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Child Poverty in Bangladesh and China

Abstract

Child poverty in Bangladesh and China is portrayed and reasons for differences across the two countries as well as reasons for changes over time during periods of rapid economic growth in both countries are investigated. Poverty comparisons are made using a decomposition framework by which poverty differences are attributed to differences in mean child income, demographic differences and differences in the distribution of income. Child poverty is found to be more extensive in Bangladesh than in China. We find that economic growth and differences in income levels affect child poverty differences across time and across countries. However, our study also shows that economic growth does not by necessity lead to a lessening of child poverty. Similarly, differences in mean income are not the only factors that affect poverty differences across countries.

1. Introduction

This paper describes child poverty in Bangladesh and China and investigates reasons for differences across the two countries as well as reasons for changes over time. Poverty is defined as household disposable income of less than one USD a day. Large sample surveys are used. For Bangladesh we study the period 1995/1996 to 1999/2000, for China the period 1988 to 1995 as well as the period 1995 to 2002. The comparisons of child poverty are made using a decomposition framework by which poverty differences are attributed to differences in mean child income, demographic differences and differences in the distribution of income.

Our first motivation for this exercise is that China and Bangladesh are among the countries in the world with the largest numbers of children, relatively many of whom can be assumed to be poor. Children are not poor by choice; child poverty is the outcome of the economic activities of parents or other adult household members and circumstances are not subject to individual control. Child poverty is structured within the societies in which it appears and is possible to affect by policy measures. A large consensus among observers of the desirability of combating child poverty is evident and child poverty has become a subject of great interest among policymakers and researchers alike. However, concerns about child poverty have been more outspoken in richer countries and in the Commonwealth of Independent States than in low- and middle-income countries.[1] We are not aware of any previous effort to compare the extent and evolution of child poverty across low- and middle-income countries, which forms the second motivation for this study.

A third motivation for this study is that just how economic growth affects poverty is open for debate. The supposition that economic growth is a prerequisite for poverty reduction in a longer time perspective is not without controversy.[2] Disagreements stem from economic growth being the outcome of many different processes. Growth is not necessarily distributionally neutral; it can be concentrated to those worse off or to those better off.

One reason for rapid economic growth in the developing world during recent years has been the opening up of previously more closed economies to allow for increased international trade

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[1] United Nations Children's Fund (UNICEF) monitors child poverty in rich countries, Southeastern Europe and the Commonwealth of Independent States (Corak, 2005; UNICEF, 2007). Contributions to the academic literature on child poverty include Bardbury et all. (2001), Vleminckx and Smeeding ed (2001), and Gordon et al., 2003).
[2] That is, when "poverty" is defined as living under a predetermined fixed poverty line – "absolute poverty". When "poverty" is defined as living under a poverty line representing a poverty line that is updated to the general level of living, "relative poverty", one could not assume that economic growth leads to less "poverty".

and foreign investments. If leading to rapid industrialisation, such processes can benefit domestic capital owners as well as skilled and semi-skilled urban workers. However, this type of growth does not necessarily spill over immediately to rural areas where typically most of the country's poor live. This is why there can be episodes where positive economic growth in the economy does not go hand in hand with poverty reduction in the population.[3] Episodes of no poverty reduction despite economic growth can also be the result of demographic changes (widely defined). If ever larger/smaller proportions of the population belong to greater/ lesser poverty prone segments, this counteracts/reinforces impulses towards poverty reduction coming from a growing economy.

Given that growth and poverty reduction must not necessarily go hand in hand, it is not surprising that questions of the connection between economic growth and poverty reduction are subject to considerable research efforts studying different countries and periods and using various research strategies. There are studies analysing single countries and others analysing many countries.[4] This paper adds to the literature on growth and poverty reduction by providing two case examples; Bangladesh during the second part of the 1990s, and the People's Republic of China from the late 1980s to the beginning of the new millennium. China's amazing growth record during recent years stimulated by a policy of opening up is well known. However, starting from a lower level, Bangladesh recently has experienced rapid economic growth as well.

Turning to results, we report that for any given point in time, child poverty is more extensive in Bangladesh than in China. Of the three periods of rapid economic growth studied, child poverty there did not decrease. A more unequal distribution of income in China between 1988 and 1995 offset the poverty-reducing impulses of economic growth. However, for the other

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[3] Winters et al (2004) surveys the literature on trade liberalization and poverty.
[4] One recent example of the former is Thurlow and Wobst (2006) who applied a general equilibrium and micro-simulation model to examine how the sectoral structure of growth in Zambia affects poverty, finding that not all growth is equally good for the poor. Among recent macrostudies, Dollar and Kraay (2002) is often quoted. Kraay (2006) applies a decomposition framework to analyse data mainly from the 1990s covering 80 developing countries in which poverty is defined using the World Bank's "one-dollar-a-day" poverty line. An analysis of spells of poverty change leads to the conclusion that cross country differences in growth, especially in the medium- and long run, are the dominate factors explaining changes in poverty. Combining this database of poverty spells with information on sector value added and on global trade, Loayza and Raddatz (2006) investigate how the sector composition of growth affects the economy's capacity to reduce poverty. It is concluded that growth in sectors intensively using unskilled labour has the largest potential for reducing poverty. This means that growth in agriculture is most poverty-reducing followed by growth in construction and thereafter manufacturing. In contrast, growth in mining, utilities and services by themselves do not seem to help poverty reduction

two periods studied, economic growth was in tandem with child poverty reduction; this was the evolution in Bangladesh in1995-1996 and 1999-2000 as well as in China from 1995-2002.

The cross country comparisons show that the lower child poverty rates in China can mainly be attributed to the country's higher average child income level, while differences in income inequality and demographic composition are of lesser importance. When trying to understand why in the mid-1990s southwest China had lower child poverty rates than Bangladesh, we find that differences in demographic composition are central. In southwest China children lived in families with fewer children than in Bangladesh. However, a few years later, the gap in child poverty between southwest China and Bangladesh had widened with differences in mean child income playing a larger role.

Our study thus illustrates that economic growth and differences in income levels affect child poverty differences across time and across countries. However, it also shows that economic growth does not automatically lead to less child poverty. For understanding changes over time and across countries in child poverty, it can be necessary to also consider changes/differences in the distribution of income as well as in the demographic composition.

The rest of the paper continues as follows: The next section provides information on the context for the comparison by giving information on the two countries compared. The data sets used are introduced in Section 3 while we describe child poverty in China and Bangladesh in Section 4. The accounting framework is presented in Section 5 while the results from applying it are shown in Section 6. Finally we sum up the study in Section 7.

2. Context

When trying to understand the extent and changes of child poverty in Bangladesh and China during the 1990s, some cross-country differences easily come to mind. First, GNI per capita is higher in China, and growth has been more rapid thus further widening the income gap between the countries.[5] Second, the age structure of the populations differs markedly. Children make up a larger proportion of the total population in Bangladesh. China has reached a further stage in the process of demographic transition. Fewer (potential) mothers in China are illiterate and child mortality is lower than in Bangladesh. Birth rates are higher in

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[5] World Bank World Development Indicators (2005) reports GNI per capita of 380 USD for Bangladesh and 1 100 for China in 2002. Life expectancy at birth is reported to be 63 years in Bangladesh and 71 in China.

Bangladesh than in China. These findings are consistent with the adoption of China's one child policy and Bangladesh's policy of encouraging no more than two children.

Third, although a process of rapid urbanisation is going on in both countries, most people in Bangladesh and China still live in rural surroundings. However, the countries differ in one important aspect regarding the dimension rural-urban. The People's Republic of China introduced the Hukou system in the 1950s, a system with no counterpart in Bangladesh. The Hukou system categorises people and only those classified as urban residents have the right to live in a city. The development policy adopted soon after PR China was formed was to prioritise the better-off urban population. Rural households had to deliver quotas of agricultural products thereby funding the industrialisation that took place in urban China. As a consequence, the urban to rural income gap is larger in China than in many other countries. The Hukou system has functioned as a barrier for movements of the less-privileged rural inhabitants into the cities. As a consequence, China has long had very little mass poverty within its registered urban population.[6] The situation is not the same in Bangladesh's cities where big cities in particular have experienced large influxes due to the interaction of push factors and pull factors.

Despite Bangladesh belonging to the group of ten most populous countries in the world, a list headed by China (see UNFPA, 2007), the latter has a population nine times as large (144 million compared to 1 304 million). Bangladesh's territory (144 000 square kilometres) is much smaller than China's (9.6 million square kilometres). Only one out of the 22 provinces of China, Liaoning (144 900 sq km) of northeast China has a territory similar in size to Bangladesh (see World Bank, 2007; World Bank 2007a). Within China, regions differ considerably regarding economic development. The eastern or coastal region is most developed, while the western region, particularly the southwest, is lagging behind. With an average income level and a population size more closely resembling Bangladesh, it seems motivated to also compare child poverty in Bangladesh with child poverty in southwest China.

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[6] However, a new kind of poverty is appearing in the cities of China. One background to this is the in-migration of rural residents who do not have a urban Hukou. Another background is the consequences of the policy of economic restructuring that appeared in China during the latter part of the 1990s. This led to increased unemployment and decreased labour market participation. When assessing new poverty in urban China, poverty lines higher than one USD per day are usually used.

3. Data

For studying child poverty in Bangladesh, microdata from household surveys conducted by the Bangladesh Bureau of Statistics for the years 1995/96 and 2000 has been used in this study. Two-stage stratified random sampling (under the framework of Integrated Multi Purpose Sampling) has been used to draw samples for 1995/96 and 2000 from Population and Housing Census 1991. Households were selected from each Primary Sample Unit (PSU) by systematic random sampling. HIES 2000 used almost the same sample design as HES 1995 with slight modifications (see also BBS, 2003).[7] From the microdata we define the three regions using the administrative divisions as building block: The coastal or southern region (Chittagong, Barisal and Khulna); the mid-central region (Dhaka and Sylhet); and inland or northern region (Rajshahi).

The Chinese data comes from the three waves of the CHIP (China Household Income Project) survey conducted in 1989, 1996 and 2003 for the reference periods 1988, 1995 and 2002. This means we have access to surveys on both rural and urban areas. The 1988 rural survey covers 28 provinces, while nine were not retained in the 1995 survey. These same provinces and also Guangxi and Xinjiang appear in the 2002 survey[8]. The 1988 urban survey was drawn from 10 provinces to represent the Coastal, Central and Western provinces. Further details are provided in Li et al. (2007).

The age at which a person is no longer regarded as a child depends on social circumstances that might vary across countries. We choose here to concentrate on persons 14 years of age and younger, the age when compulsory school ends in both countries.[9] In Table 1 we report the number of children and adults (as defined above) in our five samples and their sub-samples. There are in total around 16 000 children in the two samples for Bangladesh and in the Chinese sample for 1995. The larger sample size for the Chinese sample of 1988 is partly due to another sampling scheme and partly due to earlier birth rates being higher. The fall in birth

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[7] The modifications were made in Statistical Metropolitan Areas and PSUs, however, sample sizes were kept the same for both surveys. Also, the definitions for rural and urban were the same in both surveys. Due to the changes in questionnaires some variables were needed to be defined as closely as possible, for example, household income, parents of the children, etc.

[8] Sichuan was split into two administrative regions at the provincial level, Sichuan and Chongqing, in 1997, both of which are surveyed in our 2002 rural data.

[9] In both countries, children start school at age 6 or 7. Primary school is typically for 5 or 6 years in China and 5 years in Bangladesh, while junior high school is for 3 years.

rate in China is also the reason for the Chinese sample of 2002 not having more than 9 000 children. The two later sub-samples for southwest China comprise about 2 000 children.

/Table 1 about here /

Children make up 42 percent of all persons in Bangladesh in the sample for 1995/96 and 39 percent of the sample for 1999/2000, see Table 1. For China the corresponding proportions are much lower, starting at 25 percent in 1988 and falling to 18 percent in 2002. In both countries, at any point in time, children make up a somewhat larger share in rural areas than in urban areas. Children make up a slightly higher population share in southwest China than in China as a whole.

/Table 2 about here/

In Table 2 we provide descriptions of the five samples and their sub-samples using selected variables. For Bangladesh we report rural and urban sub-samples, for China only the rural sub-sample because poverty as defined in this study is virtually not observed within the urban sub-sample. Based on earlier writings on gender bias among children in China,[10] it comes as no surprise that the ratio between boys and girls is higher in China than in Bangladesh, and it actually increases across the surveys. Most children in China are seven to fourteen years of age, while such a dominance of school children is less pronounced in Bangladesh. Around ten percent of children in the country-wide samples for China belong to ethnic minorities; in southwest China about one out of three. In contrast, the child population of Bangladesh is rather homogeneous when it comes to ethnicity.[11] Most children in Bangladesh live in a household with at least three children, while this is unusual in China. In Bangladesh there is not much difference in parental education between rural and urban areas, while the opposite is the case in China where rural parents have considerably lower educations. Even so, the table does not indicate any dramatic differences in education level between parents in rural Bangladesh and rural China.[12]

4. Describing child poverty

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[10] See for example Johansson and Nygren (2001).
[11] As only a very small number of children are classified as an ethnic group in the surveys we do not report the fraction.
[12] As school systems are not the same in the two countries it is difficult to compare education levels.

To facilitate the cross-country comparison of child poverty, we apply the World Bank's one-dollar-a-day in PPP poverty line to data on disposable income for the two countries. For Bangladesh this means that the poverty line is set to Tk. 404.71 in 1995/96 and Tk. 500.16 in 1999/2000 per person per month. This has been estimated from Purchasing Power Parity Conversion factor, Official Exchange Rate (local currency units to Dollar), and Consumer Price Index. A child is defined as poor if living in a household with a disposable per capita income lower than the poverty line above. For China, the poverty line is set to 425 Yuan in 1988, 934 Yuan in 1995 and 1010 Yuan in 2002 in rural China, and (and in order to take into account differences in price levels) 450 Yuan, 1025 Yuan, 1134 Yuan in corresponding years for urban China.

Compared to the poverty line we use for Bangladesh, we find that the national poverty line of Bangladesh is different from and not comparable with ours since it is consumption based and higher for both years (see BBS, BBS, 2003). For China our poverty line is higher than the poverty line used when the National Bureau of Statistics has reported the extent of poverty in rural China. However, more recently NBS has adopted a low-income line that is rather close to the one-dollar-a-day poverty line.

/Table 3 about here/

We report child poverty rates for Bangladesh and China and the sub-samples in Table 3. In the table we split the samples (when relevant) by age, ethnicity, number of children, parental education and region. Table A1 in the Appendix provides corresponding information for the composition of child poverty. First looking at the total samples we find that child poverty rates in Bangladesh fell from 38 percent in 1995/96 to 28 percent in 2000. In China the child poverty rate was considerably lower, 19 percent in 1988, but had remained unchanged in 1995. However, in 2002 the child poverty rate in China was down to 6 percent. When observing the two countries as whole units we have thus found that economic growth and poverty reduction has moved in tandem during two of the periods studied, but not during a third. Not surprisingly, child poverty rates are higher in Bangladesh than in China.

Virtually all poor children in China live in rural areas and the child poverty rate in urban areas is more or less zero. For urban Bangladesh on the other hand, we report a child poverty rate of 15 percent in 1995/96, and it was only marginally reduced in 1999/2000. Rather differently, child poverty rates in rural Bangladesh fell from 47 percent in 1995/96 to 34 percent in

1999/2000. For China, changes in child poverty rates in the country as a whole are entirely driven by child poverty reductions in rural areas.[13] In contrast during the period 1995 to 2002 was the reduction rather rapid and the child poverty rate was down to 12 percent. At the beginning of the new millennium child poverty rates in rural southwest China were of the same magnitude as urban Bangladesh, thus lower than in rural Bangladesh.

Our data shows no difference in child poverty rates by gender. Child poverty rates are generally a few percentage units higher among the youngest children than among school-aged children. In the samples for China as a whole and for the southwest region, child poverty rates are higher for ethnic minorities than for the majority. We find that as many as two-fifths of the poor children in southwest China belong to an ethnic minority. A general pattern is found of child poverty rates being highest in families with many children. There is a strong negative relation between parental education and child poverty rates in the data for Bangladesh, whereas a slightly weaker counterpart is found in the later surveys for China; this is not true for the first survey for China where the relation between parental education and child poverty rates is weak. In both countries child poverty rates are highest in the inland regions, lowest in the coastal.

5. A framework for making poverty comparisons

We apply a decomposition framework for poverty comparisons attributed to Danziger and Gottschalk (1995). In this framework, poverty differences in society A and society B (which could be the same country observed during two periods or two separate countries) are due to three components; differences in average income, differences in demographic composition and differences in the distribution of income. This framework was first used to study the evolution of poverty in the United States.

Following Danziger and Gottschalk (1995) we make simulation exercises to quantify the importance of economic and demographic differences for child poverty differences across time and countries. The general idea is to quantify how child poverty would have differed as a result of three separate forces: income differences, distributional differences and demographic differences. As further lined out below the first of these shows how the extent of child poverty would have differed where children experiencing a difference in child income between the

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[13] We report an increase in the child poverty rate in rural southwest China from 29 percent in 1988 to 40 percent in 1995, but note that it is based on a relatively small sample and other poverty indices (reported below) do not show an increased extent of poverty.

two situations compared equal to that observed for average child income. The second shows how the extent of child poverty would have changed in the case of unchanged average child income, but where the distribution of child income changed between the two situations compared. The third shows how child poverty would differ in the case of differed demographic composition only.

The decomposition builds on several steps, beginning with computing the growth component. Starting from an actual base distribution (A), we assign each child an income based on the assumption that the difference in average child income observed between distributions A and B is equally shared within the population. From this distribution we compute the extent of child poverty. This simulation maintains the demographic composition and income inequality of distribution A, but has the mean child income of distribution B. The first simulation allows us to estimate what every demographic group's child poverty would have been in the second situation if only mean child income differed.

The next step weights these group-specific child poverty indices by demographic composition of the child population as it was observed in distribution B. This second simulation incorporates the inequality of the base situation, but has the mean child income and demographic composition of the second situation. The difference between child poverty from the two simulations equals the difference in child poverty that is due to demographic differences.

The difference in child poverty that is accounted for by differences in inequality in child income is computed as a residual from the outcome of the second set of simulations and the real situation. By construction, the sum of these three components – the difference attributable to differences in mean child income, to demographic differences and to differences in child income inequality, will equal the observed changes in child poverty.

When applying this framework we compute not only the poverty rate, but also other poverty indices belonging to the family of indices proposed by Foster et al. (1984). This means we are not solely assessing child poverty by number affected ("incidence") P_0 – the head count ratio, but when using the index P_1 indices we incorporate how poor the poor are on average ("intensity"). When applying P_2 we also consider how the poverty deficit (up to the poverty line) is distributed among the poor children ("inequality"). When applying this framework we

must choose along which variables demographic composition should be defined. We choose to use parental education and the number of children.

6. Results

/Table 4 about here /

The extent of poverty measured by FGT indices (See Foster et al, 1984) are reported in Table 4 for the samples as well as the various sub-samples. By measuring poverty not only by the poverty rate, a more nuanced picture of differences can be obtained than by relying on the head count index only. Thus we find that different indices give different views on how the extent of poverty developed in urban Bangladesh from 1995/1996 to 1999/2000, and that not all indices indicate an increase in poverty in southwest China as a whole between 1988 and 1995.

/Table 5 about here/

We first report results of the decomposition illuminating change over time in each country, Table 5. Starting with Bangladesh we find that economic growth was a rather strong force for poverty reduction in the rural region, but rather weak in the urban region. This is not surprising as Bangladesh experienced rapid agricultural growth during the period studied, as discussed in several studies. For example ADB (2001) reports a more than five percent annual growth in agricultural production value for the years 1997 to 2000 (as opposed to a growth of two percent per year during the years 1991 to 1996). Many factors are deemed to have contributed to this development: expansion of rural non-farm sector, expansion of micro credit programs, reform of agricultural and other sectors (see also World Bank, 2005) Indications of change in income inequality are found to be small in rural areas, and their signs differ by poverty indices, as in urban Bangladesh. Demographic change was found to be of very small importance for the poverty development in Bangladesh.

Turning to China, we find not surprisingly that the results for rural China during this period are rather similar to those for the entire country. Starting with the period 1988 to 1995 we find that increased parental education and fewer children per household worked towards decreased child poverty, but the movement towards poverty reduction from economic growth was considerably more forceful. However, a worsening of the income distribution was working in the other direction, particularly when assessing poverty by the head count ratio, though less

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when applying the distribution sensitive poverty index. Strong growth in average household income in China from 1988 to 1995 did not do much to improve the situation of the poor children in China, a finding that can be traced back to the sectors in which growth appeared. Economic growth was fastest in the eastern part of the country and less impressive in the western part where the highest poverty rates were found.

During the period 1995 to 2002, decreased numbers of children per household continued to work towards less child poverty in China. However, the magnitude of this effect is marginal compared to the poverty reducing impulses that came from economic growth. Such impulses were somewhat larger than during the preceding period. Increased income inequality did not forcefully counteract the development towards less child poverty as it did in the first period. This means that when summing up the development over the two periods we find that the development of child poverty is to a large extent driven by economic growth, slightly reinforced by demographic change, but also somewhat counteracted by a worsening income distribution.

/Table 6 about here/

Why is child poverty less extensive in China than in Bangladesh? Table 6 showing the decomposition results for the mid-1990s and the late-1990s provides some insight into this question, and the picture differs somewhat between the two comparisons. However, in both cases the main reason for child poverty being less extensive in China is a higher mean income. Demographic differences contribute to this, particularly in the comparison made for the mid-1990s. Differences across countries in the income distribution work towards reducing the cross-country poverty disparity. This is particularly the case when comparing poverty of the mid-1990s.

/Table 7 about here/

When comparing poverty in Bangladesh with poverty in southwest China in the mid-1990s, the importance of demographic differences stands out. At that time, child poverty was clearly less extensive in southwest China than in Bangladesh. However, the decomposition indicates that if southwest China would have had the same demographic composition as Bangladesh (primarily having the same average number of children), there would not have been much of a

difference in child poverty rates.[14] But when making comparisons at the beginning of the new millennium the situation is different. The higher mean income in southwest China is the predominant explanation for poverty being less extensive in southwest China.

Our decomposition analyses have shown that all three components considered are of importance for the poverty comparisons. Rapid economic growth has a large potential for lowering the extent of poverty, but it is not sufficient for reducing child poverty. This is a conclusion well in agreement with what can be found in the literature on growth and poverty in the developing world.[15] Our results also indicate that for poverty comparisons, differences in demographic compositions can be of importance, a possibility typically not considered in the same literature.[16]

7. Conclusions

In this paper we have described child poverty in Bangladesh and China as well as investigated reasons for differences across the two countries using harmonised microdata. We have also investigated reasons for changes over time during periods of rapid economic growth in both countries. The study is based on large samples and a poverty line set to one-USD-a day. The comparisons of child poverty were made using a decomposition framework according to which poverty differences are attributed to differences in mean child income, demographic differences and differences in the distribution of income.

Child poverty is very much a problem for rural children in both countries. Child poverty is more extensive in Bangladesh than in China. Out of the three periods of rapid economic growth studied, child poverty was found to have decreased during two periods, but not a third. A more unequal distribution of income in China between 1988 and 1995 had offset the

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[14] However, poverty measured by other indices would have been smaller in south west China, see Table 7.
[15] For example Ravallion (2001 p 1812) concludes: "The poor typically do share in the benefits of rising aggregate affluence, and they typically do suffer from economic contractions. But there is a sizable variance around the "typical" outcomes for the poor. Similarly Bigsten and Shimeles (2007) in an exercise of asking if Africa can reduce poverty by half by 2015, find that while strong focus on growth is the only viable option for some countries, changes in income distribution can have a large effect on poverty in others.

[16] When studying poverty in the United States 1949 to 1999 using the same framework as that used here, Iceland (2003) found that income growth explains most of the trend in poverty. Rising inequality in the 1970s and 1980s was especially important in explaining increases in poverty among Hispanics, whereas changes in family structure played a significant role for children and African Americans through 1990. However, changes in family structure no longer had a significant association with trends in poverty for any group in the 1990s.

poverty reducing impulses coming from economic growth. However, in Bangladesh 1995-1996 and 1999-2000 and in China 1995-2002, economic growth was in tandem with child poverty reduction.

A pattern of child poverty rates being highest in families with many children was found in both countries. Child poverty is negatively related to parental education level in Bangladesh, and in China in the mid-1990s and thereafter, but much less so than in 1988. Ethnic minority children are more poverty prone than the majority in China, while the Bangladeshi population is more ethnically homogeneous.

The cross-country comparisons show that the lower child poverty rates in China can mainly be attributed to a higher average child income level than in Bangladesh. When trying to understand why in the mid-1990s southwest China had lower child poverty rates than Bangladesh, it was found that differences in demographic composition are central. In southwest China children lived in families with fewer other children than in Bangladesh. However, a few years later, the difference in the extent of poverty between southwest China and Bangladesh had widened and was now driven by differences in mean income.

Our study thus illustrates that economic growth and differences in income levels are significant for child poverty differences across time and across countries. However, it also shows that economic growth does not by necessity lead to a lessening of child poverty. Similarly differences in mean income are not the only factors that affect poverty differences across countries. In addition to economic growth, changed distribution of income as well as changed demographic composition can affect how poverty develops.

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Table 1. The number of adults and children in the samples for Bangladesh 1995 and 2000 and for China 1988, 1995 and 2002.

	All		Urban		Rural	
	Number	Percentage	Number	Percentage	Number	Percentage
Bangladesh						
1995						
Children	16569	42.43	4910	38.97	11659	44.07
Adults	22482	57.57	7688	61.03	14794	55.93
Entire	39051		12598		26453	
2000						
Children	15071	39.13	4388	35.71	10683	40.73
Adults	23447	60.87	7899	64.29	15548	59.27
Entire	38518		12287		26231	
China						
1988						
Children	30809	24.98	-	-	13653	26.60
Adults	92517	75.02	-	-	37682	73.40
Entire	123326				51335	
1995						
Children	16090	21.54	-	-	8160	23.49
Adults	58621	78.46	-	-	26579	76.51
Entire	74711				34739	
2002						
Children	9428	15.97	-	-	6403	17.80
Adults	49623	84.03	-	-	29565	82.20
Entire	59051				35968	
Southwest China						
1988						
Children	3577	27.07	-	-	2784	28.37
Adults	9635	72.93	-	-	7029	71.63
Entire	13212				9813	
1995						
Children	2132	20.19	-	-	1356	22.37
Adults	8426	79.81	-	-	4706	77.63
Entire	10558				6062	
2002						
Children	2082	17.44	-	-	1498	19.82
Adults	9859	82.56	-	-	6060	80.18
Entire	11941				7558	

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Table 2. Samples by background characteristics (in percentage).

	Age	Nationality	No. of children				Parental education			region		
	<=6	Minority	1	2	3	4 & more	One High	Other	Both Low	Coastal	Middle	Inland
Bangladesh												
1995												
Entire	43.22		9.51	22.49	27.14	40.87	38.35	39.54	22.10	42.31	35.59	22.10
Urban	40.47		11.04	25.74	27.80	35.42	38.92	44.05	17.03	45.01	37.96	17.03
Rural	44.38		8.86	21.12	26.86	43.16	38.12	37.64	24.24	41.17	34.59	24.24
2000												
Entire	42.55		11.15	26.29	27.95	34.61	39.77	38.50	21.73	43.44	34.83	21.73
Urban	40.47		13.58	30.95	27.55	27.92	40.36	43.21	16.43	46.72	36.85	16.43
Rural	44.38		10.16	24.38	28.11	37.36	39.53	36.56	23.91	42.09	34.00	23.91
China												
1988												
Entire	35.79	8.80	31.82	40.31	19.18	8.70	26.49	41.35	32.16	36.29	39.98	23.73
Urban	34.12	4.06	68.90	28.49	2.45	0.15	59.41	36.06	4.53	36.47	44.83	18.70
Rural	36.39	9.25	22.10	43.21	23.69	11.00	17.94	42.59	39.47	36.34	38.43	25.23
1995												
Entire	30.33	7.83	42.72	38.28	15.47	3.52	36.67	45.82	17.51	32.62	40.98	26.40
Urban	31.08	4.88	87.16	12.34	0.49	-	78.53	20.64	0.83	33.35	38.84	27.81
Rural	30.14	8.88	29.72	45.66	20.11	4.51	24.50	52.84	22.66	32.39	41.37	26.30
2002												
Entire	26.93	10.06	61.76	30.71	6.62	0.91	43.21	45.44	11.34	32.84	40.06	27.10
Urban	28.35	7.00	92.77	7.29	-	-	85.01	14.48	0.51	30.44	41.62	27.94
Rural	26.74	11.48	46.99	41.92	9.75	1.34	24.05	59.62	16.32	34.25	39.06	26.69
Southwest China												
1988												
Entire	35.43	24.27	30.00	35.90	19.71	14.40	17.87	41.24	40.89			
Urban	30.26	13.98	65.70	31.53	2.27	0.50	50.00	42.06	7.94			
Rural	36.91	27.23	19.83	37.14	24.68	18.35	8.64	41.00	50.36			
1995												
entire	31.55	27.65	56.43	28.42	12.10	3.05	37.10	38.30	24.59			
Urban	71.13	12.50	91.75	8.25	-	-	79.32	20.03	0.65			
Rural	33.12	36.54	36.21	39.97	19.03	4.79	12.71	48.87	38.43			
2002												
Entire	29.99	29.25	54.56	31.12	11.53	2.79	33.08	46.49	20.43			
Urban	30.14	14.04	96.23	3.77	-	-	83.89	15.56	0.56			
Rural	29.92	35.18	38.32	41.79	16.02	3.87	14.38	57.87	27.74			

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Table 3. Child poverty rates in Bangladesh, China and Southwest China (in percentage)

	Age		Nationality		No. of children				Parental education			Region		
	<=6	7-14	Han	Minority	1	2	3	4	One High	Other	Both Low	Coastal	Middle	Inland
Bangladesh														
1995														
Entire	41.57	35.15			24.06	32.37	37.63	44.41	3.16	23.66	48.58	34.87	34.39	49.56
Urban	17.21	14.27			5.17	10.92	16.48	21.16	1.43	7.57	26.53	15.18	10.77	28.23
Rural	50.92	44.57			33.98	43.38	46.84	52.44	9.57	34.45	54.93	43.34	46.02	55.87
2000														
Entire	29.64	26.85			16.12	22.51	28.92	35.37	3.28	19.19	33.93	21.65	26.44	42.56
Urban	14.06	13.57			4.19	10.16	13.65	22.53	0.00	8.67	19.73	10.39	13.40	23.02
Rural	35.45	32.70			22.67	28.96	35.06	39.31	6.56	25.59	38.24	26.38	32.77	48.08
China														
1988														
Entire	23.47	17.94	18.35	35.24	9.55	19.47	30.33	36.95	12.00	18.90	27.11	12.13	20.68	31.27
Rural	29.37	22.73	23.44	39.69	17.27	22.81	31.26	36.95	22.65	22.91	27.91	15.20	27.18	37.70
1995														
Entire	21.37	17.14	16.40	39.61	8.16	22.18	33.71	34.92	10.72	19.80	31.77	7.14	17.17	34.31
Rural	27.49	22.14	21.38	46.39	15.18	23.83	33.82	34.51	20.56	21.57	32.43	9.14	21.56	45.15
2002														
Entire	9.14	5.66	5.75	14.14	3.18	10.22	19.23	24.42	2.51	7.66	18.61	3.29	5.24	12.60
Rural	13.38	8.29	8.54	18.23	6.02	11.03	19.23	24.42	6.44	8.47	18.88	4.65	7.84	18.72
SW China														
1988														
Entire	27.31	19.70	18.39	34.07	9.13	21.18	32.77	38.83						
Rural	33.69	25.84	24.60	39.11	17.57	26.31	33.62	39.14						
1995														
Entire	30.46	23.44	20.03	37.59	9.56	38.94	56.98	75.38						
Rural	45.66	37.38	36.00	44.93	22.81	43.54	56.98	56.98						
2002														
Entire	14.90	10.56	9.91	16.58	4.31	20.06	21.25	29.31						
Rural	20.54	14.67	14.93	19.17	8.36	20.77	21.25	29.31						

Note: The child poverty rates for urban China are less than 0.5% and therefore we do not report breakdowns for urban China in the table.

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Table 4. FGT indices:

	FGT(0)	FGT(1)	FGT(2)
Rural Bangladesh			
1995/1996	0.4739	0.1542	0.0719
1999/2000	0.3390	0.1059	0.0527
Urban Bangladesh			
1995/1996	0.1546	0.0366	0.0143
1999/2000	0.1376	0.0381	0.0182
Entire Bangladesh			
1995/1996	0.3793	0.1193	0.0549
1999/2000	0.2804	0.0861	0.0426
Rural China			
1988	0.2514	0.0785	0.0389
1995	0.2375	0.0665	0.0279
2002	0.0965	0.0232	0.0096
Entire China			
1988	0.1992	0.0619	0.0306
1995	0.1842	0.0512	0.0215
2002	0.0660	0.0159	0.0066
Southwest China: (rural)			
1988	0.2874	0.0788	0.0340
1995	0.4012	0.1058	0.0415
2002	0.1642	0.0369	0.0129
Southwest China: (whole)			
1988	0.2239	0.0614	0.0265
1995	0.2566	0.0677	0.0265
2002	0.1186	0.0267	0.0093

Table 5. The decomposition of percentage-point change in the poverty rate.

Bangladesh (1996-2000)	Rural			Urban			Total		
	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)
Actual change in poverty rate	-0.1348	-0.0483	-0.0193	-0.0169	0.0015	0.0039	-0.0989	-0.0332	-0.0122
(1) Economic changes	-0.1365	-0.0471	-0.0183	-0.0269	0.0006	0.0040	-0.1036	-0.0330	-0.0115
(a) Growth in mean adjusted income	-0.1281	-0.0504	-0.0249	-0.0014	-0.0010	-0.0004	-0.0711	-0.0248	-0.0120
(b) Change in income inequality	-0.0084	0.0033	0.0066	-0.0255	0.0016	0.0044	-0.0325	-0.0082	0.0005
(2) Demographic changes	0.0017	-0.0012	-0.0010	0.0100	0.0009	-0.0001	0.0047	-0.0002	-0.0007
(a) Parental education	0.0073	0.0010	0.0001	0.0171	0.0030	0.0009	0.0111	0.0024	0.0007
(b) No. Of children	-0.0060	-0.0026	-0.0013	-0.0095	-0.0026	-0.0013	-0.0076	-0.0032	-0.0016
(c) Interaction	0.0004	0.0004	0.0002	0.0023	0.0005	0.0002	0.0011	0.0005	0.0003

	1988-1995			1995-2002			1988-2002		
China as a whole	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)
Actual change in poverty rate	-0.0149	-0.0107	-0.0092	-0.1182	-0.0353	-0.0149	-0.1332	-0.0460	-0.0241
(1) Economic changes	0.0059	-0.0051	-0.0064	-0.1030	-0.0320	-0.0136	-0.1217	-0.0416	-0.0210
(a) Growth in mean adjusted income	-0.0893	-0.0271	-0.0118	-0.1317	-0.0383	-0.0156	-0.1650	-0.0472	-0.0200
(b) Change in income inequality	0.0952	0.0220	0.0054	0.0287	0.0063	0.0020	0.0433	0.0056	-0.0010
(2) Demographic changes	-0.0209	-0.0057	-0.0028	-0.0152	-0.0032	-0.0013	-0.0116	-0.0044	-0.0031
(a) Parental education	-0.0125	-0.0032	-0.0017	-0.0039	-0.0008	-0.0003	-0.0041	-0.0019	-0.0013
(b) No. of children	-0.0132	-0.0037	-0.0017	-0.0138	-0.0027	-0.0010	-0.0079	-0.0026	-0.0016
(c) Interaction	0.0048	0.0013	0.0005	0.0025	0.0003	0.0000	0.0004	0.0000	-0.0001

Note: Results for rural China are reported in appendix Table A2.

6. The decomposition of percentage-point difference in the poverty rate: Cross-country comparison of Bangladesh with China.

	Rural			Entire Countries		
1995/96	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)
Actual difference in poverty rate	-0.2364	-0.0877	-0.0440	-0.1950	-0.0682	-0.0334
(1) Economic differences	-0.1383	-0.0620	-0.0335	-0.1126	-0.0453	-0.0233
(a) Difference in mean adjusted income	-0.2775	-0.0992	-0.0467	-0.2460	-0.0819	-0.0375
(b) Difference in income inequality	0.1392	0.0372	0.0132	0.1334	0.0366	0.0142
(2) Demographic differences	-0.0981	-0.0257	-0.0106	-0.0824	-0.0229	-0.0101
(a) Parental education	-0.0704	-0.0169	-0.0064	-0.0646	-0.0171	-0.0073
(b) No. of children	-0.0445	-0.0134	-0.0061	-0.0412	-0.0126	-0.0057
(c) Interaction	0.0167	0.0046	0.0019	0.0234	0.0067	0.0029
2000/2002						
Actual difference in poverty rate	-0.2425	-0.0827	-0.0430	-0.2144	-0.0703	-0.0361
(1) Economic differences	-0.2030	-0.0697	-0.0344	-0.1926	-0.0594	-0.0283
(a) Difference in mean adjusted income	-0.2507	-0.0746	-0.0328	-0.2439	-0.0685	-0.0301
(b) Difference in income inequality	0.0477	0.0049	-0.0016	0.0513	0.0091	0.0018
(2) Demographic differences	-0.0396	-0.0130	-0.0086	-0.0218	-0.0108	-0.0077
(a) Parental education	-0.0295	-0.0095	-0.0059	-0.0167	-0.0081	-0.0057
(b) No. of children	-0.0178	-0.0052	-0.0031	-0.0104	-0.0045	-0.0031
(c) Interaction	0.0078	0.0017	0.0004	0.0053	0.0019	0.0011

Table 7. The decomposition of percentage-point difference in the poverty rate: Cross-country comparison between Bangladesh and Southwest China

1995/1996	Rural Bangladesh and Southwest China			Entire Banglades and Southwest China		
	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)
Actual difference in poverty rate	-0.0727	-0.0484	-0.0304	-0.1227	-0.0517	-0.0283
(1) Economic differences	0.0641	0.0005	-0.0075	-0.0165	-0.0219	-0.0152
(a) Difference in mean adjusted income	-0.0407	-0.0176	-0.0089	-0.2019	-0.0695	-0.0323
(b) Difference in income inequality	0.1048	0.0181	0.0014	0.1854	0.0476	0.0171
(2) Demographic differences	-0.1369	-0.0488	-0.0229	-0.1062	-0.0298	-0.0132
(a) Parental education	-0.0802	-0.0252	-0.0110	-0.0808	-0.0217	-0.0094
(b) No. of children	-0.0655	-0.0284	-0.0148	-0.0613	-0.0182	-0.0081
(c) Interaction	0.0089	0.0047	0.0029	0.0359	0.0101	0.0043
2000/2002						
Actual difference in poverty rate	-0.1748	-0.0689	-0.0397	-0.1618	-0.0594	-0.0333
(1) Economic differences	-0.0961	-0.0473	-0.0361	-0.1221	-0.0461	-0.0249
(a) Difference in mean adjusted income	-0.1219	-0.0354	-0.0137	-0.2070	-0.0602	-0.0263
(b) Difference in income inequality	0.0258	-0.0119	-0.0224	0.0849	0.0141	0.0014
(2) Demographic differences	-0.0787	-0.0243	-0.0117	-0.0397	-0.0133	-0.0083
(a) Parental education	-0.0556	-0.0174	-0.0089	-0.0299	-0.0096	-0.0058
(b) No. of children	-0.0403	-0.0108	-0.0023	-0.0206	-0.0062	-0.0037
(c) Interaction	0.0172	0.0039	-0.0005	0.0108	0.0025	0.0012

Appendix
Table A1 The Composition of Poverty in Bangladesh and China

	Age		Nationality		No. of children				Parental education			region		
	<=6	7-14	Han	Minority	1	2	3	4	One High	Other	Both Low	Coastal	Middle	Inland
Bangladesh														
1995														
Entire	47.38	52.62			6.03	19.19	26.93	47.85	0.24	17.45	82.31	35.26	35.85	28.88
Urban	45.06	54.94			3.69	18.18	29.64	48.48	0.70	18.12	81.18	38.21	30.70	31.09
Rural	47.69	52.31			6.35	19.33	26.55	47.76	0.18	17.35	82.47	34.86	36.56	28.58
2000														
Entire	44.98	55.02			6.41	21.11	28.82	43.66	0.19	23.36	76.45	30.71	36.30	32.99
Urban	40.57	59.43			4.14	22.85	27.32	45.70	0.00	27.85	72.15	30.46	42.05	27.48
Rural	45.71	54.29			6.79	20.82	29.07	43.32	0.22	22.61	77.17	30.76	35.34	33.90
China														
1988														
Entire	42.16	57.84	85.36	14.64	15.25	39.41	29.20	16.13	16.13	39.64	44.23	21.91	41.15	36.15
Rural	42.50	57.50	85.28	14.72	15.18	39.21	29.45	16.17	16.36	39.28	44.36	21.68	40.98	37.33
1995														
Entire	35.18	64.82	82.97	17.03	18.93	46.09	28.31	6.68	21.17	48.87	29.96	12.65	38.19	49.16
Rural	34.88	65.12	82.55	17.45	18.99	45.82	28.64	6.55	21.18	47.92	30.90	12.44	37.56	50.00
2002														
Entire	37.32	62.68	78.46	21.54	29.74	47.59	19.29	3.38	16.23	52.13	31.64	16.40	31.83	51.77
Rural	37.05	62.95	78.32	21.68	29.29	47.90	19.42	3.40	16.01	52.15	31.85	16.50	31.72	51.78
SW China														
1988														
Entire	43.19	56.81	62.74	37.26	12.33	33.96	28.84	24.97	9.93	37.25	52.81			
Rural	43.25	56.75	62.69	37.31	12.13	34.00	28.88	25.00	9.95	37.17	52.88			
1995														
Entire	37.46	62.54	58.24	41.76	21.02	43.14	26.87	8.90	11.55	48.48	39.96			
Rural	37.68	62.32	58.19	41.81	20.59	43.38	27.02	9.01	11.43	48.38	40.19			
2002														
Entire	37.66	62.34	59.11	40.89	19.84	52.63	20.65	6.88	8.61	54.51	36.89			
Rural	37.38	62.62	58.94	41.06	19.51	52.85	20.73	6.91	8.64	54.32	37.04			

Note: The composition of urban child poverty has not been reported in the Table since the numbers of urban children living in poverty are found to be negligible in China (14, 22 and 3 in1988, 1995 and 2002 respectively).

Table A2. The decomposition of percentage-point change in the poverty rate for rural China

	1988-1995			1995-2002			1988-2002		
	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)	FGT(0)	FGT(1)	FGT(2)
Actual change in poverty rate	-0.0139	-0.0120	-0.0109	-0.1410	-0.0433	-0.0183	-0.1549	-0.0552	-0.0292
(1) Economic changes	0.0025	-0.0081	-0.0094	-0.1225	-0.0392	-0.0169	-0.1427	-0.0527	-0.0283
(a) Growth in mean adjusted income	-0.0912	-0.0292	-0.0129	-0.1338	-0.0405	-0.0169	-0.1824	-0.0537	-0.0229
(b) Change in income inequality	0.0937	0.0211	0.0035	0.0113	0.0013	0.0000	0.0397	0.0010	-0.0054
(2) Demographic changes	-0.0164	-0.0039	-0.0015	-0.0185	-0.0041	-0.0015	-0.0122	-0.0026	-0.0010
(a) Parental education	-0.0082	-0.0017	-0.0008	-0.0045	-0.0009	-0.0003	-0.0009	-0.0007	-0.0005
(b) No. of children	-0.0108	-0.0026	-0.0009	-0.0156	-0.0036	-0.0012	-0.0105	-0.0016	-0.0004
(c) Interaction	0.0025	0.0005	0.0002	0.0017	0.0003	0.0000	-0.0008	-0.0003	-0.0001