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LINKING EQUITY AND GROWTH IN BANGLADESH

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Section 1. Introduction

The concern with equity has emerged strongly in recent global debates on economic progress. This has happened partly in recognition of the fact that in spite of great strides made by the world in recent times in promoting growth of incomes and ensuring higher standards of living across the globe (the setback caused by the recent financial crisis notwithstanding), inequality between and within nations has not diminished. In fact it has increased in many parts of the world, especially in the developed world and in parts of the developing world that have been enjoying the most rapid pace of growth.[1] In part, the increasing concern with equity has also emerged in the context of discussion of the post-MDG agenda as many participants in these discussions have noted with dismay that the original concern with equity as enshrined in the Millennium Declaration has somehow got lost in the specificities of target-setting.[2]A vigorous advocacy campaign has been launched to introduce the goal of inequality reduction as a core element of the post-MDG agenda.

This global concern with equity finds echo in the local discourse on political economy in Bangladesh as well. As growth has picked up over the last two decades, and brought poverty down in its wake, observers have noted with dismay that inequality has remained stubbornly high and if anything is getting even higher. The present paper seeks to contribute to this discourse by unravelling the nature of the growth-equity nexus in Bangladesh. As a prelude to the discussion of the specific experience of Bangladesh, we begin by reviewing the academic literature on the theory and empirics of the relationship between growth and inequality in Section 2. In Section 3, we undertake an in-depth analysis of the relationship between growth and distribution in Bangladesh, trying to understand the processes that underlie the growth-equity nexus. One of the conclusions of this analysis is that a necessary precondition for linking equity and growth in Bangladesh is to ensure greater social protection on the one hand and greater equality in the formation of human capital on the other. From that perspective, Section 4 evaluates the existing social protection system in Bangladesh, Section 5 examines recent trends in the distribution of health outcomes between the rich and the poor, and Section 6 does the same for educational outcomes. Finally, Section 7 offers some concluding observations by way of summarising the main findings of the study and drawing out some of their policy implications.

[1] The relevant evidence is discussed extensively, inter alia, in ADB (2012), BDP (2013), OECD (2011), Palma (2011), UNDESA (2013) and World Bank (2006a). Specifically on South Asia, see Rama *et al.* (2014).
[2] See, for example, Vandermoortele (2011), UN Task Team (2012) and NEF (2014), among others.

Section 2. The Growth-Inequality Nexus: Two-Way Causation

The relationship between growth and inequality is characterised by two-way causation. The rate and process of growth may shape the evolving pattern of inequality, and the existing pattern of inequality may in turn affect the prospects for growth. For almost the whole of the second half of the twentieth century, the economics profession, to the extent it considered the relationship between growth and inequality at all, focussed almost exclusively on the first line of causation - running from growth to inequality. Since the 1990s, with the emergence of endogenous growth theory, attention has shifted decisively towards the line of reverse causation – running from inequality to growth.

Following the seminal work of Simon Kuznets (1955), the causal relationship running from growth to inequality has been characterised as an inverted U-relationship, where inequality first rises with growth and subsequently falls as a country becomes richer. This relationship has been the intellectual foundation of a view often expressed in the early development literature that it is normal for inequality to rise in the early stage of development – one must be patient and wait for a country to develop before seeking to create a more equal society. Much work has been done to explain this alleged 'law' of development and to test its empirical validity.

Kuznets himself offered an explanation of rising inequality in the early stage of development in terms of inter-sectoral migration. He assumed that rural inequality was lower than urban inequality. This implied that as labour migrated from rural to urban areas in the early stage of development, the high-inequality urban sector's weight in the national economy increased, resulting in rising inequality at the national level. An even more popular explanation was based on the celebrated surplus labour model of Arthur Lewis (1954). In the early stage of development, industrial development proceeds by employing surplus labour. So long as the pool of surplus labour exists, workers do not experience any rise in wages but the profits and incomes of the owners of capital soar, resulting in growing inequality.

Despite the apparent plausibility of these explanations, for Kuznets himself, the inverted U-relationship was nothing more than a hypothesis - one that has come to be known as the Kuznets hypothesis - as he had only very skimpy data on which to base his conclusions. The first serious attempt to test the empirical validity of the hypothesis was made in the 1970s. Since then, a huge literature has developed on this subject, but often reaching completely opposite conclusions. This is not the occasion to attempt a threadbare critical review of this literature, but in view of the subject's relevance for the current concerns with linking growth with equity in Bangladesh, it is necessary to distil the main findings of this line of research. In our view, the following observations fairly summarise the current state of knowledge.

Early cross-sectional studies based on cross-country regressions found strong support for the inverted U-curve, reinforcing the view that as a poor country embarks on the growth

path inequality must get worse first before it can get better (Adelman and Morris 1973; Paukert 1973; Ahluwalia 1976; Robinson 1976). But these studies were soon challenged on several grounds. It was pointed out, for example, that the findings were not robust to alternative specifications of the relationship between inequality and growth and to the use of alternative estimation techniques. When equally plausible specifications and estimation techniques are applied to the same data, the Kuznets relationship could not be found (Anand and Kanbur 1993a, 1993b). Questions were also raised about the consistency of data since different countries collected distributional data and measured inequalities in ways that were not always consistent with each other. A series of studies based on more consistent data sets came to the conclusion that there was no evidence for the Kuznets curve from cross-sectional data (Fields 2001). More recently, Palma (2011) has pointed out that the cross-sectional inverted-U has completely disappeared from the scene as inequality has increased at both ends of the income scale across countries resulting in a convergence of inequality (around a Gini coefficient of 0.40) for countries at very different levels of per capita income.

More fundamental questions were raised about the relevance of the cross-sectional studies for the question at stake - namely, whether inequality increases *within* countries, when per capita income begins to rise. This question cannot be answered by observing whether inequality rises across countries as one moves from a poorer country to the richer ones, because of the possible influence of country-specific factors. Time series data were needed for answering the question, but such data were not available in the early days of the debate. Eventually panel data across countries became available, and when these data were analysed after controlling for country-specific effects, again there was no evidence for the general tendency that inequality tends to rise in the early stage of development (Deininger and Squire 1998; Savvidesa and Stengos 2000; Barro 2000, 2008).[3]. The general conclusion that has emerged is that there is no systematic relationship between growth and inequality - indeed, there are about as many instances of inequality rising as there are instances of inequality falling with growth (Ravallion 2001).

Despite this conclusion reached from cross-country regressions, lingering questions remain when one examines the experience of specific countries embarking on the growth path. It has been noted, in particular, that inequality has actually worsened in all the Asian countries that have moved on to a higher growth path in the recent years - for example, in China, Vietnam and India. The spectre of Kuznets is once again raising its head.[4] Even one of the most well-known critics of the early evidence for the Kuznets curve (based on cross-sectional studies) has expressed the view that when one takes the country case study approach one cannot but suspect that Kuznets still matters (Kanbur 2012).

[3] In fact, by using a consistent data set, Gallup (2012) found the perverse of U-shaped curve rather than an inverted-U.

[4] See, for example, ADB (2012) and BDP (2013).

It is important to consider, however, exactly in what sense Kuznets still matters if he indeed does. The most logical interpretation would be that if the market is left to itself there might be a natural tendency for inequality to rise along with growth in the early stage of development.[5] But this does not mean that rising inequality has to be taken as an irrevocable 'law of development' that is impervious to policy. There is no reason in principle why the 'natural' tendency of the market cannot be countered by conscious policy to make growth more equitable. Numerous studies of the East Asian 'miracle' economies have shown how policies played a critical role in helping them combine growth with equity in the 1960s and 1970s.[6] More recently, similar evidence is emerging from Latin America, which has historically contained some of the most unequal societies on earth. Reversing the historical pattern, most of these countries have successfully reduced inequality in the decade of the 2000s, even as inequality was rising in emerging Asia. Policies once again played the critical role in countering the natural tendency of the market. Of particular importance were policies aimed at promoting mass education and massive redistribution policies aimed at building broad-based human capital (Lopez-Calva and Lustig 2010; Lustig *et al*. 2011).

But the argument that policies can reverse the natural tendency of the market begs an important question: what if the attempt to reduce inequality also results in slower growth? In trying to combine growth with equity, wouldn't we end up with equitable but slow growth? In other words, isn't there a trade-off between equity and growth? In order to address this question, we need to examine the other side of the two-way causation between growth and inequality - namely, the causation running from inequality to growth. What is the effect of inequality on growth, or, more specifically, is equality bad for growth?

Economists have identified a number of channels through which inequality may affect growth - some positively, some negatively. The channel that dominated thinking until recently is the *savings channel*, which suggests the existence of a positive relationship between inequality and growth. This argument is based on the assumption commonly made by the classical economists that the richer people have a higher marginal propensity to save than the poorer people. For any given level of per capita income, higher inequality will therefore mean that the distribution is tilted towards those who save a higher proportion of income. Thus aggregate savings will be higher in a more unequal society; and in so far as savings drive investment and growth, growth will also be higher.

Contrary to this traditional view, a new body of research has emerged since the 1990s which argues that there exist other causal mechanisms that can generate a negative relationship

[5] Kuznets (1955) explained why this might be so: "…if and when industrialization begins, the dislocating effects on these societies, in which there is often an old hardened crust of economic and social institutions, are likely to be quite sharp - so sharp as to destroy the positions of some of the lower groups more rapidly than opportunities elsewhere in the economy may be created for them." (pp. 24-25). In a similar vein, Arthur Lewis (1976) contended that "Development must be inegalitarian because it does not start in every part of the economy at the same time.... There may be one such enclave in an economy, or several; but at the start development enclaves include only a small minority of the population." (p.26)

[6] See, for example, the evidence reviewed in Birdsall *et al.* (1995).

between inequality and growth. Although there are important nuances and qualifications in the findings of this new line of research, its general conclusion has been encapsulated in the phrase that 'inequality is bad for growth' as against the traditional view based on the savings channel which tended to regard inequality as good for growth. At least three different channels have been identified through which inequality can exert a negative influence on growth. These can be described as: the imperfect credit market channel, the fiscal policy channel, and the socio-economic instability channel.[7]

The essential idea behind the *imperfect credit market channel* is that in the presence of credit market imperfections people will be credit-constrained to varying degrees; faced with these constraints they will not be able to undertake all the socially profitable projects for investment in physical and human capital; as a result growth will suffer. There are several strands of this line of argument. Beginning with the pioneering work of Galor and Zeira (1993) and Piketty (1994), one of these strands combines the implication of credit market imperfections with that of indivisibilities in investment. Imperfection in credit market entails that an individual's ability to undertake investment expenditure would be determined to a large extent by his initial wealth. Those who are endowed with high initial wealth are less likely to be credit-constrained than those with a low initial amount of wealth; as a result, the former will be able to undertake much bigger volume of investment than the latter. Indivisibility, on the other hand, entails that a certain minimum level of expenditure must be incurred for an investment project to be undertaken, presumably because of the existence of fixed costs. Together, credit constraint and indivisibility imply that initially wealthy individuals will be better able to seize opportunities for profitable investment than the less wealthy individuals, because the latter will not have sufficient command over resources to meet the threshold level of investment. The more unequal a society is, the higher will be the proportion of people with lower initial wealth, other things remaining the same. As a result, the greater will be the number of investment opportunities that will be have to be foregone because of the inability to meet the investment threshold, and hence slower will be the rate of growth. Higher inequality will thus lead to slower growth.

Another strand of argument based on the idea of credit market imperfections focuses on parental decisions on the level of fertility and children's schooling, especially on the joint nature of these two decisions (e.g., Galor and Zang 1997; Dahan and Tsiddon 1998). Prospects for high returns to education may encourage all parents to invest more on children's education, and also to reduce fertility at the same time since educating children can be costly. But only the initially wealthy parents will be able to take these decisions because credit constraint is likely to less binding for them. By contrast, the initially less wealthy parents, for whom credit constraint is likely to more binding, may not have enough resources to pay for the fixed cost of education. And if they can't educate their children - and thus don't have to incur the cost of

[7] Voitchovsky (2009) provides an excellent review of the theory underlying these channels. See also, Stiglitz (2012).

education - they will be less inclined to restrict the size of the family. In fact, they might be more inclined to have more children who can be useful for augmenting the income of the household at very little cost. The more unequal a society is, the greater will be the number of such parents with lower initial wealth facing binding credit constraint; therefore, the lower will be the creation of human capital and the higher will be the level of fertility. The consequence of both low level of human capital formation and high level of fertility will be slower growth.

The arguments based on the *fiscal policy channel* rests on a political decision-making mechanism of majority voting and its effects on fiscal policy as the main process for generating a systematic relationship between inequality and growth. The early models, developed for example Alesina and Rodrik (1994) and Persson and Tabellini (1994), suggested that the fiscal policy channel will generate a negative relationship between inequality and growth. The argument is composed of two parts: (a) a more unequal society will generate stronger pressure for redistribution from the rich to the poor, and (b) redistribution will hamper growth by distorting incentives for investment.

The first part of the argument is based on the idea of majority voting as embodied in the median voter theorem well-known in the public choice literature. In the simplest version of the model, the government imposes a proportional tax on capital and redistributes the proceeds uniformly among all members of the society in a lump sum manner. The implication of this type fiscal policy is that people will smaller capital will prefer a higher tax rate than people will larger capital. At the same time, a government that wants to maximise revenue while keeping the majority of voters happy will impose a tax rate that equals the preferred tax rate of the median voter. This is because everyone with less than median capital will be happy with this tax rate because they would have been willing to opt for an even higher rate in view of the negative association between ownership of capital and preferred tax rate mentioned earlier, and along with the median voter they constitute the majority. The chosen tax rate thus depends on the level of capital owned by the median voter. Now, the more unequal the distribution of capital is for any given average level of capital, the lower will be the amount of capital owned by the median voter - the higher will be his preferred tax rate and thus higher will be tax rate chosen by the government.[8]

The second part of the argument is based on the idea that taxation and redistribution are harmful to growth because of their distortionary effects on investment incentives. Combining these two parts, one should expect a negative relationship between inequality and growth.

The *socio-political instability channel* is yet another mechanism through which inequality is expected to exert a negative effect on long-term growth. This line of argument too is composed of two parts. The first part says that high inequality of income and wealth

[8] Perotti (1996) describes this as the endogenous fiscal policy model since the tax rate chosen by the government depends on the distribution of capital which is itself affected by government policies.

generates political instability[9], and the second part says that instability negatively affects investment and future growth. Together these two parts induce a negative relationship between inequality and growth.

The existence of multiple channels through which inequality can in principle affect growth create difficulties in arriving at a firm theoretical conclusion about the relationship. The problem is not just that the savings channel pulls in one direction and the other three channels pull in the opposite direction; even the predictions of the other three channels are not always unambiguous if they are considered jointly rather than in isolation. Consider, for example, the fiscal policy channel in which the second part of the argument asserts that redistribution will adversely affect growth by distorting incentives. But distortion of incentive is just one possible impact of distribution. If one also brings along the idea of credit market imperfections, it would be plausible to argue that redistribution will promote growth by allowing the credit-constraint poor people to invest more. Furthermore, even the first part of the argument which contends that greater inequality entails higher taxation and greater redistribution cannot be taken for granted. As pointed out by Bénabou (2000), in many countries the correlation between inequality and redistributive policies is opposite to the one predicted by the 'traditional view' because of the presence of 'wealth bias', which refers to the idea that the rich has a disproportionately bigger influence on fiscal decisions (through lobbying, campaign contributions, greater propensity to vote, and so forth) than what is suggested by the median voter theorem. Once the effect of wealth bias is combined with credit market imperfections, all kinds of possibilities emerge in the fiscal policy channel, some which generate a negative relationship between inequality and growth but some positive, depending on the balance of incentive distortions and credit constraints (Galor and Moav, 2004).

A further complication arises from the possibility that different channels may dominate under different circumstances, which may include initial distribution of income and wealth, the nature of political regime, and stage of a country's development. For example, Galor and Moav (2004) propose a model in which the saving channel is dominant in the early stage of development, when physical capital is scarce and its accumulation is the main engine of development, implying a positive effect of inequality on growth. As countries continue to develop and physical capital becomes relatively abundant, human capital begins to play a much bigger role and that is when the credit market channel comes of its own, generating a negative relationship between inequality and growth. In even later stages of development, when household incomes become sufficiently high the credit constraints cease to be a serious impediment to human capital formation. At that stage, there ceases to exist any relationship between inequality and growth.

Finally, one may also need to distinguish between short run and long run effects. Certain channels may be more effective in the short to medium run - for example, the savings

[9] Keefer and Knack (2002) discuss several mechanisms through which inequality may generate socio-political stability.

channel and the fiscal policy channel. By contrast, the channels through which imperfect credit market affects the formation of human capital and the channel of socio-political instability may be more relevant in the longer run.

In view of these theoretical ambiguities, it is no surprise that empirical attempts to discern a systematic relationship between inequality and growth have come up with few definitive results. Further difficulties with the empirical studies is that while trying to discern the impact of inequality on growth one has to contend with the reverse causation from growth to inequality that underlies the Kuznets curve discussed earlier. Econometric techniques exist that can in principle disentangle the two lines of causation, but the kind of data that are necessary to implement those techniques are hard to find. For these reasons, it is difficult to make strong empirical generalizations.[10] Nonetheless, after careful scrutiny of the available evidence, Neves and Silva (2014) arrive at the tentative conclusion that the negative effect of inequality on growth is perhaps more dominant in developing countries. As they observe: "The development level is particularly relevant, as most studies have shown that the inequality-growth effect is negative in developing economies and insignificant or even positive in developed countries." (p.13)

To conclude, when one combines the theoretical and empirical findings on the two-way causation between growth and inequality, very little ground is found for persisting with the traditional view that one must accept rising inequality in the early stages of growth. It is of course possible that if left to itself market may generate forces that aggravate inequality as the process of development sets off. But there is no inexorable law that ordains that this must happen. Experience shows that the 'natural' tendency of the market can be successfully contained, even reversed, with appropriate policy interventions. Furthermore, there is no definitive reason to fear that attempts to reduce inequality will involve a trade-off with growth; in other words, policy-induced equity need not come at the expense of growth. On the contrary, for developing countries in particular, greater equity may in fact induce faster growth, thereby inducing a virtuous circle between equity and growth.

Finally, it must be recognised that even if the attempt to ensure greater equity hampers growth to some extent - which may indeed happen in certain circumstances - this need not be taken as a decisive argument against equity. After all, people value equity for its intrinsic worth - out of a concern for justice and fairness, not just for its instrumental role in influencing the pace and pattern of growth. Therefore, even if the pursuit of equity does involve some trade-off with growth, the society might well decide to improve equity at the cost of some growth, provided the loss of growth is not of a precipitous nature.

[10] For comprehensive review of the available evidence, see Ehrhart (2009) and Neves and Silva (2014).

Section 3. Growth and Distribution: The Bangladesh Experience

The first two decades after the independence of Bangladesh in 1971 were the most difficult times in the country's economic history. The1970s passed by in trying to recover from the ravages of war, cyclones, floods and famine, and the 1980s were devoted to consolidating the success in recovery and reconstruction. Throughout this period, economic growth remained slow, as GDP grew at less the 4 per cent per annum, while population growth remained relatively high – at more than 2 per cent. As a result, per capita income grew only very slowly – at just over 1.5 per cent annum. There was a mild improvement in the growth of per capita income in the 1980s, but this was due entirely to slowdown in population growth and owed nothing to growth of GDP which remained virtually trendless.

It was only at the turn of the 1990s that GDP growth embarked on a rising trajectory, and the trend has continued to date, taking Bangladesh economy to a substantially higher growth path. Growth of GDP accelerated from about 3.7 per cent in the first two decades to 4.8 per cent in the 1990s and further to 5.8 per cent in the 2000s (Table 1). The growth spurt, in combination with continued slowdown in population growth, has resulted in a fairly rapid increase in per capita income. In the 1990s, per capita income grew at the rate of 3 per cent per annum, which amounted to a near doubling of the growth rate of the preceding two decades, and in the 2000s it grew even faster, at 4.4 per cent per annum.[11] While this performance was not nearly as strong as in some of the East and Southeast Asian countries during the same period, it was still a remarkable achievement by historical standards and also quite impressive in comparison with the developing world as a whole.

Table 1
Decadal Growth Rates: 1970s to 2000s
(per cent per annum)

	1970s	1980s	1990s	2000s
GDP growth	3.79	3.72	4.80	5.82
Population growth	2.40	2.01	1.70	1.32
Per capita GDP growth	1.39	1.68	3.05	4.44

Notes: (1) Data refer to the average of annual figures for each period.
(2) The 1970s refers to the period 1972/73 to 1979/80.
Source: Calculated from time series data compiled by the author from various statistical publications of the Government of Bangladesh and the World Bank, after making necessary adjustments for comparability, to the extent possible.

As the economy is currently trying to meet the challenges of an even faster growth in the coming years, a new challenge has meanwhile emerged that has become a matter of grave concern. It relates to the distribution of the gains from growth: as economic growth has accelerated since the early 1990s the personal distribution of income has become more unequal.

[11] There has been further acceleration in growth since 2010, as GDP growth has averaged at more than 6 per cent in the years from 2010-11 to 2013-14, with per capita GDP growth just crossing the 5 per cent mark.

According to official figures, the degree of income inequality, as measured by the Gini coefficient, has increased from an average of 0.38 in the 1980s to 0.44 in the 1990s and further to 0.46 in the 2000s (Table 2). Thus while the average living standard is rising faster than ever, the gap between the rich and the poor is also widening faster than before. In this regard, Bangladesh's experience is similar to most other rapidly growing economies in Asia, which are also witnessing widening inequality along with rapid growth. However, as noted earlier in the paper, there is nothing inevitable about rising inequality being combined with rapid growth, as the early experience of the East Asian countries showed (in the 1960s and 1970s) and as the recent Latin American experience also confirms (in the 2000s).

Table 2
Decadal Average of Income Gini Coefficient: 1980s to 2000s
(per cent)

	1980s	1990s	2000s
National	0.377	0.442	0.463
Rural	0.361	0.389	0.430
Urban	0.380	0.471	0.475

Source: *Household Income and Expenditure Surveys* of the Bangladesh Bureau of Statistics (various rounds).

Before examining the nature and causes of rising inequality, a couple of apparently odd features of the available statistics on inequality need to be commented upon. The first oddity relates to income inequality in urban Bangladesh. Detailed time series data show that urban income inequality has apparently declined in the 2000s after rising in the 1990s. Thus, the income Gini went up from 0.40 in 1991/92 to 0.44 in 1995/96 and further to 0.50 in 2000, but that is where the rising trend stopped. In 2005, the Gini coefficient remained at 0.50 and by 2000 it seems to have fallen to 0.45. If these statistics are to be taken at face value, they would imply that whatever forces had caused urban inequality to widen as growth accelerated for the first time in the 1990s either ceased to exist or were neutralized by some countervailing forces in the 2000s when growth accelerated even more. As we shall see, however, there are good reasons not to take these figures at their face value.

The second oddity relates to the distribution of consumption expenditure as distinct from the distribution of income. Official figures show that after rising in the first half of the 1990s, inequality in consumption at the national level has remained more or less constant since 1995-96. In the rural areas, the consumption Gini has hovered around 0.27, while in urban areas it appears to have declined slightly from 0.36 in 1995/96 to 0.34 in 2010 (Table 3). Of the two, the urban figures are easier to explain. Since official statistics show a slight decline in income inequality in urban areas in the 2000s, a corresponding reduction in consumption inequality is at least consistent. As we shall argue below, official figures of urban income inequality

underestimate the degree of inequality; if so, they are very likely to underestimate consumption inequality as well. It is, therefore, no surprise that consumption inequality will be found to decline in urban areas along with a decline in income inequality. The real oddity relates to the rural figures. According to the official estimates, rural income inequality has increased consistently from 1991/92 to 2010 (Table 2), and yet rural consumption inequality has remained virtually constant since 1995/96 (Table 3). This apparent disjuncture between income and consumption inequality in rural Bangladesh clearly calls for some explanation.

Table 3
Consumption Inequality: Gini Coefficient
(per cent)

	National	Rural	Urban
1991-92	0.259	0.243	0.307
1995-96	0.302	0.265	0.363
2000	0.307	0.271	0.368
2005	0.310	0.278	0.353
2010	0.320	0.275	0.338

Source: World Bank (2002, 2008, 2013a).

We shall first comment on the second oddity, which is related to inequality in rural consumption, before returning to the first, which is related to income inequality and is closer to our main concern in this paper.

The first point to note about the disjuncture between income and consumption inequality is that it is entirely plausible for consumption inequality to rise less than income inequality. The reason lies in the well-known fact that the marginal propensity to consume is lower at higher levels of income; as a result even as the income gap between the rich and the poor widens, the consumption gap my not widen as much. But that alone cannot explain why consumption inequality should not change at all when income gap widens. For that to happen, it is not enough that the propensity to consume is higher at the bottom end of the scale than at the top at any point in time; the propensity to consume will have to rise over time at the bottom end of the scale and/or fall over time at the top end, so that the relative consumption distribution may remain unchanged in the face of rising income inequality. A recent study of rural income inequality has demonstrated that the former has actually happened – i.e., the propensity to consume at the bottom end of the scale has risen over the decade of 2000s (Osmani and Sen 2011).

The same study also offers an explanation of why this has happened and provides evidence in its support. The explanation lies in the rapid growth of microfinance in rural Bangladesh, which has resulted in some relaxation of the liquidity constraint faced by poor consumers. The argument goes as follows. The consumption behaviour that was observed in 2000 was heavily conditioned by the stringent liquidity constraint that the poor people had to face. Because of this constraint, when some of the poor people faced a negative income shock

and their actual income fell below 'permanent income', they could not maintain the 'desired' level of consumption by borrowing against better times that was required by the logic of inter-temporal consumption smoothing. The following decade has witnessed an explosion of microfinance that has resulted in a significant easing of the liquidity constraint faced by the rural poor. As a result, poor people who end up with unusually low incomes because of negative income shocks can now get closer to the 'optimum' level of borrowing and maintain their consumption level in line with permanent income. In other words, in earlier times the binding liquidity constraint kept the propensity to consume at the bottom end of the income scale at an artificially low level; with the relaxation of the liquidity constraint the propensity to consume has now gone up closer to the optimum level. That is why consumption distribution has not worsened even as income inequality has.[12]

The resulting stability in consumption distribution, combined with rapid growth in per capita income, has led to in an impressive rate of poverty reduction in rural Bangladesh in the 2000s, despite rising inequality.[13] In other words, widening of income inequality has not posed an obstacle to poverty reduction in rural Bangladesh so far only because microfinance has served to decouple consumption distribution from income distribution, and it is the distribution of consumption that matters for poverty estimation. But this situation is likely to change. As soon as the expansion of microfinance slows down (if only because it might be approaching a saturation point) the decoupling will cease to exist, and consumption distribution will then begin to follow the path of income distribution. Rising income inequality will then certainly become an obstacle to poverty reduction. Thus, even though poverty is measured with reference to consumption levels, in the final analysis it is the distribution of income that matters.

We may now return to the first oddity, which is indeed a matter of income distribution, related to urban Bangladesh. The basic problem is that the picture of stable or even falling inequality in urban Bangladesh as given by official statistics sits oddly with most people's perception based on direct experience. A common problem with all household surveys – on the basis of which data for income distribution is generated – is that they fail to adequately capture the situation of households at the two extremes of the income scale. As a result, if distribution is becoming unequal because it is the extremely rich people who are running away even further from the rest of the population, household surveys may not be able to capture this phenomenon

[12] It should be noted that this explanation does not imply that microfinance borrowers are sustaining higher consumption by accumulating debts over time because the argument does not rest on the idea of permanent or repeated borrowing. On the contrary, the scenario being envisaged is one where only people with temporarily low incomes (i.e., lower than 'permanent income') borrow in order to maintain their 'normal' level of consumption, repaying the loan in good times; so, the question of accumulating debt over time does not arise. This of course begs the question: then how does loan-financed high propensity to consume persist over the years? The answer lies in the fact that negative income shocks strike randomly, afflicting different sets of people at different times, so that the set of people who face unexpectedly low incomes would vary from year to year. In other words, there would be a good deal of churning of people at the bottom end of the income scale. Every year, even as the old borrowers repay their loans, new victims of negative income shocks become new borrowers and they are the ones who keep up the high rate of propensity to consume at the at the lower end of the income scale.

[13] According to official estimates, the incidence of rural poverty has declined from 52.3 per cent in 2000 to 35.2 per cent in 2010 (BBS 2007, 2012).

even though perception based on experience might.[14] Of course, perception, or even casual empiricism, by itself cannot serve as an adequate basis for overturning the evidence given by available statistics, but it can certainly provide a ground for questioning the evidence. In an important study, Khan (2005) not only questioned the evidence, but also provided strong empirical support for overturning it.

He showed that at least a part of the problem lay in the way income was officially measured from the data generated by the *Household Income and Expenditure Surveys* (HIES). The official estimate of income include elements that ideally should not be counted as income – for example, transfers of various kinds and revenue generated by sales of assets and liquidation of past savings. When income is recalculated in a theoretically more correct manner, urban inequality is found to have risen in the first half of the 2000s, instead of staying constant as shown by official statistics (Table 4). A similar exercise is not available for the survey of 2010, but one can expect the rising trend to have continued after 2005, contrary to the official picture of falling inequality, because the measurement problems with the earlier surveys that had kept the trend of rising inequality hidden from the view would have persisted in the 2010 report as well.

Table 4
Alternative Estimates of Income Inequality in Bangladesh
(Gini coefficient; per cent)

	National		Rural		Urban	
	HIES	**Khan**	**HIES**	**Khan**	**HIES**	**Khan**
1991-92	0.388	0.303	0.364	0.276	0.398	0.327
1995-96	0.432	0.359	0.384	0.310	0.444	0.387
2000	0.451	0.405	0.393	0.356	0.497	0.437
2005	0.467	0.438	0.428	0.404	0.497	0.475

Source: HIES data are from BBS and Khan data are from Khan (2005).

There are also other grounds on which one can infer that the trend of rising inequality that started in the 1900s continued in the decade of the 2000s as well. One of them has to do with the measurement of inequality itself. Our discussion so far has relied exclusively on the Gini coefficient as the measure of inequality. Gini of course is the most popular and most

[14] This inability to capture by the very rich through household surveys is not unique to Bangladesh; it is a common problem everywhere including the developed world. Recently, in a seminal work on the developed countries and some of the large developing countries, Piketty (2014) has tried to overcome this problem by making use of data obtained from tax returns, and not surprisingly the results show a much sharper increase in inequality than what is revealed by household surveys. It is doubtful, however, whether the same methodology would serve well in Bangladesh given the scale of tax evasion that is suspected to exist in this country.

widely used measure of inequality, partly because of its close association with the visually more intuitive Lorenz curve analysis of income distribution. But it has been well-known for a long time that one of the limitations of the Gini coefficient is that by construction it attaches more weight to the middle of the distribution than to the tails. This would not be a problem for comparison between distributions if the middle of the distribution behaved in the same way as the tails – e.g., if any widening of the gap between the upper and lower tails was also accompanied by similar widening of the gap in the middle of the distribution. This is indeed the implicit assumption behind the widespread use of the Gini coefficient.

But the path-breaking recent work by Gabriel Palma has seriously questioned the empirical basis of this assumption. In an influential study on income distribution for a large number of countries around the globe, he has demonstrated that the middle of the distribution does not generally behave in the same way as the tails (Palma 2011). In fact, one of the stylized facts that emerges from his studies is that the middle class – representing 50 per cent of the population belonging to the five deciles from the fifth to the ninth – manages to capture a fairly constant share of roughly 50 per cent of national income in most countries most of the time. It is the changing division of the remaining 50 per cent of national income between the bottom 40 per cent and the top 10 per cent of the population that drives the change in overall income distribution. Thus when income distribution worsens it is mainly because the share of the top t10 per cent goes up at the expense of the bottom 40 per cent, while the middle 50 per cent more or less hold on to their share. The changing pattern of income distribution thus essentially represents a struggle between the two tails of the distribution for sharing the half of national income that is not captured by the middle class.

This finding has a clear implication for how best to measure the degree of income inequality. What one should look for is not a measure of overall distribution, such as the Gini coefficient, because the middle of the distribution doesn't change much anyway, but simply a measure of the gap between the two tails of the distribution because that's where changes mainly occur. The simplest such measure is the ratio between the income shares of the top 40 per cent and the bottom 10 per cent of the population. Some researchers have christened this ratio as the Palma ratio and advocated its use in preference to the Gini coefficient (e.g., Cobham and Sumner 2013a, 2013b).

In Table 5, we present some data in the spirit of Palma's analysis. A couple of important conclusions follow from this data. First, as measured by the Palma ratio, income inequality displays a secular tendency to rise over time – a tendency that continued into the decade of the 2000s. The income share of the top decile as a ratio of the share of the bottom deciles increased from 1.7 in the 1980s to 2.1 in the 1990s and increased further to 2.6 in the following decade. Thus, contrary to the trend revealed by the Gini coefficient, inequality as measured by the Palma ratio has never stopped rising in the high growth period - it increased both in the 1990s and in the 2000s. This is so even on the basis of the official estimates of income, without corrections of the kind made by Khan.

Table 5
Income Share Analysis: The Palma Ratio
(per cent)

Income share (%)	**1980s**	**1990s**	**2000s**
Bottom 40%	18.22	16.30	14.34
Middle 50%	51.53	49.72	48.92
Top 10%	30.25	33.97	36.75
Palma Ratio	1.66	2.08	2.56

Notes: Palma ratio is the ratio of income shares of the top 10% and the bottom 40% of the population.
Source: *Household Income and Expenditure Surveys* of the Bangladesh Bureau of Statistics (various rounds).

The second interesting feature of the data is that they provide striking support to Palma's hypothesis that the middle 50 per cent of the population manage to cling on to almost half the national income even as income disparity widens. According to our data, the middle class did lose slightly, as their share fell from 51.5 per cent in the 1980s to 48.9 per cent in the 2000s. But in proportionate terms this was nothing in comparison with the changes that occurred at the two ends of the distribution: the share of the top 10 per cent increased from 30.2 per cent to 36.7 per cent, while the share of the bottom 40 per cent fell from 18.2 per cent to 14.3 per cent. The phenomenon of rising inequality that we observe in Bangladesh today is clearly one that conforms to Palma's stylized fact – the very rich moving further away from the very poor, while the middle class manages to hold on to its ground.

Another way of gauging what is happening to the gap between the rich and the poor is to study what economists call the functional distribution of income i.e., the distribution of income among the owners of factors of production such as land, labour and capital. For the classical economists such as Adam Smith, David Ricardo, Thomas Malthus and Karl Marx the study of distribution was just as important as the study of growth, but by distribution they invariably meant functional distribution of income. Of course, the ultimate goal was to understand the nature and evolution of distribution among persons but they realized that since personal distribution emerges out of functional distribution through the earnings of factors of production owned by the people, it is the latter that should be the focus of theoretical analysis. Yet, for a very long time personal distribution of income has held the centre stage in the statistical – as distinct from theoretical – analysis of income distribution. But statistical analysis of personal income distribution, unless it is matched with an analysis of functional distribution, is essentially a-theoretical; it describes but does not explain what has been happening to the distribution of income. This realization has recently led to a resurgence of interest in functional distribution, as it provides the necessary conceptual tools for interpreting the evolution of personal income distribution.[15]

[15] See, for example, the discussion in Atkinson (1997, 2009), Glyn (2009) and the references therein.

A practical problem in this line of research is that it is not always easy to obtain data on the ownership of factors of production, which is essential for mapping functional distribution into personal distribution of income. One way of dealing with this problem is to use rough indicators rather than to embark on a full-fledged analysis of functional distribution. An indicator that can be especially helpful in this regard is the share of labour in the growth of income. Since labour is the most important factor of production owned by the poor, evolution in the share of labour can reveal a great deal about the evolving share of the poor vis-à-vis the share of the rich in national income. The evolution in labour share can in turn be inferred by comparing the growth of real wage with the growth of labour productivity. If real wage and productivity grow at the same rate, the relative shares of labour and non-labour inputs (such as land and capital, including human capital) in national income will remain constant, and since labour input comes mostly from the poor and non-labour inputs mostly from the rich the personal distribution of income will also remain relatively stable. If, however, real wage grows more slowly than productivity, this would lead to rising share of non-labour inputs, with the implication that the share of the rich is also perhaps rising i.e., personal income distribution is getting more unequal. The converse would be true if real wage grows faster than productivity.[16]

Let us first consider the productivity data. Growth of GDP can be decomposed into two components – namely, growth in labour input (i.e., employment) and growth in the productivity of labour (as measured by GDP per worker). Table 6 presents this decomposition for three decades from 1980 to 2010.

Table 6
Decomposition of GDP Growth into
Employment Growth and Productivity Growth
(per cent)

	1981-1989	1989-2000	2000-2010
Annual growth in real GDP	3.42	4.90	6.50
Annual growth in employment	3.17	2.56	3.32
Annual growth in labour productivity	0.25	2.34	3.18
Share of productivity in GDP growth	7.30	47.8	48.90

Notes: (1) The choice of years is dictated by the availability of employment data, which are given by the periodic *Labour Force Surveys*.
(2) Growth in labour productivity (GDP per worker) is measured as the difference between growth of GDP and growth of employment.
Source: Calculated from GDP data as given in *Bangladesh Economic Revie*w (various years) and employment figures as given in *Labour Force Surveys* (various years).

[16] It should be noted that even though real wage data relate directly only to those who are employed for wages, the comparison between the real wage and productivity growth is relevant for a wider set of people, including the self-employed among the poor. Since the poor self-employed people would rely more on labour than on non-labour inputs in whatever enterprise they are engaged in, their fate will be inextricably linked to the fate of labour as a factor of production. Real wage can thus be seen as a proxy for the earnings for all those who rely mainly on the supply of labour for their livelihood, regardless of whether they are wage-employed or self-employed.

It is noteworthy that the relatively slow growth that occurred in the 1980s came almost entirely from employment growth, with very little contribution coming from productivity growth. Only about 7 per cent of GDP growth could be attributed to productivity growth. By contrast, after the onset of the growth spurt in the 1990s, productivity growth has contributed nearly half of the GDP growth. The relatively high growth performance of the last couple of decades has thus clearly been driven by a sharp improvement in labour productivity.

For the purpose of distributional analysis, the pertinent question is how has the benefit of productivity growth been shared by labour and non-labour factors of production. The answer can be found in Table 7, where we present data on the growth of real wage alongside the growth of labour productivity in the last three decades.[17]

Table 7
Real Wage Growth and Productivity Growth
(per cent per annum)

	Nominal wage	Food CPI	Real wage	GDP per worker
1981-1989	12.43	9.52	2.91	0.25
1989-2000	5.44	5.31	0.13	2.34
2000-2010	8.94	8.17	0.77	3.18

Sources: Data on nominal wage and food CPI are taken from *Statistical Yearbooks* of various years and data on the growth of GDP per worker (labour productivity) are taken from Table 6 above.

The contrast between the 1980s and the subsequent growth-spurt period is quite remarkable. In the 1980s, when productivity growth was barely positive real wage increased at the healthy rate of almost 3 per cent. By contrast, in the 1990s, when the growth spurt began and productivity growth jumped to 2.3 per cent, there was hardly any growth in real wage at

[17] Some comments are in order regarding the methodology of estimating real wages. The Bangladesh Bureau of Statistics (BBS) publishes a long time series of nominal wage index for the economy as a whole and also provides a corresponding series of real wage by deflating the nominal wage indices by what it describes as a cost-of-living index for industrial workers. There are, however, a couple of problems with this real wage data. First, the cost-of-living index is based on the workers' consumption pattern of 1969-70, which is hardly likely to represent current pattern of consumption. Second, and perhaps because of the first reason, BBS has stopped publishing real wages indices after 2005-06. An alternative procedure would be to apply the national-level consumer price indices (CPI), which, unlike the workers' cost-of-living index, has been kept up-to-date through periodic revisions of the base year i.e., by incorporating changing patterns of consumption. But the problem with CPI for the present purpose is that it is based on the consumption pattern of the average household, which may be quite different from the consumption pattern of workers who belong mostly to the poorer households while an average household is currently well above the poverty line. As a more defensible strategy, we have chosen to deflate the nominal wage indices by national food price indices, since expenditure on food accounts for by far the largest part of consumption expenditure by poorer households. While constructing a consistent series of food price indices, we have taken due note of the fact that following the latest revision of base year from 1995-96 to 2005-06 inflation in recent years appears to be somewhat higher than what had seemed to be the case with the old base year. An additional issue is that using food price indices as the deflator is admittedly not an ideal strategy since non-food prices matter too. It is reassuring to note, however, that our food price indices correspond quite closely to a basic-needs cost-of-living index calculated for recent years by Zhang *et al. (*2013) from the *Household Income and Expenditure Surveys* by incorporating both food and non-food prices relevant for poorer households.

all – just over 0.1 per cent per annum. This implies that the benefit of productivity growth, which was driving the growth spurt, was being enjoyed mostly by the owners of non-labour inputs, i.e., the richer segment of the society. As we have seen, that is when income distribution began to become unequal in Bangladesh. There was some improvement in the 2000s when real wages increased at the rate of about 0.8 per cent per annum. But this was still far below the productivity growth of 3.2 per cent. This means that even though labour was claiming a slightly higher share of output per worker than before, the owners of non-labour inputs were still claiming a much larger share than labour, thus continuing the trend of rising inequality. It is this gain of non-labour relative to labour that is reflected in the rising Palma ratio (the ratio of income shares between the top 10 per cent and the bottom 40 per cent of the population) observed earlier.

To understand the processes underlying these data, consider first the experience of the 1980s when real wage was growing at a healthy rate despite the absence of any significant growth in labour productivity. This was in fact a phenomenon of 'catch-up growth'. During the economic slump that followed the Liberation War, real incomes of the people of Bangladesh had actually gone down below the pre-Independence level. Per capita income of the population as a whole was restored to the pre-Independence level only in the early 1980s, but real wage took somewhat longer to recover fully. It was only around 1990 that real wage had come back to the 1969-70 level. The growth of real wage that we observe in the 1980s is, therefore, simply a case of making up the lost ground on the part of labour that was made possible by successful recovery and reconstruction of the economy in the first two decades after Independence.

What we observe in the two subsequent decades is a classic example of Arthur Lewis's surplus labour model in operation. Economic growth moved on to a higher trajectory in the 1990s, riding on the shoulder of rapid productivity growth, and although the demand for labour increased as a result, real wages hardly moved because of the presence of a large pool of surplus labour. And there was no catch-up growth either because the process of catching up had already been completed by 1990. As a result, income distribution moved inexorably in favour of the rich.

Real wages rose somewhat faster in the 2000s, probably reflecting the fact that the labour market was getting tighter as the pool of surplus labour was finally being reduced by a significant amount. This is confirmed by a disaggregated study of real wages based on data from *Household Income and Expenditure Surveys* (Zhang *et al.* 2013). The study has found that rural wages actually rose faster than urban wages during the two decades from 1990. More significantly, rural wages began to go up before urban wages, which is precisely the sequence one would expect to observe when surplus labour begins to shrink (Basu 1997). If surplus labour shrinks further and labour market gets tighter, one can expect real wages to rise even faster, and if this happens at a pace faster than productivity growth, the trend of rising income inequality could be reversed at some point in the future. But the economy of Bangladesh has not quite reached that stage yet.

The fact that over the last two decades real wage growth has lagged behind productivity growth not only helps explain the trend of rising inequality, it also goes a long way towards explaining the high growth performance of this period. From the producers' point of view, the consequence of real wage lagging behind productivity is that the real cost of production goes down. In a globalized economy, this is translated as a competitive advantage in the export market – in technical jargon, by causing a depreciation of the real exchange rate. To a large extent, it is this cost advantage that has spurred the remarkable export performance of Bangladesh in garments and more recently in some other sectors as well, which in turn has played a big role in bringing about the growth spurt since the 1990s. High growth and rising inequality can thus be seen as two sides of the same coin – the coin being the process whereby the growth of real wage has been kept well below the growth of labour productivity. The existence of surplus labour has certainly played a role in sustaining this process, but it may also have been supported by anti-labour institutional arrangements that have served to curb the powers of trade unions and to permit lax implementation of minimum wage laws.

In addition to the dynamics of real wage and productivity, another factor that has helped create a positive association between growth and inequality is the emergence of workers' remittance as a major feature of Bangladesh's economy. Directly, remittance amounts to more than 10 per cent of GDP but its indirect contribution would be much bigger as the spending of remittance income by the recipient households generates further income through linkage effects. But even as remittance contributes to growth, it also serves to widen income inequality. According to a recent study, foreign remittance happens to be the single most important factor aggravating inequality in rural Bangladesh, followed by increasing share of income from non-farm enterprises (Osmani and Sen 2011).[18] The inequalizing effect of foreign remittance stems simply from the fact that the initial cost of sending workers abroad is quite high and it is mainly the relatively better off households who can afford it.

It is thus fair to conclude that it is the very process of growth which Bangladesh has experienced in the last two decades that has led to higher inequality. While trying to think about the mechanisms through which growth can be linked to equity, it must be acknowledged first that the question of reversing the essentials of the growth process does not arise. The export-oriented growth process must be allowed not just to continue but to prosper, and greater earning of foreign remittance must be encouraged, not discouraged, if we are to maintain the growth momentum. The key to equitable growth must lie in ensuring that the fruits of this growth process are enjoyed more equitably by a broad spectrum of the population. For this to be possible, a two-pronged strategy must be employed. First, an effective social protection system must be put in place to help those who may be bypassed or even impoverished by the growth process. Second, conditions must be created so that people from the currently disadvantaged

[18] For more detailed analysis of the relative contributions of different components of income towards the creation of inequality over the years, see Khan and Sen (2001), Khan (2005), Osmani *et al.* (2006) and Bhattacharya and Khan (2008).

segments of the society are able to seize the employment opportunities opened up by the growth process just as much if not more than those coming from the privileged background.

The two strategies are supposed to operate, however, on two different time horizons. The first strategy – social protection – has an immediate focus. It stems from the recognition that the structural changes brought about by any growth process will inevitably create winners and losers, and when the losers happen to belong to the more disadvantaged segments of the society, it is a moral duty of the rest of the society to share their gains with those who have been left out. An effective social protection system would mitigate to some extent the current inequities created by the growth process.

The second strategy has a longer term focus and is meant to prevent future inequities. The logic of this strategy lies in the recognition that the best way of making growth equitable is to ensure that the opportunities for gainful employment created by the growth process remain open in an equitable manner so that the poor and the marginalized people can seize these opportunities as much as others. The problem, however, is that currently the opportunities are not equitably open, for the simple reason that people from the marginalized background do not have the physical and human capital necessary to seize the opportunities.[19] Whatever new opportunities are being created are being taken up mainly by those who are already from the privileged background. For growth to be equitable in the future, current inequity in the access to opportunities must be removed, and this can only be done by equipping the underprivileged with necessary resources.[20]

Here, resources should be interpreted broadly to mean both physical and human capital, but it must also be acknowledged that the constraints to expanding access to the two types of resources may vary greatly. Providing equitable access to land and other physical assets through directly redistributive measures is bound to be fraught with serious practical difficulties involving issues of property rights. An alternative mechanism of broadening access to resources is to take measures that overcome credit market imperfections and ensure access to credit for all, as acknowledged in the emerging enthusiasm for inclusive finance. Broad-based access to credit will allow the currently asset-poor people to acquire access to land (through reverse tenancy, for example) and other physical assets required for pursuing non-farm activities, without confronting the property rights issues. This is already happening to some extent through the expansion of microfinance, which has enabled millions of poor people access to productive assets and thereby led to a much greater equity in access to resources than any redistributive measure could possibly achieve.[21] But microfinance, by its very micro nature, can help only up to a point. For equity in access to resources to occur in a really substantial way, the poor people must find greater access to the formal financial sector. A great deal of work remains to be done in this area.

[19] For a recent assessment of some aspects of inequality in opportunities in Bangladesh, see World Bank (2012).
[20] See Osmani (2006) for an elaboration of this argument.
[21] See the evidence on pro-poor distribution of microfinance presented in Khalily and Khaleque (2013).

A much greater potential exists for improving access to human capital through redistributive measures. This strategy necessarily has a longer time frame than that of social protection since development of human capital takes time – actions must start at a very early stage of life and continue well into adulthood. But if steps are taken today to remove inequities in the access to human capital, it will create the condition in the future for equitable sharing of the benefits of growth. Broad-based development of human capital is, therefore, the necessary precondition for equitable growth; this is the lesson from East Asia in the 1960s and 1970s and from Latin America in the 2000s. Equitable development of human capital will not only allow more equitable sharing of future growth, but will also promote growth itself, especially as the future growth process will inevitably be more skill-intensive than has been the case so far.[22]

It is, therefore, necessary to evaluate how Bangladesh has been performing in terms of social protection on the one hand and equity in the formation of human capital on the other. This evaluation is undertaken in the following three sections – first in the sphere of social protection, followed by two major aspects of human capital, namely, health and education.

Section 4. The Reach and Equity of Social Protection

There are currently a bewildering variety of social protection programmes (SPP) in Bangladesh, administered by a plethora of government agencies but mostly in an uncoordinated manner.[23] According to a recent count, there were 95 programmes under 30 different ministries/agencies but only a few of them were of any significant size (GOB 2014, p.7). About a dozen programmes dominate the whole system, accounting for more than 70 per cent of spending and beneficiaries.

There is, however, a serious mismatch between programmes that dominate in terms of funding and programmes that dominate in terms of beneficiaries. In terms of funding, by far the largest programme is the government pension scheme, which accounts for nearly a quarter of total budget but covers only about 0.5 percent of all beneficiaries. Open Market Operations, which is the second largest programme in terms of funding, has a much larger reach accounting for 28 per cent of beneficiaries, but like the pension scheme this too is a broad-based programme rather than a targeted one aimed specifically at protecting the poor and the vulnerable. The major targeted schemes, such as the *Vulnerable Group Feeding Programme*, the *Gratuitous Relief Food Programme*, the *Primary and Secondary School Stipend Programmes*, and the *Economic Empowerment of the Poor Programme*, etc., receive only 21 percent of total budget even though they together cover almost 70 per cent of all beneficiaries.

[22] Both in the export of goods and services and export of manpower - the two main drivers of the growth process so far - it will be essential to move up the skill ladder if Bangladesh is to benefit more from the process of globalization.

[23] A valuable recent contribution is a strategy paper prepared by the Bangladesh Planning Commission (GOB, 2014). Other major contributions include Ahmed *et al.* (2009), Khuda (2011), Morshed (2009), Rahman and Chaudhury (2012), Rahman *et al.* (2012, 2014) and World Bank (2006, 2013a).

The paucity of allocation for targeted programmes is compounded by low overall level of spending on social protection. The allocation for Social Protection Programmes (SPPs) has actually increased in recent years, but the improvement has occurred from a very low base. From a mere 1.3 percent of GDP in 1998, spending on social protection went up to 2.5 per cent in 2011-12. Over the next couple of years, however, it came down to around 2.2 percent of GDP, amounting to 12 percent of total government spending. Low as it is, the contribution of this spending towards the well-being of the poor and vulnerable population is even lower because of the imbalance between targeted and non-targeted programmes mentioned earlier.

Exactly how low this contribution is can be gauged from a recent study of the reach and impact of social protection in rural Bangladesh (Osmani *et al*., forthcoming; chapter 7).[24] The transfer income received from social protection schemes accounted for less than one per cent of total household expenditure of an average household and 2.7 per cent for an average beneficiary household in 2010. Going beyond the average and considering the poorer groups alone, the picture improves only slightly. In the rural population as a whole, the extreme poor households were able to finance only 2.2 per cent of their household expenditure by income from safety net programmes and moderate poor households only 1.5 per cent. Even among the beneficiary households, the contribution of safety net to household expenditure was only about 4 per cent for the extreme poor and 3.4 per cent for the moderate poor (Table 8).

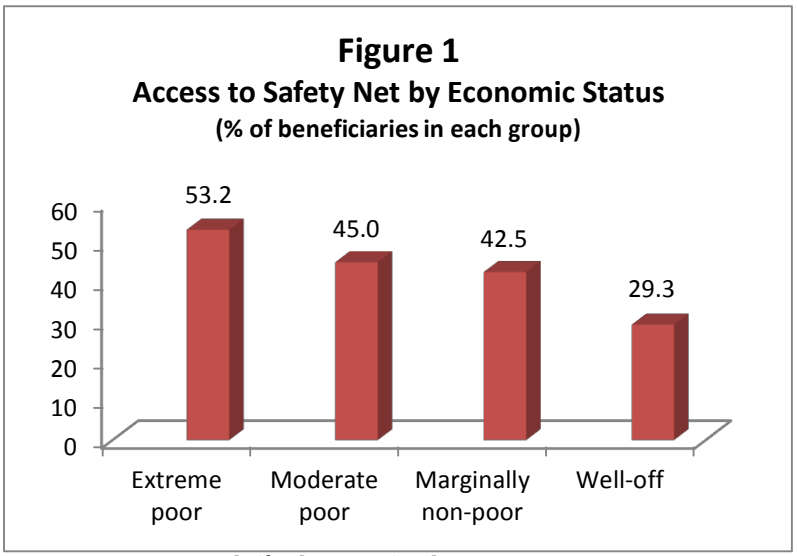
Table 8
Contribution of Social Safety Net to Household Expenditure by Economic Status in Rural Bangladesh: 2010
(Benefit as % of household consumption expenditure)

Poverty group	Beneficiary households	All rural households
Extreme poor	4.05	2.19
Moderate poor	3.39	1.49
Marginally non-poor	3.47	1.47
Well off	1.94	0.50
Total	***2.67***	***0.84***

Source: Osmani *et al.* (forthcoming), Chapter 7.

[24] This study is based on a nationally representative sample survey of 6300 rural households carried out by the Institute of Microfinance (InM) in 2010 under the guidance of the present author as part of a project entitled *The Dynamics of Poverty in Rural Bangladesh*. Even though this study is focussed only on rural areas, it provides a broad enough assessment of the social protection system as a whole since the system itself is oriented predominantly towards the rural sector. For example, in 2010 about 30 per cent of rural households benefitted from social protection as compared with only 9 per cent of urban households according to the official *Household Income and Expenditure Survey* (BBS 2012). It may be noted that according to the InM study, rural coverage was slightly higher in the same year – at 37 per cent; the difference between the two estimates probably stems from the difference in the list of programmes covered in the two surveys.

A positive feature of the social protection system is that it is mildly progressive in the incidence of spending. One aspect of progressivity is evident from Table 8, which shows that poorer households finance a slightly higher percentage of their expenditure from safety net income in comparison with better off households. Another aspect of progressivity is found in the percentage of households covered – i.e., the poorer groups are covered relatively more than the richer groups. Thus, while 53 per cent of the extreme poor households had access to some type of safety net programme or the other in 2010, the rate of access declined to 45 per cent for the moderate poor, and to 29 per cent for the well-off. (Figure 1).



Source: Osmani *et al.* (forthcoming), Chapter 7.

The progressivity of incidence does not ensure, however, that the major part of social protection spending goes to the poor – on the contrary. As can be seen from Table 9, the non-poor groups, comprising the well-off and marginally non-poor households, accounted for roughly 60 per cent of both beneficiaries and money offered by the social protection programmes in 2010. The well-off group alone accounted for 46 per cent of all beneficiaries and 43 per cent of funds.[25]

[25] Distribution of benefits happens to be perverse in spite of the fact, as noted above, that the incidence of benefit is distinctly progressive (i.e., the percentage of beneficiaries is higher among the poorer groups) and per household benefit is also mildly progressive. The reason for this apparent paradox lies in the difference in absolute numbers. The non-poor groups are much larger in size in terms of number of households – some 70 per cent of rural households belong to these groups. So even with slightly lower percentage of beneficiaries and per household benefit, the total amount of benefit accruing to these groups turns out to be much larger than the benefit accruing to the poorer groups.

Table 9
Distribution of Benefits of Safety Net Programmes by Economic Status in Rural Bangladesh: 2010

Poverty group	Share of beneficiary households (%)	Share of total funds received (%)
Extreme poor	24.5	25.6
Moderate poor	15.1	14.8
Marginally non-poor	14.6	16.6
Well off	45.8	42.9
Total	***100.0***	***100.0***

Source: Osmani *et al.* (forthcoming), Chapter 7.

When a small amount of fund is distributed so heavily in favour of those who need protection the least, it should come as no surprise that the social protection system should fail to achieve its objective of providing protection to those who need it the most. Two types of evidence are offered below to illustrate this failure.

First, we ask whether the social safety net system has helped reduce poverty of rural households. A simple approach to answering this question is to do a simulation by subtracting social security contribution from household's consumption expenditure and then calculating poverty rates with these adjusted consumption levels. This will give us a counterfactual poverty rate for the scenario without any social protection. Comparison of this counterfactual poverty rate with the actual poverty rate will then show the contribution of social protection towards poverty reduction. The results of this exercise are presented in Table10. It may be seen that without the contribution of social safety net rural poverty would have been higher but only marginally - by about one percentage point in the case of overall poverty and one and a half percentage points in the case of extreme poverty.[26]

Table 10
Comparison of Rural Poverty with and without Social Protection: 2010
(Headcount poverty ratio: per cent)

Poverty	**With social protection**	**Without social protection**
Overall poverty	33.1	34.4
Extreme poverty	19.9	21.4

Notes: (1) The poverty rate without protection is calculated after subtracting social safety net transfer from a household's consumption expenditure.
Source: Osmani *et al.* (forthcoming), Chapter 7.

[26] This tiny contribution pales in comparison with the substantial contributions made by both microcredit and foreign remittance, which are in the range of 20 to 30 per cent. See, Osmani *et al.* (forthcoming).

Secondly, we examine the safety net's contribution towards improving the ability to cope with periodic shocks. If a system of social protection is to serve the goal of protection in any meaningful sense, it ought to be able to help households cope better with shocks. One measure of how well a household is able to cope is to check what kind of coping strategy they happen to use when faced with shocks. Two types of coping strategies may be distinguished for this purpose – erosive or non-erosive strategies. Erosive strategy, as the name suggests, erodes the resource base of the household – for example, when it draws down past savings or sells some assets to meet a crisis. Non-erosive strategy, on the other hand, is employed when the household seeks to meet the crisis without depleting the resource base – for example, by borrowing money, working harder, or migrating to places where work is available. Clearly, erosive mechanisms involve potentially greater cost to the household economy over the longer term as assets once sold are very difficult to retrieve even in good times. It stands to reason, therefore, that households would try to avoid such strategies as far as possible, and get by with the non-erosive ones to the extent possible. The extent to which they are actually able to do so would depend to a large degree on the external support they receive – for example, support from the social safety net. One way of assessing the effectiveness of the social protection system, therefore, is to find out how far it has enabled shock-stricken households to avoid erosive coping mechanisms.

Using the InM dataset for 2010, econometric estimation showed that, after controlling for other factors, access to social safety net had no effect on a household's ability to avoid erosive coping. By contrast, access to microcredit made a significant contribution in this regard by enabling households to choose non-erosive coping (Osmani *et al.*, forthcoming) Evidently, the social protection system as it currently operates in rural Bangladesh fails in one its most important functions – namely, to enable the beneficiaries to cope with shocks better.

Thus, whichever way we look at the effect of social protection – whether in its effect on poverty or in its ability to help households cope with crises better – its contribution has been negligible. This is a consequence partly of low financial allocation made to the targeted schemes that are supposed to protect the poor and the vulnerable and partly of the fact that even this small allocation is appropriated mostly by the better off households. Evidently, the existing social protection system in Bangladesh is thoroughly inadequate to mitigate the current inequities that are being generated by the growth process.

Section 5. Equity in Health Outcomes

Bangladesh's achievement on the health front has been widely acclaimed. As measured by the indicators of health outcomes such as life expectancy and child mortality as well as indicators of health services such as coverage of immunization, Bangladesh outperforms most

other developing countries at similar or even higher levels of per capita income.[27] All this is well-known; what is less well-known, however, is the extent of inequality in health outcomes and health services prevailing in Bangladesh and how it is changing over time. We present below some evidence in this regard based on the data in *Demographic and Health Surveys* (DHS). Since the 1993 survey, DHS has collected data on different types of household assets which has allowed the construction of a wealth index of households and thus enabled classification of data by wealth quintiles.[28] The analysis of health inequality presented below is based on this classification.[29] We shall look at the trend in health inequality with regard to both children and women – children because they are the foundation on which future human capital will be built and women because women's health is a major determinant of children's health and thus of future human capital.

First, we present data on children's nutritional status as measured by three indicators - namely, the proportion of children who are stunted (low height-for-age), the proportion of children who are wasted (low weight-for-height) and the proportion of children who are underweight (low weight-for-age). Of these, the extent of stunting is the most appropriate indicator of long-term changes in nutritional status as wasting can capture the effects of short-run fluctuations in access to nutrition and healthcare, and so can underweight which shows the combined outcome of stunting and wasting.

Malnutrition as measured by stunting and underweight has been a persistently serious problem in Bangladesh in the past - in fact in the whole of South Asia, where the level of malnutrition was found to be higher even that of sub-Saharan Africa which was economically more backward than South Asia in almost all respects. In the 1990s, this paradox was dubbed by the UNICEF as the 'Asian Enigma'. Recent evidence shows that while the enigma still remains i.e., the rate of malnutrition in South Asia is still higher than that in sub-Saharan Africa[30], in absolute terms there has been a good deal of progress in reducing the magnitude of malnutrition in South Asia, including Bangladesh. As can be seen from Table 11, the extent of stunting has come down 55 per cent in 1996/97 to 41 per cent in 2011 while the proportion of underweight children has declined from 56 per cent to 36 per cent during the same period.

[27] This phenomenon has recently been analysed intensively by Mahmud (2008), Drèze and Sen (2013) and Asadullah *et al.* (2014).

[28] The early DHS reports (up to 2004) did not actually report health indicators by wealth status although the relevant data were collected. Thankfully, Gwatkin *et al.* (2000, 2007) used the unpublished raw data for the earlier years to present information on health indicators by wealth quintiles. We drew upon their data for the earlier years and DHS reports themselves for the later years. In addition to DHS, The *Multiple Indicators Cluster Survey* (MICS) carried out periodically by the Bangladesh Bureau of Statistics with the help of UNICEF also collects data that permit classification of households according to wealth index, but published health data based on such classification are available only for 2006. As a result, the published MICS data cannot be used for analysing trend of inequality over time.

[29] For an earlier analysis of health inequality based on this data, see Chowdhury and Osmani (2010).

[30] In 2011, the proportion of underweight children was 32 per cent in South Asia as against 21 per cent in sub-Saharan Africa, according to the World Development Indicators (WDI) of the World Bank.

Table 11
Socio-Economic Differentials in the Nutritional Status of Children

	NCHS 1977 GRS			WHO 2006 GRS		
	1996/97	**2004**	**2007**	**2004**	**2007**	**2011**
Underweight (%)						
All	*56.3*	*47.5*	*46.3*	*43.0*	*41.0*	*36.4*
Bottom quintile	65.2	59.3	55.5	55.6	50.5	50.3
Top quintile	37.6	30.2	31.7	25.9	26.0	20.9
Ratio (bottom to top quintile)	***1.7***	***2.0***	***1.8***	***2.1***	***1.9***	***2.4***
Stunting (%)						
All	*54.6*	*43.0*	*36.2*	*51.0*	*43.0*	*41.3*
Bottom quintile	61.4	54.4	46.2	62.2	54.0	53.7
Top quintile	34.8	25.0	21.1	30.5	26.3	25.7
Ratio (bottom to top quintile)	***1.8***	***2.2***	***2.2***	***2.0***	***2.1***	***2.1***
Wasting (%)						
All	*17.7*	*12.8*	*16.2*	*15.0*	*17.0*	*15.6*
Bottom quintile	n.a.	15.5	20.2	17.7	20.8	17.5
Top quintile	n.a.	9.4	11.3	11.1	13.2	12.1
Ratio (bottom to top quintile)	***n.a.***	***1.6***	***1.8***	***1.6***	***1.6***	***1.4***

Note: Two different sets of estimates are provided as the methodology of measuring malnutrition changed in 2007 from the use of NCHS growth reference standard (GRS) to the WHO growth reference standard. There is overlap for some years because for those years DHS reports produced estimates by using both standards.
Source: Gwatkin *et al.* (2007) and NIPORT *et al.* (2005, 2009, 2013).

It is disconcerting to note, however, that while the overall rate of malnutrition has declined, the same cannot be said about inequality in nutritional status between children from poorer and richer backgrounds. As measured by the ratio of the proportions of malnourished children in the poorest and richest wealth quintiles (henceforth called the quintile ratio), inequality in stunting increased from 1.8 in 1996/97 to 2.2 in 2004 and remained stubbornly around that ratio in the subsequent years. In other words, throughout the decade of the 2000s, the incidence of stunting among children from the poorest quintile remained more than twice the incidence among children from the richest quintile. A very similar pattern obtains for inequality in the incidence of underweight. Thus, it is fair to conclude that there has been no decline in inequality in the nutritional status of children in the last decade and a half; if anything, the gap between the poorest and the richest quintile has become somewhat wider today than it was in the mid-1990s.

This conclusion does not change if we expand the set of indicators to include mortality and morbidity rates among children. Table 12 presents the relevant data for two mortality indicators – viz., infant mortality and under-five mortality, and three morbidity indicators – viz., prevalence of fever, prevalence of diarrhoea and prevalence of acute respiratory infection (ARI). For none of these indicators, there is a clear trend of decline in inequality as measured by the quintile ratio – either the ratio has fluctuated without showing any trend or it has

increased slightly in recent years. The overall picture once again is one of persistent inequality despite significant progress made in reducing the average levels of morbidity and mortality among children.

Table 12
Socio-Economic Differentials in Childhood Mortality and Morbidity

	1996/97	1999/00	2004	2007	2011
Infant mortality					
All	*82*	*72*	*65*	*52*	*43*
Bottom quintile	97	93	90	66	50
Top quintile	57	58	65	36	29
Ratio (bottom to top quintile)	***1.7***	***1.6***	***1.4***	***1.8***	***1.7***
Under-five mortality					
All	*116*	*95*	*88*	*65*	*53*
Bottom quintile	141	140	121	86	64
Top quintile	76	72	72	43	37
Ratio (bottom to top quintile)	***1.9***	***1.9***	***1.7***	***2.0***	***1.7***
Prevalence of fever (%)					
All	*31.0*	*37.2*	*40.2*		*36.5*
Bottom quintile	31.6	39.7	42.6	38.9	40.7
Top quintile	30.0	35.3	37.7	34.8	29.0
Ratio (bottom to top quintile)	***1.0***	***1.1***	***1.1***	***1.1***	***1.4***
Prevalence of diarrhoea (%)					
All	*7.6*	*6.1*	*7.5*	*9.8*	*4.6*
Bottom quintile	8.8	6.3	8.7	10.2	5.5
Top quintile	6.4	6.4	6.1	8.1	4.4
Ratio (bottom to top quintile)	***1.4***	***1.0***	***1.4***	***1.3***	***1.3***
Prevalence of acute respiratory infection (ARI) (%)					
All	*12.8*	*n.a.*	*19.3*	*13.0*	*5.8*
Bottom quintile	12.7	n.a.	21.4	16.5	7.3
Top quintile	10.6	n.a.	14.1	8.1	5.1
Ratio (bottom to top quintile)	***1.2***	***n.a.***	***1.5***	***2.0***	***1.4***

Notes: (1) Reference period for mortality is five years preceding the survey.
(2) Absolute values of ARI data for 2011 are not comparable with earlier years because of definitional differences, but the ratio between quintiles may still be comparable.
Source: Gwatkin *et al.* (2007) and NIPORT *et al.* (2005, 2009, 2013).

To probe a bit more deeply into the reasons for persistent inequality in health outcomes, we first looked at the levels of healthcare received by children and then at the status of women's health since both of these are important determinants of child health. For healthcare, a distinction was made between preventive and curative care and information on the two types of healthcare are presented separately in Tables 13 and 14 respectively. In Table 13, two types of preventive healthcare are considered – full immunization (comprising immunization against BCG, measles and DPT) and vitamin A supplementation. In both cases, great strides have been

made at the aggregate level – the average rate of immunization has increased from 54 per cent in 1996/97 to 86 per cent in 2011 and the rate of vitamin A supplementation has increased from 66 per cent in 1996/97 to 88 per cent in 2007. But this admirable progress in the aggregate has not been accompanied by a similar improvement in the equity of healthcare. Inequality in healthcare has been measured here as the ratio of shortfall in the coverage of healthcare from the maximum possible coverage of 100 per cent.[31] According to this measure, the degree of inequality in the rate of immunization has increased over time – from less than 2 in the 1990s to over 3 in 2011. Inequality in vitamin A supplementation also increased in the early years; it then seems to have declined sharply in 2007 but what has been happening since then remains to be seen.

Table 13
Socio-Economic Differentials in Preventive Healthcare for Children

	1996/97	1999/00	2004	2007	2011
Full basic immunization (%)					
All	*54.2*	*60.4*	*73.3*	*81.1*	*86.0*
Bottom quintile	47.4	50.3	57.5	79.9	76.8
Top quintile	66.6	74.9	86.7	88.4	93.5
Ratio of shortfall	***1.57***	***1.98***	***3.20***	***1.73***	***3.57***
Vitamin A supplementation (%)					
All	*66.8*	*73.3*	*81.8*	*88.3*	---
Bottom quintile	66.3	73.5	74.6	88.8	---
Top quintile	76.3	83.1	83.5	90.0	---
Ratio of shortfall	***1.42***	***1.57***	***1.54***	***1.12***	---

Notes: Vitamin A supplementation figures for 2011 are not presented because they not comparable with figures for earlier years as they relate to children aged 6-59 months as against 9-59 months in earlier surveys.
Source: Gwatkin *et al.* (2007) and NIPORT *et al.* (2005, 2009, 2013).

Turning now to the three measures of curative care, we once again find an impressive performance at the aggregate level but disappointing performance with regard to equity. As measured by the ratio of shortfalls in coverage as between the poorest and richest quintiles, there has been an unambiguous increase of inequality in the decade of the 2000s in comparison with the mid-1990s (Table 14). Thus, for example, the ratio of shortfall in the medical treatment of fever was 1.15 in 1996/97 but from 2004 to 2011 it varied between 1.36 and 1.50; shortfall in the medical treatment of ARI also rose from 1.58 in 1996/97 to the range of 1.60-2.07 in the later years.

[31] Thus, if the coverage of a particular type of healthcare for the poorest and richest quintiles are denoted by h_p and h_r per cent respectively, the degree of inequality would be measured by the ratio $(100 - h_p)/(100 - h_r)$. This is a better measure than the simple ratio of coverage (h_p/h_c) because when h_p starts from a low base it is easier to get an improvement in the h_p/h_r ratio even though much of the incremental healthcare has gone to the richest quintile. Measuring the ratio of shortfalls from a maximum possible value avoids this problem. For a fuller discussion of this issue, see Chowdhury and Osmani (2010).

Table 14
Socio-Economic Differentials in Curative Healthcare for Children

	1996/97	1999/00	2004	2007	2011
Medical Treatment of fever (%)					
All	*18.9*	*23.8*	*18.0*	*23.9*	*27.0*
Bottom quintile	15.0	17.0	8.9	13.3	22.3
Top quintile	26.1	44.1	39.1	38.7	42.8
Ratio of shortfall	***1.15***	***1.48***	***1.50***	***1.41***	***1.36***
Treatment of diarrhoea with ORT (%)					
All	*74.6*	*81.0*	*83.4*	*81.2*	*80.6*
Bottom quintile	76.1	78.9	74.9	75.0	84.2
Top quintile	73.0	80.4	94.4	85.9	83.3
Ratio of shortfall	***0.89***	***1.08***	***4.48***	***1.77***	***0.95***
Medical Treatment of ARI (%)					
All	*32.9*	*n.a.*	*20.0*	*30.2*	---
Bottom quintile	23.0	n.a.	10.7	17.0	---
Top quintile	51.3	n.a.	44.1	59.9	---
Ratio of shortfall	***1.58***	***n.a.***	***1.60***	***2.07***	***---***

Note: (1) ARI data for 2011 are not comparable with earlier years because of definitional differences.
Source: Gwatkin *et al.* (2007) and NIPORT *et al.* (2009, 2013).

Clearly, persistent and to some extent rising inequality in the access to healthcare has played a role in preventing inequality in child health outcomes from falling in the last decade and a half despite impressive expansion in healthcare coverage at the aggregate level. Evidence shows that apart from inequities in healthcare inequity in women's health has also played a role in this regard. This is revealed by Table 15 which presents data on the extent of malnutrition among ever-married women of reproductive age as measured by low BMI (body-mass index). Once again, performance at the aggregate level has been quite impressive, as the average rate of malnutrition has come down from 56 per cent in 1996/97 to 24 per cent in 2011. The problem, however, is that the rate of progress has been a lot slower for poorer women as compared with richer women. As a result, the quintile ratio of the degree of women's malnutrition has increased steadily over the years – rising from 2.0 in 1996/97 to 4.8 in 2011.

Table 15
Socio-Economic Differentials in the Nutritional Status of Women
(per cent)

Undernutrition (BMI<18.5)	1996/97	2004	2007	2011
All	*52.0*	*34.3*	*29.7*	*24.2*
Bottom quintile	64.5	44.0	43.4	40.1
Top quintile	32.6	14.7	13.4	8.4
Ratio (bottom to top quintile)	***2.0***	***3.0***	***3.2***	***4.8***

Note: Ever married women aged 15-49 years.
Source: Gwatkin *et al.* (2007) and NIPORT *et al.* (2005, 2009, 2013).

As in the case of child health, rising inequality in women's health has gone hand in hand with rising inequality in the access to healthcare. Data on three measures of healthcare for women are presented in Table 16 – viz., ante-natal care visits to a medically trained person, iron supplementation, and delivery attended by a medically trained person. For each type of healthcare, we have measured inequality by the ratio of shortfalls from the maximum possible coverage of 100 per cent (as in the case of child healthcare). The data show that while the aggregate coverage of women's healthcare has improved considerably since the mid-1990s, the extent of inequity in coverage has also increased at the same time, for each type of healthcare. The rise in inequality is especially severe in the case of ante-natal care, for which the ratio of shortfall between the poorest and richest quintiles has increased from 2.2 in 1996/97 to 5.5 in 2011.

Table 16
Socio-Economic Differentials in Maternal Care
(per cent)

	1996/97	1999/00	2004	2007	2011
Ante-natal care visits to a medically trained person					
All	*29.0*	*33.4*	*48.8*	*51.7*	*54.7*
Bottom quintile	16.0	19.4	24.9	30.8	30.3
Top quintile	62.3	69.8	81.1	83.5	87.4
Ratio of shortfall	***2.23***	***2.67***	***3.97***	***4.19***	***5.53***
Iron Supplementation					
All	...	*36.4*	*50.0*	*54.8*	...
Bottom quintile	…	21.2	31.6	38.9	…
Top quintile	…	62.8	76.1	75.9	…
Ratio of shortfall		***2.12***	***2.86***	***2.54***	
Delivery attended by a medically trained person					
All	*8.1*	*12.1*	*13.2*	*18.0*	*32.1*
Bottom quintile	1.8	3.5	3.3	4.8	12.2
Top quintile	29.8	42.1	39.4	51.0	63.9
Ratio of shortfall	***1.40***	***1.67***	***1.60***	***1.94***	***2.43***

Note: Ever married women aged 15-49 years with live births in the three years preceding the survey.
Source: Gwatkin *et al.* (2007) and NIPORT *et al.* (2005, 2009, 2013).

The evidence presented above depicts a rather grim picture. Inequality in health outcomes has remained stubbornly high over the years and has actually increased in a number of dimensions. The reason lies in either increasing or persistent inequities in the distribution of healthcare for children and increasing inequity in women's health outcomes, the two major determinants of children's health. Clearly, the current trends must be reversed if equity is to be linked with growth in the future on the foundation of an equitable distribution of the health component of human capital.

Section 6. Equity in Education

Access to education, especially at the primary and secondary levels, has increased in a very impressive manner over the last few decades. Between 1975 and 2010, the number of primary schools more than doubled, as did the number of teachers. Along with this expansion of facilities, net enrolment rates at the primary level increased from 53 per cent in 1975to 95 per cent in 2010. The country is, however, still far from ensuring universal coverage of primary education because drop-out remains a serious problem.[32]

The significant increase in enrolments primary level since the 1980s has spilled over to higher enrolment at the secondary level in the 1990s, which more than doubled between 1990 and 2010. Yet, enrolment at the secondary level remains quite low - around 37 per cent at the national level in 2011. The problem of low enrolment is compounded by very poor survival rates. A study in the late 1990s found that for every 100 students who entered the secondary school system at grade six, only 60 advanced to the second year and a meagre six of them survived through passing the final examination at the higher secondary level, which is a pre-condition for continuing with higher education (CAMPE 1999). In some respects, the survival rate has got worse over time. For instance, in 1999, of those who entered the 6th grade some 31 per cent survived the examination in grade 10, but in 2008 only 20 per cent did so (CAMPE 2009).

Going beyond aggregate levels of enrolment and survival, equity in access is also important in shaping the inclusiveness in education. Perhaps the most satisfying aspect in this regard is the achievement of gender parity at the primary level and significant reduction of the gender gap at the secondary level. In 1970, net enrolment of girls at the primary level was only half of that of boys – 33 per cent as compared with 66 per cent. By the end of the 1990s, the enrolment rates had become virtually equal – at 82 and 84 per cent respectively. By 2009, girls had overtaken the boys with a net enrolment of 94 per cent compared with 88 per cent for boys. In the recent years, girls have overtaken boys even in secondary enrolment as well.

Gender apart, in most other respects disparities in educational attainment remain a major concern. Significant disparity still persists between urban and rural areas, and between the poor and the non-poor. The 'rural-urban divide' is reflected partly in variations in the type of primary schools that the students attend. Most of the rural students (around 92 per cent) are enrolled in government and government subsidized schools and madrasahs, while in the urban areas students have greater access to private schools. A distinction needs to be made, however, between urban slums and non-slum urban areas. A nationwide survey carried out by the Bangladesh Bureau of Statistics in 2006 found that children from urban slums performed even worse than rural children in terms of completion rates at the primary level and transition to secondary level (Table 17).

[32] According to official statistics, the drop-out rate from primary schools was about 40 per cent in 2010 (*Statistical Yearbook* 2011).

Table 17
Disparity in Educational Outcomes by Location
(per cent)

Location	Net primary completion rate	Transition to secondary level
Rural	43.8	88.3
Urban	53.6	91.3
Urban non-slum	53.8	93.2
Urban slum	32.5	84.5

Source: BBS (2007b)

The problem with urban slums is symptomatic of a much wider problem of disparities in the educational achievement across economic status. These disparities are much less discussed in Bangladesh as compared with gender disparities or the urban-rural divide. One reason is the relative lack of data. While the official statistics on educational progress often provide disaggregated data across gender and along the rural-urban divide, they seldom reveal disparities across economic status. There are, however, a number of alternative sources from which one obtain a picture of these disparities; these include the regular *Household Income and Expenditure Surveys* (HIES) carried out by BBS, the periodic *Multiple Cluster Sample Surveys* (MICS) also by BBS, the *Demographic and Health Surveys* (DHS) carried out by Macro International with the help of local associates and *Education Watch* reports published by an advocacy group called the Campaign for Popular Education (CAMPE). As discussed below, the synthetic picture on the equity in education that emerges from these sources is quite revealing.

Economic disparities in education has many dimensions - for example, enrolment and completion rates at different levels of schooling, levels of competencies achieved, cost of education, and so on. Let us begin with the most basic statistics - namely, attendance at different levels of education. Based on data from *Demographic and Health Surveys*, Table 18 shows how the differential in attendance rates between children from the poorest and the richest wealth quintiles has changed in the last two decades.

Table 18
Trend in Disparities in Attendance Rates at Primary and Secondary Levels

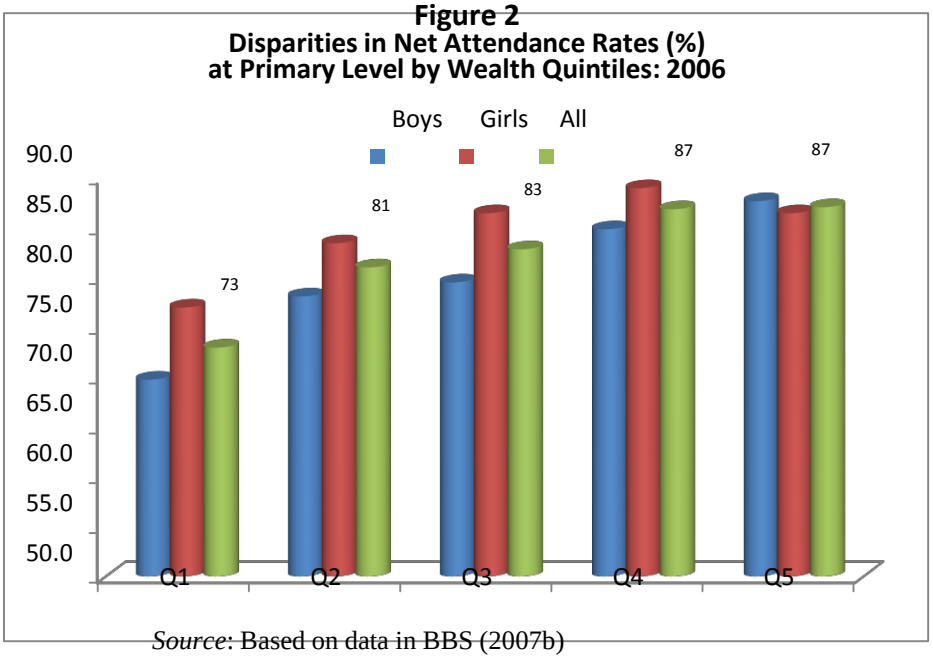
	1993	1996/97	1999/00	2004	2007	2011
Primary net attendance rate (%)						
Bottom quintile	56.69	64.04	63.40	73.84	80.18	77.24
Top quintile	82.42	84.59	80.87	87.53	85.10	82.21
Percentage point difference	***25.73***	***20.56***	***17.47***	***13.69***	***4.92***	***4.97***
Secondary net attendance rate (%)						
Bottom quintile	3.50	8.79	9.60	11.05	18.42	20.27
Top quintile	49.06	48.07	52.54	53.21	50.32	47.29
Percentage point difference	***45.56***	***39.29***	***42.94***	***42.16***	***31.90***	***27.02***

Source: *Demographic and Health Survey* (DHS) data processed by World Bank's *World Development Indicators* (WDI) 2014.

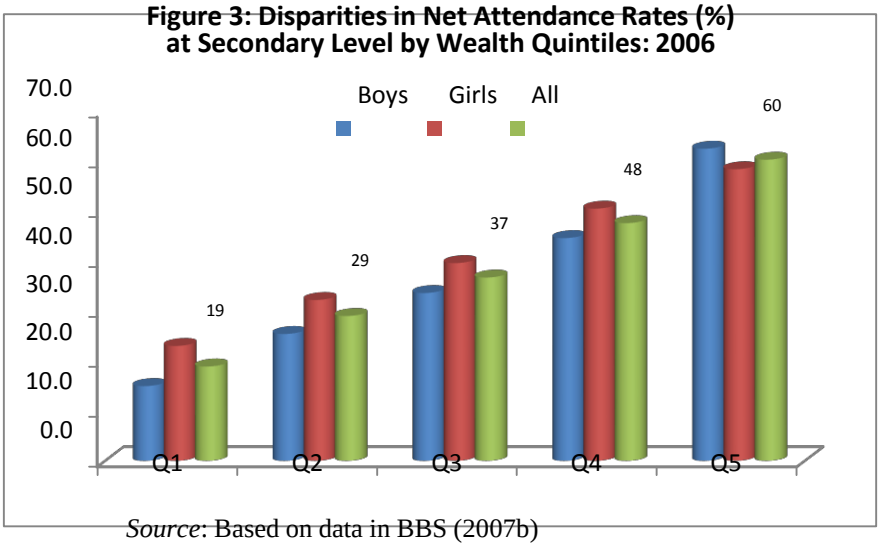
The most satisfying aspect of the picture presented by this table is the sharp decline in inequality in attendance at primary and secondary levels. In 1993, net attendance rate at the primary level for children from the poorest quintile was only 57 per cent as against 82 per cent for children from the richest quintile. By 2011, the attendance rate for the richest quintile had remained virtually unchanged but the rate for the poorest quintile had progressed to 77 per cent, thus almost closing the gap with the richest quintile. Similar narrowing of the gap is observed for attendance at the secondary level as well albeit to a lesser extent. While for the richest quintile the net attendance rate at the secondary level hovered around 50 per cent throughout the two decades, for the poorest quintile it jumped from a very low 3.5 per cent in 1993 to 20 per cent in 2011. It is thus clear that the great progress that has been made in the last two decades in improving overall access to primary and secondary education has been accompanied by significant improvement in the equity to access.

A more disaggregated view of the equity to access – separately for boys and girls – is presented in Figures 2 and 3, for primary and secondary levels respectively, based on data from the *Multiple Indicators Cluster Survey* (MICS) carried out by the Bangladesh Bureau of Statistics in 2006 (BBS 2007b). It is evident that the degree of inequity was similar for boys and girls - there was no gender difference in the narrowing of gaps across economic status. The success that has been achieved in promoting girls' education in Bangladesh has not only enabled girls to close the gap with boys at primary and secondary levels, it has also enabled girls from the poorer households to narrow the gap with girls from richer households just as much as boys.

Figure 2
Disparities in Net Attendance Rates (%) at Primary Level by Wealth Quintiles: 2006

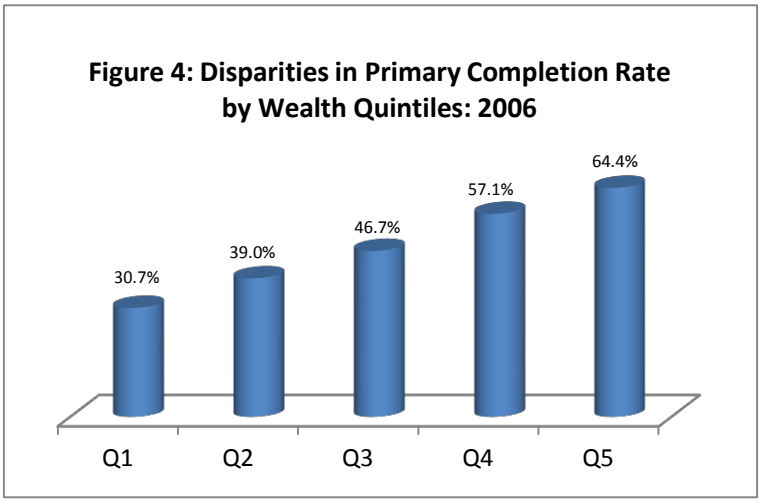


Source: Based on data in BBS (2007b)



Source: Based on data in BBS (2007b)

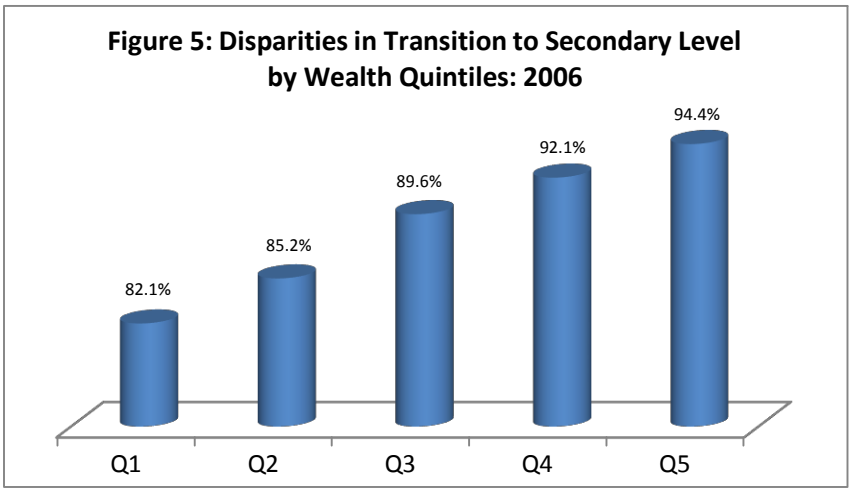
But sadly this is where the good news ends. As we move beyond attendance to probe into disparities in performance, the picture is found to be much less encouraging. Disparities in one such measure of performance – namely, completion rate at the primary level – is shown in Figure 4. Completion rates are systematically lower for children from the poorer quintiles. For the poorest quintile, the completion rate (31 per cent) is almost half of that for the richest quintile (64 per cent).



Source: Based on data in BBS (2007b)

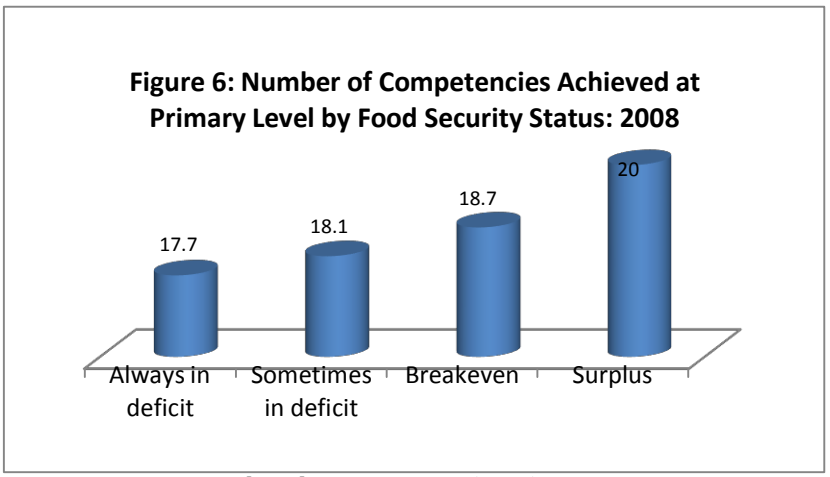
Yet another indicator of interest is the transition rate i.e., once the primary level is passed what percentage of students actually move on to the secondary level instead of dropping

out. As revealed by Figure 5, for the transition rate too there is significant disparity across economic status, albeit not as pronounced as in primary completion rates.



Source: Based on data in BBS (2007b)

Going further beyond completion and transition, it is necessary to look at the disparities in performance as measured by various measures of quality of education. Some revealing information in this regard can be gleaned from the surveys carried out by CAMPE in its *Education Watch* Reports. In one of these reports, CAMPE measured the quality of education at the primary level by the number of competencies achieved by students from different backgrounds including their food security status, which can be used as a proxy for the economic status of households. As can be seen from Figure 6, the number of competencies achieved is systematically lower for the economically worse off households.[33]

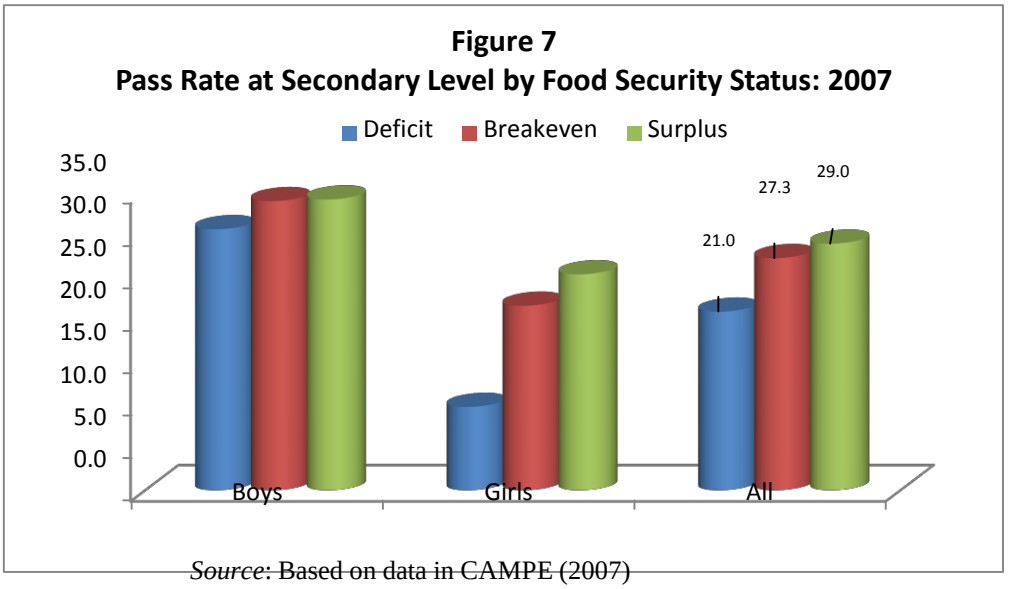


Source: Based on data in CAMPE (2008)

[33] A more recent study, based on the official *National Student Assessment 2011*, confirms the continued existence of disparity in scores achieved at Grade 5 by students from poorer and richer backgrounds (World Bank, 2013b, Figure 6).

In yet another Report, CAMPE measured the competency of students at grade 10 through a special test on Bangla, English, Mathematics and Everyday Science. Once again, the results reveal large disparities across economic status (Figure 7). Pass rates were found to be systematically lower for children from poorer background, and the disparity was particularly sharp for girls.

Figure 7
Pass Rate at Secondary Level by Food Security Status: 2007



Source: Based on data in CAMPE (2007)

The overall picture that emerges from above is that although disparity along economic status has all but disappeared in primary enrolment large disparities still remain in most other aspects of educational achievement. Thus, in secondary education, even though disparities have narrowed over time, the current level of disparity is still very high, with children from the poorest quintile having an attendance rate of less than half of that of children from the richest quintile; children from poorer backgrounds have much lower completion rates at the primary level and lower transition rate to the secondary level; and at both primary and secondary levels poorer children fare much worse than their richer counterparts in terms of the quality of education achieved.

More disturbingly, there are aspects of the educational scene where the disparities are actually becoming worse over time. This is especially true at the two ends of the educational spectrum – namely, at the pre-primary and post-secondary levels. There has a been a great deal of emphasis on pre-primary education of late as experience has shown that children who are exposed to some schooling at the pre-primary stage get a head start against the rest when

education begins at earnest at the primary level. Moreover, evidence also shows that pre-primary education helps neutralize some of the disadvantage that children from poorer backgrounds tend to face, relative to children from the more privileged background, in acquiring educational skills at later stages of life. But this can only happen if the disadvantaged children get access to pre-primary education at the same rate as the privileged children in the first place. Unfortunately, the very opposite seems to be happening in Bangladesh. Evidence presented by the *Education Watch* Report of 2013 shows that not only do the poorer children have lower enrolment at the pre-primary level than their richer counterparts, the gap between the two groups has actually been widening in the last decade and a half (CAMPE 2014). As can be seen from Table 19, although enrolment has increased for all economic groups, the gap between the richest and poorest groups has widened from 8 percentage points in 1998 to 16 percentage points in 2013.

Table 19
Net Enrolment in Pre-primary Education
(per cent)

Food deficit status	1998	2005	2013
Always in deficit	6.9	7.3	31.9
Sometimes in deficit	9.2	12.2	34.3
Breakeven	10.0	14.2	37.5
Surplus	15.1	18.5	48.1
All	9.3	13.4	40.4

Source: CAMPE (2014)

A similar widening of gap is observed at the other end of the spectrum. Contrary to primary and secondary education where, as we have seen, inequality in access has declined over time, post-secondary education is marked by increasing inequality. In 1993, a negligible proportion of children from the poorest wealth quintile were enrolled in post-secondary education; by 2011 the proportion increased marginally to 3.5 per cent. During the same period, enrolment for the wealthiest quintile increased from 29 per cent to 43 per cent, resulting in a substantial widening of the gap between the two groups (Table 20).[34]

The combined effect of narrowing inequality at the pre-secondary level and widening inequality at the post-secondary level is that disparity in the number of years of schooling among the 15-19 year-olds has hardly changed in the last two decades. Throughout this period, children from the wealthiest quintile have maintained an advantage of roughly four years of additional schooling in comparison with children from the poorest quintile (Table 20).

[34] A World Bank (2013b) study using data from the *Household Income and Expenditure Surveys* confirm that although there has been some decline in enrolment inequality at the primary and secondary levels in the decade of the 2000s, inequality has widened at the post-secondary level.

Table 20
Trend in Disparities in Attendance Rates at post-Secondary Level and in Average Years of Schooling

	1993	1996/97	1999/00	2004	2007	2011
Post-secondary net attendance rate (%)						
Bottom quintile	0.00	1.39	0.85	0.44	1.30	3.15
Top quintile	29.24	33.14	36.27	26.84	31.99	42.96
Percentage point difference	***29.24***	***31.74***	***35.42***	***26.40***	***30.68***	***39.80***
Average years of schooling by age group 15-19 years						
Bottom quintile	3.55	4.62	4.00	4.39	5.12	5.33
Top quintile	8.37	8.78	8.87	8.25	8.53	9.68
Absolute difference	***4.82***	***4.16***	***4.87***	***3.86***	***3.41***	***4.35***

Source: *Demographic and Health Survey* (DHS) data processed by World Bank's *World Development Indicators* (WDI) 2014.

There is a popular perception that one way for the children from poorer background to overcome their relative disadvantage is to move away from general education towards vocational training of various kinds which would presumably help them acquire the practical skills necessary for doing well in the labour market. The reality is very different, however. A recent study shows that it is the richer households who are represented relatively more in vocational training, for the simple reason that vocational training is more costly than general education (CAMPE 2013).

Growing inequality in both pre-primary and post-secondary education are matters of serious concern. Higher inequality in pre-primary education suggests that the persistent inequality that we find in primary and secondary education in terms of educational outcomes (completion, competencies, etc.) will only be aggravated in the future. This, combined with growing inequality in post-secondary education, will ensure that children from the poorer background will in future enter the labour market at an even greater disadvantage relative to children from well-off background than they do now. This disadvantage will be all the more serious as the economy moves on to a higher skill-base in the next phase of growth.

Just how serious the disadvantage might be can be gauged from a recent study which examined the rewards to education and skills in the labour market of Bangladesh (World Bank 2013b, Part III). Several findings are of particular interest in the present context. First, workers with higher levels of education are found proportionately more in occupations that pay more. Second, workers with lower levels of education are found more in the informal sector, and for any given level of education, the reward in the informal sector is less than in the formal sector. Thus, the less educated workers are doubly penalized - once through lower return for lower education, and again through a further reduction in return because of working in the informal sector. Third, in addition to the years of schooling, the quality of education also matters in

getting a good job in the labour market. There is a clear positive correlation between the grades achieved and remuneration of the jobs offered by employers. Finally, the quantity and quality of education also matters for self-employed workers. Those who are more successful (in terms of poverty status) were found to have both longer years of schooling and greater literacy skills.

These findings together imply that if current trend of widening inequality in educational outcomes is allowed to continue, thereby allowing the inequality in human capital to widen over time, it will be difficult to break the positive association between growth and inequality that we observe today. Linking growth with equity calls for a significant reform of the education system, especially education financing, aimed at achieving greater equity in educational outcomes, going beyond just equity in enrolment.

Sadly, this is not happening at the moment – at least not in the required scale. For example, "The amount Bangladesh spends on education has remained relatively stable in the last 10 years, oscillating between 2.2–2.5 percent of GDP over 2000–2008, while countries like India and Nepal have had ratios ranging from 3.1–4.4 percent and 3.0–4.6 percent, respectively, in the same period … The average public education spending of low-income countries is also consistently higher than that of Bangladesh over the last decade, at around 3.2–3.7 percent." (World Bank 2013b, p.31). Furthermore, even the small amount of resources that are spent is not allocated equitably. A benefit incidence analysis of public expenditure on education shows that even in primary education, where the poor people have gained considerable access in the last two decades, some 26 per cent of benefit accrues to the richest quintile as compared with 17 per cent to the poorest quintile (World Bank 2013b, p.33). Obviously, at higher levels of education, where the poor are represented less, allocation of public resources would be even more inequitable. Reversing such inequities in public expenditure is an essential pre-condition for linking growth with equity in Bangladesh.

Section 7. Conclusion

Bangladesh's transition to a higher growth trajectory since the early 1990s has been accompanied by increasing inequality of income. In particular, the gap between the richest ten per cent and the poorest forty per cent of the population has steadily widened while the middle half of the population has more or less retained control over about half of national income – a common enough pattern in most countries where income distribution is getting worse. Although the pace of growth has been rapid enough to bring about a substantial reduction in poverty despite rising inequality, the worsening of income distribution is still a matter of concern for at least two reasons – one intrinsic and the other instrumental. The intrinsic reason is that there is something inherently unfair and unjust in allowing the fruits of development to be confined to a tiny minority while depriving the majority who are poor. The instrumental

reason is that higher inequality has the potential to dampen the pace of poverty reduction in the future by depressing future growth.[35]

The positive association between growth and inequality has not occurred by coincidence. The two are in fact causally inter-twined – in the sense that the same processes that have led to rapid growth have also resulted in higher inequality. Two aspects of this causal connection have been emphasized in this paper. First, the period of rapid growth since the early 1990s has witnessed very slow growth in real wage – far below the growth of labour productivity. This has resulted, on the one hand, in reduced real cost of production, which has given Bangladesh a cost advantage in the global market, allowing its export industries to grow rapidly and to act as an engine of growth for the economy as a whole. On the other hand, slower growth of real wage relative to labour productivity has moved the functional distribution of income against labour and in favour of the owners of non-labour factors of production such as land and capital. Since labour input is supplied mostly by the poor people and non-labour inputs mostly by the rich, this anti-labour change in the functional distribution of income has also resulted in the widening of personal income distribution. The second element of the causal connection between growth and inequality is the role of foreign remittance. As the inflow of foreign remittance has become an increasingly prominent feature of Bangladesh economy, acting as an important driver of growth especially in rural areas, it has also served to widen income inequality since it is mainly the relatively better off households who can afford to bear the initial cost of sending workers abroad.

Thus in some important ways the transition to a higher growth path and worsening of income distribution are but two sides of the same coin - the coin being the very process of growth itself. It does not follow, however, that in order to achieve higher equity the current growth process must reversed. In fact, export-oriented growth process must be allowed not just to continue but to prosper, and greater earning of foreign remittance must be encouraged, not discouraged, if we are to maintain the growth momentum. Equitable growth must be achieved by ensuring that the fruits of this growth process are enjoyed more equitably by a broad spectrum of the population.

For this to be possible, a two-pronged strategy must be employed. First, an effective social protection system must be put in place to help those who may be bypassed or even impoverished by the growth process. Second, conditions must be created so that people from the currently disadvantaged segments of the society are able to seize the opportunities opened up by the growth process – just as much if not more than those coming from the privileged background. An essential precondition for creating such equality of opportunity is to ensure equality in the distribution of human capital. The first prong of this strategy would help mitigate the current inequities that are emerging as a consequence of the growth process, while the

[35] In fact, inequality can constrain future poverty reduction in two distinct ways - by reducing the rate of growth and by lowering the growth elasticity of poverty reduction i.e., by reducing the pace of poverty reduction for any given level of growth (Ravallion 2005).

second prong would improve future equity by enabling the children of the disadvantaged segments of the population to participate more fully in the growth process.

The evidence presented in this paper suggests, however, that neither of these two prongs is working very well in Bangladesh. The social protection system is too small and the allocation of resources too perverse to make any significant impact on current inequities. There are also serious failures in enabling the currently disadvantaged segments of the society to seize the opportunities being opened up by the growth process. This is evident from the fact that inequality in human capital – as measured by differences in health and educational outcomes between poor and rich households – has either remained unchanged or increased in certain dimensions during the last two decades.

The latter failure is especially worrying for two distinct reasons. The first reason for concern emanates from the possibility that this failure will sow the seeds of perpetuation of income inequality. This paper has argued that the recent trend of rising income inequality emerges from a growth process that is based on the suppression of the growth of real wages. One would normally expect this trend to be reversed in the course of growth. As surplus labour gets exhausted and the skill base of the labour force is upgraded to meet the challenges of globalization, real wages will have to grow faster in the future, thereby narrowing the gap in functional income distribution. There is a danger, however, that despite rising real wages inequality in personal income distribution may continue to grow because one source of inequality may replace another. Currently, the main source of inequality is the widening gap between the rewards to labour and non-labour factors of production. With rising real wages, this particular source of inequality may begin to wither away, but a new source might emerge as inequality grows between the rewards to skilled and unskilled labour. This is indeed what has happened in many middle-income developing countries in Latin America, and more recently in Asia, as they have attempted to grow rapidly riding on the wave of globalization.[36] Bangladesh may experience the same fate as it attempts to become a middle-income country. But it is important to recognize that this is not an inexorable fate. As the experience of Latin America in the decade of the 2000s shows, the trend of growing inequality between skilled and unskilled labour can be reversed, provided human capital can be developed on an equitable basis (Lopez-Calva and Lustig 2010; Lustig *et al.* 2011). This is where persistent inequalities in the access to human capital in Bangladesh become a matter of concern. As the demand for skilled labour rises in the next phase of growth, it is the children from the more privileged

[36] The observed widening of rewards to skilled and unskilled labour in the developing world is in fact contrary to what one should expect according to the standard trade theory, as embodied for example in the celebrated Stolper-Samuelson theorem. This theorem predicts that as countries that are relatively more endowed with unskilled labour begin to globalize the relative reward to unskilled labour should rise and that of skilled labour should fall, thereby narrowing the gap in the rewards to skilled and unskilled labour. Exploring the reasons for this discordance between theory and evidence has been the subject of vigorous research in the last couple of decades worldwide. A number of possible explanations have been offered, including technological diffusion, firm heterogeneity and market imperfections. For a helpful introduction to this literature, see, *inter alia*, Davis and Mishra (2007) and Goldberg and Pavcnik (2007).

background who will mostly gain from it because of their superior human capital in comparison with children from the less privileged background. This will be a certain recipe for the perpetuation of income inequality.

The second reason for concern has to do with the sustainability of the current growth process in Bangladesh. As has been argued in this paper, it will not make sense to try and reverse the current growth process even though the very same process has also led to rising inequality. But such an inequity-inducing growth process can only be sustained in a liberal democracy if the present generation feels that the current inequities are a price worth paying for the sake of equitable access to better standards of living in the future. In other words, people may accept some inequity today if they are hopeful that their children will enjoy a better life as its reward. But if inequities in the access to human capital continue to persist, those who are underprivileged today will have no reason to hope that things will be any better for their children when they grow up as citizens of the future. It will then be difficult to achieve a social consensus to tolerate some degree of inequity today for the sake of economic growth. This will jeopardise the very sustainability of the growth process that has so far served the Bangladesh economy reasonably well.

For both these reasons, ensuring equity in human capital becomes an essential precondition for linking equity and growth in Bangladesh. This is quite apart from the fact that equity in health and education is desirable in itself as an essential component of broad-based human development.

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