programs without the presence and active participation of strong local government institutions. The benefits of economic growth and development can be taken to the doorsteps of the mass people effectively through the local governments. So, a strong structure of local government needs to be built through necessary administrative reform and reconstitution of the existing local government entities.
- 11.9 Tax revenue especially income tax needs be raised in order to enhance public expenditure. This requires expansion of both the tax-base and tax-net²². The annual budget deficit of the government should be contained within 5 percent of GDP. The total amount of arable land is shrinking day by day whereas the use of land for non-farm purpose is increasing. Special initiatives can be taken to increase the rate of land-tax of the non-farm land. Paying income tax at personal level should also be encouraged.
- 11.10 Although there is some criticism of the income inequality in Bangladesh, but the overall inequality situation is not worse than that of other comparable countries. Addressing the inequality problem usually requires redistribution of income towards the poor. This induces an urgency to increase the budgetary allocation for subsidy and transfer. As the government is always subject to resource constraint, any increase in subsidy and transfer allocation ought to be compromised with capital expenditure. Given this situation, it would be prudent to limit the social safety net expenditure to current 2 percent of GDP level. But safety net programs for those not capable of contributing to the productive sectors of the economy (like the disabled) should

²¹ 'Where is the Wealth of Nations? Measuring Capital for the 21st Century', The World Bank, Washington, D.C.

²² According to Robinson (1977), public expenditure based on earnings of tax revenue is conducive to higher growth.

continue²³. The number of safety net programs in Bangladesh is too many and they are implemented by many ministries and agencies. These results in a variety of problems including higher transaction costs involving the selection of the right beneficiaries and duplication of beneficiaries, and the challenges of delivering benefits of programs to the extreme poor. To address these issues, an integrated national social safety net policy (NSPS) needs to be prepared incorporating employment and social insurance policy through which the existing safety net programs can be further reinforced and more target oriented.

- 11.11 Public investment in Research and Development (R & D) needs to be increased for stimulating and sustaining the growth. For example, in agriculture sector, we need to innovate appropriate technology to produce seed which can withstand natural calamities, salinity etc. as our agriculture sector is facing the challenges of climate change and shrinking of arable land. To achieve growth in small, medium and heavy industry, we need to adopt a careful approach to shift from low-end product to high-end product. But, at the same time, we will have to maintain sustained investment in labour intensive industries like readymade garments, leather, jute, toys, furniture etc. Enhanced investment in research and development is needed to understand all these dynamics.
- 11.12 In order to enhance the efficiency of the economy, labour productivity needs to be increased through building a skilled labour force by proper technical education. This will help the population under poverty line to come out of poverty by their own. The government can undertake various projects for skill development with its own fund or funds from the development partners²⁴.

²³ The formulation of an integrated National Social Safety Net Policy (NSPS) is at the final stage. The proposed strategy envisages to further consolidate the on-going safety programmes and make them target oriented. There is also a plan to widen its scope by incorporating policies related to employment generation and social insurance.

²⁴ Finance Division has recently undertaken a mega plan to spend 1.6 billion US\$ over a period of 10 years on labour force capacity building. In the first phase, US\$146 million will be spent over the first four years, which is expected to meet to a great extent the demand of skilled manpower in the private sector.

Average Per Capita Income and Poverty Situation in Developing Countries During 2003-12

Country Name	GDP Per capita (Average)	Headcount Poverty (Lowest in the period)	Poverty Gap (Lowest)	Income share held by highest 10% (Average)	Income share held by lowest 10% (Average)	Gini Index (Minimum)
Congo, Dem. Rep.	142.60	71.30	32.20	34.69	2.29	44.43
Burundi	148.80	66.90	23.40	28.04	4.14	33.27
Ethiopia	197.10	29.60	7.80	26.57	3.63	29.83
Liberia	206.80	63.80	24.40	30.10	2.35	38.16
Malawi	221.70	50.70	17.80	33.38	2.68	39.02
Niger	268.30	59.50	19.60	32.09	2.94	34.55
Madagascar	278.90	75.00	32.00	38.11	2.41	44.11
Guinea	305.30	53.00	17.60	31.29	2.61	39.35
Afghanistan	305.40	36.00	7.90	23.21	4.08	27.82
Rwanda	314.50	44.90	14.80	44.19	1.97	50.82
Mozambique	346.60	54.10	20.50	37.97	2.03	45.66
Nepal	348.00	25.20	5.40	31.61	3.27	32.82
Sierra Leone	351.70	52.90	16.10	31.16	3.03	35.35
Uganda	356.10	24.50	6.80	35.09	2.47	42.62
Tajikistan	380.80	47.20	0.00	25.53	3.18	30.83
Togo	391.00	58.70	23.60	28.24	2.85	34.41
Central African Republic	392.10	62.00	33.10	39.58	1.66	43.57
Guinea-Bissau	411.00	69.30	Na	Na	Na	Na
Tanzania	412.90	28.20	6.70	29.61	2.82	37.58
Zimbabwe	425.50	72.30	34.10	Na	Na	Na
Burkina Faso	430.40	46.70	15.10	32.30	2.94	39.60
Gambia, The	440.80	48.40	27.90	36.94	1.95	47.28
Haiti	455.40	Na	Na	Na	Na	Na
Mali	469.40	43.60	13.20	28.19	3.10	33.02
Bangladesh	482.90	31.51	6.54	27.58	3.99	32.12
Kyrgyz Republic	527.60	31.70	6.10	28.54	3.09	33.38
Cambodia	543.80	20.50	4.20	33.32	3.23	36.03
Benin	545.90	33.30	9.50	31.24	3.00	38.62
Kenya	550.50	45.90	16.30	37.99	1.96	47.68
Lao PDR	553.90	27.60	6.50	30.33	3.34	36.74
Timor-Leste	556.00	49.90	13.60	Na	Na	Na
Ghana	569.00	28.50	9.60	32.75	2.03	42.76
Comoros	622.30	44.80	16.30	55.19	0.91	64.30
Chad	644.90	46.70	19.70	30.79	2.61	39.78

Country Name	GDP Per capita (Average)	Headcount Poverty (Lowest in the period)	Poverty Gap (Lowest)	Income share held by highest 10% (Average)	Income share held by lowest 10% (Average)	Gini Index (Minimum)
Uzbekistan	653.10	16.00	0.00	29.47	2.85	36.72
Zambia	685.10	60.50	28.00	40.82	1.71	42.08
Pakistan	720.40	22.30	0.00	27.02	4.14	30.02
Sudan	744.90	46.50	16.20	26.72	2.74	35.29
Mauritania	756.60	42.00	14.50	32.40	2.49	40.46
Sao Tome and Principe	778.10	61.70	23.00	Na	Na	0.00
Senegal	778.50	46.70	14.50	30.62	2.51	39.19
Lesotho	792.80	56.60	0.00	39.40	0.99	52.50
Vietnam	800.90	17.20	4.50	28.33	3.10	35.57
Yemen, Rep.	832.20	34.80	8.90	30.82	2.91	37.69
India	880.90	21.90	4.00	28.53	3.72	33.38
Nigeria	886.60	46.00	17.00	35.33	1.87	42.93
Papua New Guinea	887.40	39.90	15.70	Na	Na	0.00
Moldova	905.30	16.60	2.90	27.55	3.04	33.03
Djibouti	921.20	0.00	0.00	Na	Na	0.00
Cameroon	927.80	39.90	12.30	30.36	2.91	38.91
Cote d'Ivoire	939.70	42.70	15.30	31.75	2.23	41.50
Solomon Islands	987.50	22.70	7.50	Na	Na	0.00
Bolivia	1105.50	51.30	0.00	44.07	0.52	56.29
Guyana	1139.10	0.00	0.00	Na	Na	0.00
Kiribati	1159.20	0.00	0.00	Na	Na	0.00
West Bank and Gaza	1168.10	21.90	4.90	29.17	2.94	35.50
Mongolia	1187.70	27.40	0.00	28.38	3.04	36.52
Nicaragua	1219.30	42.50	0.00	31.51	2.61	40.47
Philippines	1302.00	24.90	5.10	33.94	2.44	42.98
Egypt, Arab Rep.	1396.60	19.60	3.60	27.10	3.91	30.77
Indonesia	1429.10	11.40	1.80	28.79	3.45	34.01
Sri Lanka	1448.00	8.90	1.70	31.49	3.22	36.40
Honduras	1470.90	58.30	0.00	45.04	0.56	56.16
Bhutan	1543.70	12.00	2.60	32.56	2.65	38.06
Syrian Arab Republic	1568.80	0.00	0.00	28.93	3.36	35.78
Paraguay	1591.20	32.40	37.90	41.97	1.04	51.04
Georgia	1698.50	14.80	4.30	31.06	2.09	39.37
Congo, Rep.	1776.20	46.50	0.00	37.05	2.08	47.32
Armenia	1883.00	27.60	5.10	27.96	3.55	30.23
Ukraine	1952.80	2.90	0.40	22.80	3.97	25.62
Iraq	1978.90	19.80	4.20	25.24	3.79	30.86

Country Name	GDP Per capita (Average)	Headcount Poverty (Lowest in the period)	Poverty Gap (Lowest)	Income share held by highest 10% (Average)	Income share held by lowest 10% (Average)	Gini Index (Minimum)
Vanuatu	2021.10	0.00	0.00	Na	Na	0.00
Morocco	2171.60	9.00	0.00	33.22	2.66	40.88
Angola	2197.40	36.60	12.70	32.37	2.18	42.66
Turkmenistan	2228.50	0.00	0.00	Na	Na	0.00
Guatemala	2235.40	51.00	0.00	42.21	0.64	54.50
Samoa	2296.50	0.00	0.00	Na	Na	0.00
China	2322.20	0.00	0.00	31.00	1.75	42.06
Micronesia, Fed. Sts.	2354.00	0.00	0.00	Na	Na	0.00
Swaziland	2380.80	63.00	30.40	40.12	1.66	51.49
Azerbaijan	2385.40	6.00	2.00	27.37	3.43	33.71
Kosovo	2446.60	29.20	7.30	Na	Na	0.00
Tuvalu	2451.10	0.00	0.00	Na	Na	0.00
Tonga	2562.30	0.00	0.00	Na	Na	0.00
Jordan	2568.20	13.00	2.60	29.41	3.23	33.82
Marshall Islands	2714.40	0.00	0.00	Na	Na	0.00
Cabo Verde	2741.90	26.60	8.10	Na	Na	0.00
El Salvador	2910.00	30.70	0.00	36.56	1.08	46.19
Thailand	2912.70	13.20	0.00	31.89	2.72	39.37
Iran, Islamic Rep.	2978.40	0.00	0.00	29.63	2.62	38.28
Albania	3003.50	12.40	2.30	26.48	3.43	31.09
Algeria	3063.60	0.00	0.00	Na	Na	0.00
Bosnia and Herzegovina	3099.50	14.00	0.00	27.47	2.80	35.78
Macedonia, FYR	3144.00	27.10	0.00	31.32	2.19	38.85
Ecuador	3158.70	27.30	0.00	41.09	1.10	49.26
Peru	3380.30	25.80	7.10	38.87	1.34	48.14
Tunisia	3488.70	15.50	0.00	30.02	2.52	36.06
Fiji	3598.70	35.20	9.90	34.80	2.08	42.83
Serbia	3603.20	24.60	0.00	24.20	3.44	27.80
Colombia	3719.20	32.70	12.90	45.88	0.66	55.91
Belarus	3826.50	5.20	0.00	22.18	3.77	26.22
Namibia	3864.80	28.70	8.80	54.75	1.39	63.90
Suriname	3880.60	0.00	0.00	Na	Na	0.00
Belize	4127.20	0.00	0.00	Na	Na	0.00
Bulgaria	4153.30	10.60	3.00	22.97	3.37	28.19
Montenegro	4186.40	4.90	0.90	23.67	3.53	28.58
Jamaica	4189.70	9.90	0.00	35.90	2.25	45.51
Maldives	4224.50	0.00	0.00	28.03	2.71	37.37

Country Name	GDP Per capita (Average)	Headcount Poverty (Lowest in the period)	Poverty Gap (Lowest)	Income share held by highest 10% (Average)	Income share held by lowest 10% (Average)	Gini Index (Minimum)
Dominican Republic	4225.50	40.40	0.00	39.56	1.54	47.20
Cuba	4294.50	0.00	0.00	Na	Na	0.00
Kazakhstan	4295.70	3.80	0.50	25.01	3.70	29.04
Argentina	4567.40	0.00	0.00	35.35	1.15	44.49
Costa Rica	5067.50	20.30	0.00	37.72	1.26	47.63
Brazil	5150.10	15.90	0.00	44.57	0.71	54.69
Romania	5263.10	13.80	3.20	23.83	3.38	24.24
St. Vincent and the Grenadines	5353.10	0.00	0.00	Na	Na	0.00
South Africa	5478.00	23.00	7.00	54.62	1.12	63.14
Panama	5577.00	27.60	0.00	41.25	0.92	51.92
Mauritius	5616.30	0.00	0.00	Na	Na	0.00
Dominica	5820.30	0.00	0.00	Na	Na	0.00
Venezuela, RB	5825.20	25.40	0.00	34.80	0.79	44.77
Botswana	5848.70	19.30	11.70	Na	Na	0.00
St. Lucia	5854.50	0.00	0.00	Na	Na	0.00
Malaysia	5962.40	1.70	0.80	32.73	2.11	37.91
Russian Federation	5970.70	11.00	1.00	31.05	2.59	37.14
Uruguay	5990.20	12.40	0.00	35.24	1.77	45.32
Lebanon	6146.60	0.00	0.00	Na	Na	0.00
Gabon	6315.10	32.70	10.00	32.95	2.58	41.45
Grenada	6506.80	0.00	0.00	Na	Na	0.00
Turkey	7500.90	17.10	0.00	30.89	2.09	38.73
Latvia	7623.60	5.90	0.00	27.89	2.71	34.81
Libya	8063.40	0.00	0.00	Na	Na	0.00
Mexico	8066.10	42.90	0.00	38.07	1.72	46.05
Chile	8160.30	13.70	0.00	43.24	1.48	51.84
Lithuania	8648.80	0.00	0.00	28.35	2.68	35.81
Poland	9059.60	10.60	0.00	26.88	3.16	32.73
Palau	9504.70	0.00	0.00	Na	Na	0.00
Croatia	10449.50	11.10	2.60	25.35	3.52	28.99
Estonia	10774.10	0.00	0.00	27.78	2.67	35.78
Hungary	10958.40	0.00	0.00	24.87	3.58	30.04
Seychelles	12253.00	13.40	9.30	60.16	1.64	65.77
Slovak Republic	13031.50	0.00	0.00	23.77	4.06	26.00
Slovenia	18680.90	0.00	0.00	24.23	3.41	30.82
Qatar	57254.90	0.00	0.00	35.90	1.30	41.10
South Sudan	Na	50.60	23.70	Na	Na	45.53

Source: World Development Indicators 2013; Na= Not available

Social Mobility and Inequality: Bangladesh Perspective

Growth cannot be inclusive without social mobility. Social mobility is a broad concept that discusses the correlation between fathers' socio-economic status (occupation, income, social class etc.) and the socio-economic status of the offspring. If this correlation is significant, it implies that social mobility is weak. In this scenario, children belonging to the rich (poor) families tend to remain rich (poor). The lack of social mobility reduces the probability of social inequality declining. For the benefit of a sound economic analysis, the extent of social inequality needs to be measured in quantitative terms. One such accepted method to do this is the assessment of Intergenerational Earnings Elasticity where percentage change in the income of a generation is estimated relative to the percentage change in income of the previous generation. The elasticity may assume the maximum value of 1 which means children from the poor (rich) families will remain poor (rich), i.e. the level of social mobility is zero. The less the value of intergenerational earnings elasticity is, the more mobile is the society. For example, if the value of the elasticity is 0.35, then only 35 percent of the offspring's change in income is dependent on the fathers' income. In this case, social mobility is comparatively more.

Intergenerational Earnings Elasticity: International Experience

Miles Corak (2012) in his article titled "Inequality from Generation to Generation: The united States in Comparison" estimated intergenerational earnings elasticity of 22 countries:

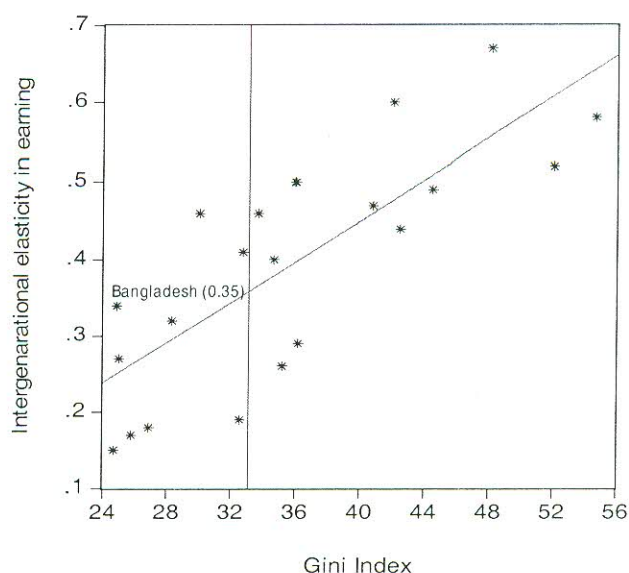
Table 1 Intergenerational Earnings Elasticity for Different Countries

Country	Intergenerational elasticity	Country	Intergenerational elasticity
Peru	0.67	France	0.41
China	0.60	Spain	0.40
Brazil	0.58	Japan	0.34
Chile	0.52	Germany	0.32
U.K	0.50	New Zealand	0.29
Italy	0.50	Sweden	0.27
Argentina	0.49	Australia	0.26
United States	0.47	Canada	0.19
Switzerland	0.46	Finland	0.18
Pakistan	0.46	Norway	0.17
Singapore	0.44	Denmark	0.15

Source: Miles Corak (2012)

Table 1 shows that social mobility in Peru is the lowest among 22 countries where 67 per cent of income of the present generation depends on their parents' income. On the other hand, only 15 per cent of income of the present generation in Denmark depends on their parents' income. Among these 22 countries, therefore, Denmark's social mobility is the highest. In addition, Corak (2012) plotted Gini coefficients of the relevant countries against their intergenerational earnings elasticity and found a positive relationship

Figure: Intergenerational Earnings Elasticity and inequality



between these variables (Figure 1) i.e. when value of intergenerational earnings elasticity increases, inequality in the society rises as well. Simply put, when social mobility is low, income inequality tends to be high.

Social Mobility in Bangladesh

There has been no research to calculate intergenerational earnings elasticity in Bangladesh that could measure social mobility²⁵. Despite the absence of direct research on this topic, in light of the established relationship between intergenerational earnings elasticity and inequality, a somewhat logical deduction on the statistical measurement of social mobility can be made. In figure 1, Gini coefficient and intergenerational earnings elasticity are shown on the horizontal and vertical axis, respectively. The red line is the simple regression line that plots the average value of intergenerational earnings elasticity against every value of the Gini coefficient. If the value of the Gini coefficient is known, then the probable value of the intergenerational earnings elasticity can be derived from this line. It is possible to derive an understanding about social mobility in Bangladesh based on this technique. For example, according to Bangladesh Bureau of Statistics, the value of the Gini coefficient in 2010 in Bangladesh was 32.12. Against that, the average value of intergenerational earnings elasticity is 0.35²⁶. The sample of Corak's (2012) research

²⁵ However, Asadullah (2011) calculated the correlation of the wealth between the father and the son in the range of 0.53 to 0.77 from a data on 141 villages of Chandpur Upazilla (1974-96)

²⁶ Calculated by using OLS method (intergenerational earnings elasticity as dependent variable and Gini coefficient as independent variable).

includes mostly developed countries. There may be doubts as to the applicability of the findings of the research to developing countries. These doubts may be cleared, however, owing to some characteristics of the Gini coefficient. Firstly, Gini coefficient is mean independent which means the value of Gini coefficient will not change if everyone's income in the society doubles, i.e. Gini coefficient carries the same meaning for rich or poor nations. Secondly, Gini coefficient is independent of the size of population, i.e. even if the size of the population changes and other things remain constant, Gini coefficient does not change. As a result, the inference this coefficient conveys is unchanged despite the size of the country. Thirdly, Gini coefficient is symmetrical, i.e. it does not affect the coefficient if two persons interchange their income.

Due to these characteristics of Gini coefficient, there is no significant reason to prevent the application of Corak's (2012) research findings to countries including Bangladesh. However, there are other factors that may influence social mobility significantly. Family, labour market and state policy play differing roles depending on the particular country. Family is the primary source of a child's positive growth to maturity. Children who are raised in affluence are generally well looked after so as to accumulate necessary social skills for a successful future life. These children have a higher probability to become an able parent. The opposite might happen to a child who was born in a poor family. Still, differences in the demographic characteristics and size of the family, capacity of parenting, time spent for the child etc. may result in distinct intergenerational earnings elasticity in various countries.

Disparity in expenditure on human capital and its future return are responsible for the country-wise difference in intergenerational earnings elasticity as well. For example, human capital formation is expensive for families in countries where child and health care, education etc. are market-based. Higher expected return on human capital in these countries will create an incentive to invest in this sector. Solon (2004) assumed that higher return on investment in education is an indicator for inequality in labour market and showed that intergenerational mobility is low in those societies where there is more cross-section inequality in the labour market. Moreover, government policy may play an important role to reduce inequality in the labour market and progressive government programmes can increase intergenerational mobility. For example, assuming two countries spend same proportion of their gross domestic product on education, the country will be more socially mobile which spend less on subsidizing the tertiary education and more on developing quality primary education. Putting differently, if the government can ensure equal opportunity for its citizen by spending adequately on education, health and other social safety programmes, society will be more mobile. Moreover, government can play a role to augment social mobility by implementing minimum wage act. Hence, differences in the role of the labour market, family and the government may cause social mobility to differ across countries.

Whatever may be the controlling factors behind social mobility, it is of utmost relevance to the discussion of its role in reducing inequality. The reason that Bangladesh has a favourable consumption distribution is due mainly to the increasing improvement of social mobility since independence. If we compare the inequality scenario in Bangladesh with the world, assuming the value of intergenerational earnings elasticity to be close to 34.6 (Figure 1) appears logical, although we do not have any direct tool of measurement. This means that the income of about 65 per cent of the population of Bangladesh does not depend on their forefathers' income which signifies a relatively higher social mobility. The visible progress in the socio-economic condition of Bangladesh since independence attests to that fact.

The pro-poor expenditure policy pursued by the government in different sectors including health, education and social safety-net sectors that the government is pursuing in line with the provisions of the Constitution in ensuring equal opportunity of participation for all citizens of the country.. People are free to take their own decision like any other democracy. Alongside the government, non-governmental organizations (NGOs) are also playing a role in creating social awareness. People are investing more in developing human capital for their posterity as a result of this awareness. Thus, younger generation is becoming more creative. They are physically stronger as well thanks to the concerted effort of the government as well as the NGOs.

Due to its expansion, a large part of the educated labour force can be employed by the private sector reducing strain on the government and families. Again, thanks to increased opportunities, a new class of creative entrepreneurs is gaining ground. Rural economy has been rejuvenated due to a growth in remittances. As remittances grow, people are consuming more, which in turn, is creating more demand for consumer goods. As a result, the economy is benefitting. More jobs are being created. As people have more access to internet, mobile phone and cable television, ancient ideas and prejudices are being replaced by more modern ones. Dowry, child marriage, unscientific medical practices, use of tobacco, religious bigotry etc. is on the decline. It is difficult to enumerate all the positive impacts that relatively higher social mobility has achieved in Bangladesh. However, the lack of any estimation of intergenerational earnings elasticity notwithstanding, the inverse relationship between social mobility and inequality has been obvious in the country since independence. The policies that facilitated this development have gained momentum over the last couple of decades as the decline in inequality and poverty indicates.

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