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Poverty Reduction in China

Trends and Causes

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Abstract

Applying the Shapley decomposition to unit-record household survey data, this paper investigates the trends and causes of poverty in China in the 1990s. The changes in poverty trends are attributed to two proximate causes; income growth and shifts in relative income distribution. The Foster-Greer-Thorbecke measures are computed and decomposed, with different datasets and alternative assumptions about poverty lines and equivalence. Among the robust results are: (i) both income growth and favourable distributional changes can explain China's remarkable achievement in combating poverty in rural areas in the first half of the 1990s; (2) in the second half of the 1990s, both rural and urban China suffered from rapidly rising inequality and stagnant income growth, leading to a slow-down in poverty reduction, even reversal of poverty trend.

Keywords: poverty, Shapley decomposition, unit-record data, China
JEL classification: O15, O53

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1 Introduction

Poverty dynamics in China commands world-wide attention not merely because the sheer size of its population and its low starting point entail that China still has the second largest share of the poor in the world,[1] despite the great strides made in alleviating poverty. China's combat against poverty will continue to affect global poverty trend in a significant way. More intriguing, and also puzzling, is the fact that poverty reduction slowed down and at times were even reversed in the past decade or so (Ravallion and Chen 2004) while per capita real GDP frequently posted growth rates of well over 8 per cent per annum. This development contrasts with China's experience in the 1980s when growth in the same range successfully lifted hundreds of millions out of poverty. What could the weakening of the responsiveness of poverty to aggregate output growth be attributed to? Was it caused by a reduction in the household share of national income, in which case even the income of an average person would have been grown much slower than suggested by GDP growth rates? Or, was it down to an increase in inequality such that the gains from aggregate growth have failed to trickle down to those on the bottom rung of the income ladder? A theoretically less interesting yet empirically important third possibility is that the reported poverty trend is a statistical artifact arising from inappropriate measurement of poverty.

In this paper, we explore poverty changes in China in the 1990s and attempt to attribute these changes to contributions by income growth and redistribution, respectively. To address the issue of robustness, we use unit-record household survey data from two separate sources rather than the grouped data published by the National Bureau of Statistics (NBS). Further, we compare results from using different poverty measures, poverty lines and equivalence scales and adjust poverty lines over time and space. Urban poverty, as well as rural poverty, is considered. Our results help assess the relative importance of growth and inequality in affecting poverty, and thus shed light on the proximate causes of the lack of progress in poverty reduction in the 1990s.

The plan of this paper is as follows. In Section 2, we describe the decomposition methodology and discuss various uncertainties involved in assessing poverty trend and decomposition. Section 3 presents the time profile of poverty measures and the decomposition results. Particular attention is given to results that are consistent across alternative poverty measures, poverty lines and equivalence scales. Concluding remarks are given in the last section.

[1] According to the World Bank's Global Poverty Monitoring database, more than 210 million people in China live with less than US$1.08 per day (in 1993 PPP) as of 2001, 99 per cent of whom are in the rural areas.

2 Decomposition procedure and the robustness of decomposition results

As is known, poverty decomposition typically follows Datt and Ravallion (1992) which is similar to Kakwani and Subbarao (1990) and Jain and Tendulkar (1990). All three variants are path-dependent. In addition, the first two are either inexact or come with a non-vanishing residual component unless distribution remains the same or growth is absent over time. As shown below, these nuisances can be removed by a simple averaging procedure.

Let ΔP denote a change in poverty index P and assuming both income Y and poverty line z are measured in real terms (changes in the poverty line can also be accommodated). A change in poverty between period 0 and period T can be written as

$$\Delta P = P(Y_T; z) - P(Y_0; z) \quad (1)$$

By definition, the growth component is the change in poverty due to a change in the mean of Y while holding its distribution (characterized by the Lorenz curve) constant. The inequality or redistribution component is the change in poverty due to a change in the distribution of Y while holding its mean constant. Let $Y(L_i, \mu_j)$ be a hypothetical income distribution with Lorenz curve L_i and mean μ_j taken from different distributions, i.e., $i = 0$ or T, $j = 0$ or T and $i \neq j$. Let $P(L_i, \mu_j)$ represent the corresponding poverty index of $Y(L_i, \mu_j)$. The growth component of ΔP can be defined as

$$\text{growth component} = P(L_0, \mu_T) - P(Y_0; z) \quad (2)$$

or, alternatively as

$$\text{growth component} = P(Y_T; z) - P(L_T, \mu_0) \quad (2A)$$

Similarly, the redistribution component can either be defined as

$$\text{redistribution component} = P(L_T; \mu_0) - P(Y_0; z) \quad (3)$$

or

$$\text{redistribution component} = P(Y_T; z) - P(L_0, \mu_T) \quad (3A)$$

It is easy to see that different combinations of the alternative growth and redistribution components produce four distinct decompositions of ΔP. If equations (2) and (3) are used, period 0 is considered as the reference period. By contrast, choosing equations (2A) and (3A) implies that the reference period is period T. The results from the two decompositions need not agree, and both are inexact in the sense the growth and redistribution components do add up to ΔP. If the combination (2A)-(3) or (2)-(3A) is used, the decomposition will be exact since

$$P(Y_T; z) - P(Y_0; z) = [\text{redistribution component}] + [\text{growth component}]$$

$$= [P(Y_T; z) - P(L_0, \mu_T)] + [P(L_0, \mu_T) - P(Y_0; z)] \quad (4)$$

$$= [P(L_T; \mu_0) - P(Y_0; z)] + [P(Y_T; z) - P(L_T; \mu_0)] \quad (5)$$

However, the redistribution and growth components are measured against different reference periods in equations (4) and (5). Again, the two decompositions will produce different results in general and are thus equally arbitrary or equally justified.

A solution to the reference point problem is to take the average of equations (4) and (5) to arrive at

$$\Delta P = 0.5\{[P(Y_T; z) - P(L_0, \mu_T)] + [P(L_T; \mu_0) - P(Y_0; z)]\}$$

$$+ 0.5\{[P(L_0; \mu_T) - P(Y_0; z)] + [P(Y_T; z) - P(L_T; \mu_0)]\} \quad (6)$$

As it turns out, the decomposition in equation (6) is not an arithmetic gimmick; theoretical justifications can be found in the cooperative game theory (Shorrocks 1999; Kolenikov and Shorrocks 2005). Apart from notational difference, equation (6) is identical to what Shorrocks (1999) derived using Shapley value. Thus, we can decompose poverty differences into a growth component G and an inequality component I as

$$G = 0.5\{[P(L_0, \mu_T) - P(Y_0; z)] + [P(Y_T; z) - P(L_T, \mu_0)]\} \quad (7)$$

$$I = 0.5\{[P(Y_T; z) - P(L_0, \mu_T)] + [P(L_T, \mu_0) - P(Y_0; z)]\} \quad (8)$$

The decomposition is symmetric as well as exact.

How can the poverty indices $P(L_0, \mu_T)$ and $P(L_T, \mu_0)$ of the hypothetical distributions be obtained? The method used in previous studies is to derive the functional form of the poverty index as a function of the mean and parameters governing the shape of the Lorenz curve or the distribution. The parameters are then estimated econometrically for both periods 0 and T. Plugging into the derived formula the parameter estimates for period 0 and mean income of period T gives $P(L_0, \mu_T)$. $P(L_T, \mu_0)$ can be obtained similarly. Implementing this method requires *a priori* specification of the parametric form of either the Lorenz curve or the probability density function of relative income. Both the specification and the estimation of parametric models can give rise to errors biasing the results, a price one is forced to pay when faced with grouped data. If unit-record micro-data are available, which is the case of this study, a simpler solution exists. To leave the Lorenz curve of an income distribution intact but give it a new mean, one can simply scale every observation, that is, $Y(L_T, \mu_0) = Y_T \times (\mu_0/\mu_T)$ and $Y(L_0; \mu_T) = Y_0 \times (\mu_T/\mu_0)$.

Even with unit-record data, however, making poverty comparison is still subject to a host of uncertainties, many of which carry over to the decomposition of poverty changes. We consider three such uncertainties here: poverty measures, poverty lines and equivalence scales. The three most widely-used poverty measures are the head-count ratio P0, the poverty gap index P1 and the squared poverty gap index P2, all of which belong to the Foster-Greer-Thorbecke (FGT) (Foster et al. 1984) family of poverty measures

$$P_\alpha = \frac{1}{N}\sum_{Y_i \le z}\left(\frac{z - Y_i}{z}\right)^\alpha \tag{9}$$

The head-count ratio (α = 0) gives the proportion of the population whose incomes fall below the poverty line z. The poverty gap index (α = 1) measures the average income shortfall in meeting the living standards implied by the poverty line. The average shortfall is expressed as a percentage of the poverty line, and the income shortfall of the non-poor is deemed to be zero. The squared poverty gap index (α = 2) is the sum of the proportional poverty gaps weighted by themselves. It is well known that, depending on how inequalities among the poor have changed, the three measures may give out conflicting signals regarding changes in poverty. This in turn will lead to different assessment of the relative role played by income growth and redistribution in affecting poverty.[2]

The evaluation of changes in poverty may also be very sensitive to where the poverty line is drawn. For example, a poverty line set near a local mode of the income distribution might unduly exaggerate the growth component of poverty decomposition, thereby obscure changes occurring further down the distribution. In this paper, we consider four sets of national and international poverty lines. These include the US$1.08 and US$2.15 per capita per day poverty lines in 1993 PPP, the US$1 and US$2 per capita per day poverty lines in 1985 PPP, the urban and rural poverty lines proposed in Ravallion and Chen (2004) (1,200 yuan for urban areas, and 850 yuan for rural areas in 2002 prices), the official rural poverty line of 530 yuan in 1995 prices, and a 1995 urban poverty line obtained by adjusting the official rural line by the 2002 urban-to-rural poverty line ratio in Ravallion and Chen (2004). Another concern about the poverty line is whether a uniform nominal value of the poverty line is applicable to all regions under examination. The costs of living vary, sometimes widely, across Chinese provinces. Official CPIs published by the NBS, available at the provincial level, allow one to trace

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2 To take a simple example, suppose that an income distribution has changed from (1, 2, 3, 4) to (2, 2, 2, 4) and the poverty line is set at 2.5. The head-count ratio would indicate an increase in poverty (from 0.5 to 0.75) whereas the poverty gap index would show a decrease (from 0.2 to 0.15). Decomposing the change in head-count ratio according to equations (7) and (8) would put the contribution of growth at zero and the contribution of redistribution as poverty worsening (I > 0). The same decomposition applied to the change in the poverty gap index would give a negative redistribution component.

the changes in the costs of living within a province over time, but not the differences across provinces. Using official CPIs and price data for 1990, Brandt and Holz (2004) constructed several panels of provincial price levels for the latter purpose. One of these price deflators is adopted in this paper to convert poverty lines at the national level to provincial poverty lines or, equivalently, to convert nominal income figures to real incomes measured in national prices of the base year.[3]

Most existing studies about China's income poverty use per capita income as the indicator of individual welfare.[4] As is known, some important household consumption items like housing, utilities, transportation, etc., are fairly non-rivalry. The existence of scale economies due to such semi-public goods, along with the varying needs of households of different demographic compositions, means that the same amount of per capital income does not always denote the command of the same amount of real resources for individuals from different households. To account for such idiosyncrasies, we employ the constant-elasticity equivalence scale to normalize household sizes. More specifically, if n_i represents the number of people in household i, the normalized household size is given by $k_i = n_i^{\theta}$, where θ is alternatively set to 0, 0.8 and 0.5.[5] Given a poverty line defined in per capita income, it is clear that the larger the value of θ, the lower the level of poverty. Whether and how applying different equivalence scale will impact on the change in poverty and its decomposition is not immediately clear.

3 Poverty dynamics in the 1990s

The rural and urban household surveys administered by the NBS have long been the most important data source for studying income distribution in China. Nonetheless, the number of available alternative surveys has been on the rise. It is on two of these alternative datasets that the analysis in this paper is based. Our first data set, taken from Wan and Zhou (2005), comes from the rural household survey conducted by the Research Centre for Rural Economy (RCRE) of the Ministry of Agriculture of China. A

3 For rural areas, we use the deflator obtained by applying to a rural consumption basket rural CPIs adjusted for consumption of self-produced products. For urban areas, the deflator is obtained by applying official urban CPIs to a urban consumption basket. It is necessary to note that although Brandt and Holz (2004) used separate rural and urban baskets, they applied the same compositions to all provinces throughout 1984-2000. As a result, regional differences in and changes over time of consumption patterns are ignored. In addition, consumption baskets used for deriving CPIs are meant to be representative of the consumption pattern of the entire population, and hence may well differ from the consumption pattern of the poor.

4 In a study of urban residents in 12 cities, Gustafsson et al. (2004) found that the size and age composition of households have a modest impact on households' perception of minimum living expenditure.

5 $\theta = 1$ corresponds to the assumption that there exist no scale economies. $\theta = 0.5$ is the equivalence scale most frequently found in OECD countries. Note that although the one-parameter equivalence scale does not explicitly account for differences in household characteristics other than household size, Figini (1998) found that, for OECD countries, many two-parameter equivalence scales in common use are empirically similar (when measuring inequality) to the one-parameter equivalence scale with $\theta = 0.5$.

brief description of the history of the RCRE survey is available in Wan and Zhou (ibid.). We note here that the data set covers the period 1995-2002 and that the three provinces included in the data set, Guangdong, Hubei and Yunnan, constitute a relatively representative sample of the economic geography of contemporary China.

Our second data source is the China Health and Nutrition Survey, a joint project run by the Carolina Population Center at the University of North Carolina, the National Institute of Nutrition and Food Safety, and the Chinese Center for Disease Control and Prevention. Five rounds of CHNS were conducted in 1989, 1991, 1993, 1997 and 2000. Each round covers around 15,000 individuals from about 4,000 households spread over nine provinces. Though not primarily an income survey, the income-related part of the questionnaire was designed to enable imputing the values of incomes and subsidies received in kind, both of which are excluded in NBS surveys. The CHNS data also distinguish between urban and rural neighbourhoods.[6]

3.1 A decade of progress and reverse in the fight against poverty

As stated in the introduction section, one of our concerns in this paper is whether the slowdown in poverty reduction reported in some recent studies is a reliable assessment of poverty trend in China during the 1990s in the sense that it is robust to data from alternative sources, poverty measures, poverty lines and equivalence scales. Various poverty indices and their annual percentage changes have been calculated for the above three panels of income data, and are tabulated in Appendix Tables 1A, 1B and 1C.

Table 1A traces out the time profile of poverty of the RCRE panel. It can be seen that when per capita income is used as the indicator of living standards (θ = 1), the directions of year-to-year changes in poverty indices are quite consistent across the six poverty lines. More specifically, over a rather wide income range (the value of the highest poverty line is nearly four times that of the lowest poverty line), first- and second-order stochastic dominance can be found for most pairs of years while third-order dominance always obtains.[7] The percentage changes tend to be greater in absolute value, the lower the poverty line is, suggesting concentration of per capita income at the lower end of the income spectrum. Changes in higher order poverty measures tend to be greater than those in lower order measures.[8] This indicates that per capita income growth of households well below the poverty lines (i.e., the ultra poor) is usually positively correlated with the income growth of those around the poverty lines. As expected, allowing economies of scale within households (θ = 0.8, 0.5) reduces not only the values of poverty measures, but also the magnitudes of their changes. It doe not,

6 Readers interested in obtaining more information about the CHNS are referred to the website www.cpc.unc.edu/projects/china.

7 For the definitions of first-, second- and third-order stochastic dominance, see Ravallion (1992).

8 For instance, if the official poverty line is adopted, the head-count ratio declined by 10.3 per cent during 1996-97, the poverty gap index by 16.4 per cent and the squared poverty gap index by 24.6 per cent.

however, alter the picture qualitatively. In particular, over the entire period between 1995 and 2002 poverty is shown to have increased.

Turning now to Table 1B where rural poverty indices estimated from the CHNS data are presented, the first thing that strikes one is the fluctuations of poverty levels between 1988 and 1992. There does not seem to be any historical events during this period to justify such large swings within so short a period. Upon checking the household size series in the dataset, we found that the average size of rural households was 4.31 in 1988 and 4.18 in 1992, but drops to 2.94 in 1990. Similarly, the average size of urban households was 3.92 in 1988 and 3.68 in 1992, but 2.96 in 1990. This raises serious doubts about the reliability of the 1990 data, given the considerable overlaps between the samples of the three rounds. We have excluded the 1990 data from subsequent analysis, but decided to retain the calculated poverty indices in Tables 1B and 1C for reference purpose. Comparing Table 1B with Table 1A, it is easily seen that not only are the estimated poverty indices for the two overlapping years of the two datasets—1996 and 1999—at comparable levels, but most of the characteristics observed above of Table 1A also show up in Table 1B, including the consistency of the directions of poverty change across poverty lines, poverty measures and equivalence scales, and the tendency for the magnitude of poverty change to be negatively related to the value of the poverty line but positively related to the order of the poverty measure. Most importantly, poverty increased between 1996 and 1999, confirming the poverty trend identified in the RCRE dataset. Thanks to the success in bringing down poverty in the late 1980s and early half of the 1990s, however, the period of 1988-99 as a whole saw a reduction in poverty.

Table 1C shows the poverty levels and changes in the urban areas covered by the CHNS. The overall level of urban poverty is still way below that found in rural areas. However, all poverty indices exhibit a worrying trend of rapid increase, especially in the second half of the 1990s. This trend seems to have broke off temporarily between 1992 and 1996. Yet the evidence is inconclusive.

Putting the results from the three tables together, the message, not incompatible with findings in studies using NBS data, emerges: while much progress was made in the first half of the 1990s in the battle against poverty in rural areas, grounds were lost in the second half of the decade. In urban areas, poverty had been creeping up throughout the 1990s and possibly at an accelerated rate in the later years.

3.2 Impacts of growth and inequality

The fact that the lack of progress in poverty reduction occurred alongside rapid output growth suggests that the nature of output growth is such that either the labour share of total output has been shrinking, and/or the part of the income distribution below the poverty line has become longer and fatter. For the first part of this proposition, we do not possess sufficient data to compute the exact metric of labour income share for testing. Nonetheless, the growth rates of rural and urban per capita income and real GDP per capita plotted in Figure 1 are tale-telling. Except for one or two years, urban income growth was on average 3–4 percentage points lower than per capita GDP growth in the 1990s, rural income growth was even lower. The validity of the second part of the proposition turns partly on the assumptions about the poverty line and equivalence scale. Since we are not only interested in whether income distribution has become adverse for the poor but also the relative impact of changes in distribution vis-à-vis income growth, we now turn to decomposing poverty changes following the method described in equations (7) and (8) in Section 2. The results of applying this procedure are in Table 2A and Tables 2B and 2C in the Appendix.

In Table 2A, the welfare indicator is per capita income. The first panel presents results using the RCRE data. The signs and relative magnitudes of the growth and redistribution components are highly consistent across the three poverty indices. In most cases, the results also do no appear to be very sensitive to the choice of the poverty line. The exceptions are the 1998/99 and 2000/01 years where at higher poverty lines the redistribution component switches from poverty-increasing to poverty-decreasing. The growth component is mostly poverty-decreasing, but is usually outweighed by the effects of adverse changes in distribution. However negative income growth occurred in 1998 and 2001, whilst 1997 and 1998 saw ameliorative distributional changes. Pinning down the causes for these deviations from the general pattern is beyond the scope of this paper. But in view of the finding in Ravallion and Chen (2004) that lower inflation helps reduce poverty, our conjecture would be that rapid disinflation, or deflation in the case of 1998, in these years might have played a role.

The results in the second panel concerning the CHNS rural data also demonstrates sign consistency across poverty measures. In the two periods before 1996, poverty reduction was driven by income growth, but was also aided by distributional changes favouring the poor. During 1996-99, zero or negative income growth, compounded by adverse distributional changes reversed some of the progress made earlier. Whatever the forces responsible for the distributional changes in this period, their impact on income distribution was apparently large and came through quickly, so much so that the improvement achieved in the nine years before 1996 was completely undone. In 1999, the relative position of the poor on the income spectrum is already less favourable than that in 1988. In the third panel where the results are for the CHNS urban data, the urban poor are found to have suffered similar misfortunes as their rural counterparts in 1996-99. In the other years covered by the sample, overall income growth seems to have left the poor behind.

Figure 1: Growth rates (%) of real GDP per capita, rural and urban per capita income

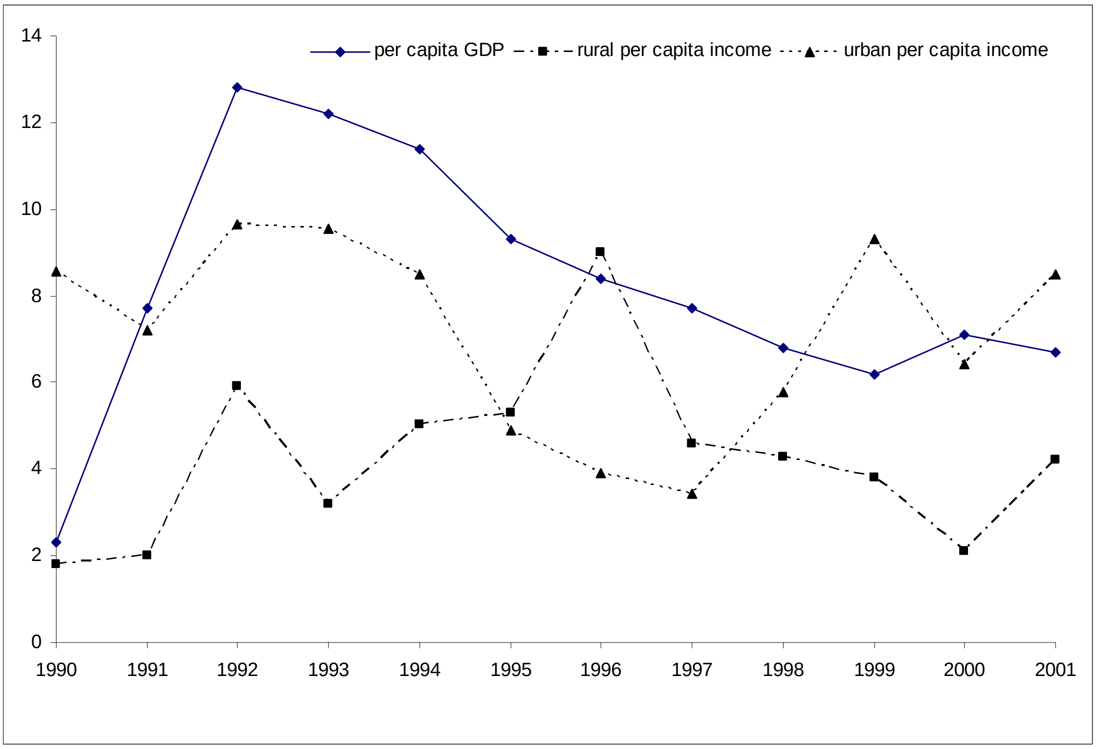

Table 2B and Table 2C in the Appendix present the results of applying the same decomposition procedure to income data adjusted by the two equivalence scales with $\theta = 0.8$ and $\theta = 0.5$ respectively. These two tables reveal qualitatively similar information to that in Table 2A. It appears, therefore, that the choice between these equivalence scales does not matter much to the decomposition results.

4 Summary

Correct assessment of poverty trend and understanding of the relative roles of income growth and redistribution in affecting poverty trend often matter more to the formulation of poverty reduction policy than does the estimation of cardinal poverty measures. In addition to being vulnerable to measurement errors, the latter also hinges crucially on the choice of poverty lines, poverty measures and equivalence scales. In principle, all these factors can also affect the evaluation of poverty trend and the results of poverty decomposition. How robust they are to these factors are not well studied empirically. Meanwhile, the most important data source for studying poverty in China—the NBS household survey—has been criticized for its exclusion of many non-monetary incomes and subsidies, the importance of which increased in the reform years. The sharp contrast posted by the rapid GDP growth in the 1990s and the slow progress in poverty reduction in the same period once again raised concern about the quality of the NBS data.

This paper examines poverty trend in China in the 1990s, employing two unit-record household survey datasets. One of the datasets, the CHNS data, has taken particular care to cover various incomes in kind received by households. The derived poverty changes are then decomposed into contributions due to income growth and to shifts in relative income distribution. Different poverty measures, poverty lines and equivalence scales are considered. The following results appear to be empirically robust: poverty reduction in both rural and urban China was hampered by rising inequality in the second half of the 1990s. In urban China, worsening income distribution had been ongoing throughout the decade, while in rural China it seems to be a 'late-1990s' phenomenon. In the second half of the decade, rural and urban households also experienced slow income growth, pointing to an enlarged gap between the growth of household income and the growth of aggregate output.

Admittedly, the datasets used in this study have limited coverage. This would diminish to certain extent the comparability of our results with those obtained from using more comprehensive surveys such as those conducted by the NBS. However, the NBS data are mostly available only in grouped format. Access to its unit-record data is strictly limited. It is our view that, in the absence of nation-wide observations, useful results can still be obtained from relatively selective surveys. Moreover, the possible sampling biases are less of a concern when changes in rather than the levels of poverty are the main subject of research. The biases will become even smaller if changes in poverty are decomposed, as is in this paper.

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Appendix

Table 1A Rural poverty levels and changes using RCRE data

		Levels of poverty measures								Percentage changes of poverty measures							
		1995	1996	1997	1998	1999	2000	2001	2002	95-96	96-97	97-98	98-99	99-00	00-01	01-02	95-02
										θ = 1							
P0	(1)	9.61	10.47	9.39	8.61	12.69	10.63	12.06	10.40	8.98	-10.30	-8.33	47.34	-16.22	13.48	-13.79	8.22
	(2)	16.11	17.88	17.58	16.66	19.08	16.55	17.93	19.71	10.99	-1.63	-5.27	14.55	-13.29	8.40	9.92	22.40
	(3)	18.21	20.22	19.33	18.27	20.75	17.38	19.11	20.47	11.01	-4.39	-5.50	13.60	-16.24	9.96	7.10	12.39
	(4)	19.49	23.14	21.42	20.26	23.52	20.11	21.05	22.94	18.69	-7.42	-5.41	16.08	-14.52	4.72	8.93	17.66
	(5)	48.85	50.46	50.20	50.77	50.93	50.86	47.27	46.01	3.31	-0.53	1.14	0.32	-0.12	-7.06	-2.68	-5.81
	(6)	53.21	54.55	53.82	55.31	54.53	54.50	51.94	50.96	2.52	-1.33	2.77	-1.42	-0.05	-4.70	-1.88	-4.23
P1	(1)	2.68	3.53	2.95	2.61	5.31	4.55	4.93	4.26	31.44	-16.43	-11.32	103.08	-14.22	8.23	-13.63	58.61
	(2)	6.26	7.25	6.55	6.11	9.01	7.80	8.56	8.22	15.72	-9.69	-6.70	47.52	-13.45	9.75	-3.97	31.22
	(3)	6.97	8.03	7.33	6.86	9.76	8.41	9.23	9.01	15.17	-8.72	-6.40	42.15	-13.75	9.64	-2.33	29.19
	(4)	7.82	9.03	8.26	7.76	10.66	9.15	10.01	9.95	15.48	-8.47	-6.07	37.39	-14.20	9.43	-0.61	27.29
	(5)	20.13	21.52	20.88	21.27	23.07	21.55	21.53	21.26	6.88	-2.95	1.86	8.44	-6.57	-0.08	-1.30	5.57
	(6)	22.49	23.89	23.28	23.70	25.33	23.94	23.69	23.36	6.27	-2.56	1.79	6.90	-5.51	-1.04	-1.37	3.90
P2	(1)	1.02	1.58	1.19	0.98	2.75	2.40	2.61	2.07	55.59	-24.59	-17.42	179.54	-12.94	8.79	-20.43	104.15
	(2)	3.16	3.91	3.35	3.04	5.50	4.73	5.17	4.63	23.76	-14.33	-9.16	80.53	-13.97	9.29	-10.45	46.40
	(3)	3.60	4.39	3.81	3.48	5.99	5.16	5.64	5.14	21.80	-13.18	-8.54	71.99	-13.89	9.36	-8.97	42.60
	(4)	4.13	4.97	4.37	4.02	6.58	5.66	6.20	5.74	20.15	-12.07	-7.97	63.77	-13.91	9.41	-7.34	38.98
	(5)	11.32	12.55	11.90	11.76	14.10	12.75	13.22	13.11	10.82	-5.19	-1.13	19.89	-9.56	3.69	-0.86	15.79
	(6)	12.79	14.05	13.40	13.34	15.59	14.23	14.61	14.47	9.78	-4.60	-0.42	16.84	-8.74	2.68	-0.98	13.06
										θ = 0.8							
P0	(1)	4.42	6.36	5.50	4.29	9.37	7.96	8.78	8.23	0.44	-0.13	-0.22	1.18	-0.15	0.10	-0.06	0.86
	(2)	10.26	11.34	10.49	9.89	14.36	12.12	13.29	12.94	0.11	-0.08	-0.06	0.45	-0.16	0.10	-0.03	0.26
	(3)	10.91	11.79	11.53	10.65	14.96	12.62	13.71	13.62	0.08	-0.02	-0.08	0.40	-0.16	0.09	-0.01	0.25
	(4)	12.17	12.74	12.58	12.37	15.84	14.01	14.89	14.62	0.05	-0.01	-0.02	0.28	-0.12	0.06	-0.02	0.20
	(5)	29.45	31.66	30.97	33.44	32.66	31.20	31.67	30.98	0.08	-0.02	0.08	-0.02	-0.04	0.02	-0.02	0.05
	(6)	34.52	35.93	35.38	38.22	36.54	35.18	34.64	35.23	0.04	-0.02	0.08	-0.04	-0.04	-0.02	0.02	0.02
P1	(1)	0.88	1.64	1.20	0.82	3.01	2.65	2.86	2.33	0.85	-0.27	-0.31	2.65	-0.12	0.08	-0.19	1.63
	(2)	3.47	4.37	3.70	3.34	6.26	5.34	5.79	5.19	0.26	-0.15	-0.10	0.87	-0.15	0.08	-0.10	0.49
	(3)	3.95	4.85	4.18	3.80	6.81	5.81	6.31	5.72	0.23	-0.14	-0.09	0.79	-0.15	0.09	-0.09	0.45
	(4)	4.50	5.38	4.75	4.36	7.42	6.34	6.88	6.32	0.20	-0.12	-0.08	0.70	-0.15	0.09	-0.08	0.40
	(5)	11.76	13.14	12.60	12.22	14.73	13.11	13.72	13.81	0.12	-0.04	-0.03	0.21	-0.11	0.05	0.01	0.17
	(6)	13.27	14.78	14.19	14.02	16.22	14.64	15.21	15.32	0.11	-0.04	-0.01	0.16	-0.10	0.04	0.01	0.15
P2	(1)	0.26	0.59	0.32	0.23	1.31	1.16	1.29	0.85	1.24	-0.45	-0.29	4.73	-0.11	0.11	-0.34	2.24
	(2)	1.44	2.09	1.65	1.38	3.40	2.94	3.19	2.68	0.45	-0.21	-0.16	1.46	-0.13	0.09	-0.16	0.86
	(3)	1.73	2.41	1.94	1.66	3.80	3.28	3.56	3.03	0.39	-0.19	-0.14	1.29	-0.14	0.09	-0.15	0.75
	(4)	2.08	2.79	2.29	2.00	4.26	3.67	3.98	3.45	0.34	-0.18	-0.13	1.13	-0.14	0.09	-0.13	0.66
	(5)	6.51	7.53	6.98	6.59	9.22	8.04	8.62	8.37	0.16	-0.07	-0.06	0.40	-0.13	0.07	-0.03	0.29
	(6)	7.39	8.47	7.93	7.55	10.14	8.90	9.48	9.29	0.15	-0.06	-0.05	0.34	-0.12	0.07	-0.02	0.26
										θ = 0.5							
P0	(1)	0.83	1.82	0.68	0.33	3.58	3.40	2.91	2.44	1.20	-0.63	-0.51	9.77	-0.05	-0.14	-0.16	1.94
	(2)	3.31	5.41	5.17	3.70	8.98	7.57	7.97	7.85	0.63	-0.05	-0.28	1.42	-0.16	0.05	-0.01	1.37
	(3)	4.54	6.16	5.71	4.60	9.81	8.17	9.44	8.58	0.36	-0.07	-0.20	1.13	-0.17	0.16	-0.09	0.89
	(4)	5.39	7.23	6.57	5.62	10.29	9.29	10.07	9.29	0.34	-0.09	-0.15	0.83	-0.10	0.08	-0.08	0.72
	(5)	14.43	15.73	15.34	15.84	17.36	16.00	17.28	16.65	0.09	-0.02	0.03	0.10	-0.08	0.08	-0.04	0.15
	(6)	16.16	17.93	17.85	17.12	19.08	17.64	18.41	18.79	0.11	0.00	-0.04	0.11	-0.08	0.04	0.02	0.16
P1	(1)	0.10	0.28	0.12	0.07	0.79	0.66	0.88	0.37	1.70	-0.59	-0.41	10.34	-0.16	0.32	-0.58	2.50
	(2)	0.82	1.51	0.98	0.71	2.80	2.46	2.61	2.14	0.85	-0.35	-0.27	2.94	-0.12	0.06	-0.18	1.62
	(3)	1.02	1.80	1.27	0.94	3.24	2.82	3.01	2.55	0.76	-0.29	-0.26	2.45	-0.13	0.07	-0.15	1.49
	(4)	1.31	2.15	1.62	1.24	3.74	3.24	3.50	3.02	0.64	-0.25	-0.23	2.01	-0.13	0.08	-0.14	1.30
	(5)	5.46	6.45	5.89	5.56	8.57	7.42	7.98	7.54	0.18	-0.09	-0.06	0.54	-0.13	0.08	-0.06	0.38
	(6)	6.22	7.24	6.67	6.41	9.31	8.15	8.75	8.32	0.16	-0.08	-0.04	0.45	-0.12	0.07	-0.05	0.34
P2	(1)	0.02	0.08	0.03	0.03	0.23	0.19	0.33	0.07	2.38	-0.56	-0.16	6.91	-0.18	0.75	-0.78	2.21
	(2)	0.28	0.56	0.29	0.21	1.19	1.04	1.17	0.77	1.02	-0.48	-0.27	4.63	-0.13	0.13	-0.34	1.81
	(3)	0.36	0.70	0.40	0.29	1.42	1.24	1.38	0.98	0.95	-0.43	-0.27	3.92	-0.13	0.11	-0.29	1.73
	(4)	0.47	0.88	0.54	0.40	1.71	1.49	1.64	1.23	0.86	-0.38	-0.26	3.27	-0.13	0.10	-0.25	1.61
	(5)	2.68	3.49	2.97	2.64	5.11	4.42	4.77	4.31	0.30	-0.15	-0.11	0.93	-0.13	0.08	-0.10	0.61
	(6)	3.15	3.99	3.45	3.14	5.67	4.92	5.30	4.84	0.27	-0.13	-0.09	0.81	-0.13	0.08	-0.09	0.54

Notes: (1): the official rural poverty line of 530 yuan in 1995 prices. (2): 850 yuan in 2002 prices, equivalent to 833.85 yuan in 1995 rural prices. (3): US$1.08 per day in 1993 PPP, equivalent to 892.85 yuan in 1995 rural prices. (4): US$1 per day in 1985 PPP, equivalent to 1035.50 yuan in 1995 rural prices. (5): US$2.15 per day in 1993 PPP, equivalent to 1777.40 yuan in 1995 rural prices. (6): US$2 per day in 1985 PP, equivalent to 2071.10 yuan in 1995 rural prices.

Table 1B Rural poverty levels and changes using CHNS data

		Levels of poverty measures					Percentage changes of poverty measures					
		1988	1990	1992	1996	1999	88-90	90-92	88-92	92-96	96-99	88-99
							θ = 1					
P0	(1)	14.81	1.59	7.26	7.44	10.86	-89.26	356.71	-103.94	2.40	46.07	-26.66
	(2)	27.71	6.21	17.82	15.11	20.35	-77.60	187.08	-55.51	-15.19	34.65	-26.57
	(3)	30.21	7.15	19.80	16.97	22.22	-76.34	176.92	-52.62	-14.27	30.93	-26.45
	(4)	35.06	9.85	25.10	21.79	26.41	-71.91	154.79	-39.70	-13.19	21.19	-24.69
	(5)	59.39	29.26	49.33	43.94	45.74	-50.74	68.59	-20.41	-10.91	4.10	-22.98
	(6)	66.30	36.29	56.60	50.79	52.84	-45.26	55.94	-17.14	-10.26	4.04	-20.29
P1	(1)	5.68	0.40	2.77	2.42	4.40	-92.90	586.49	-105.20	-12.44	81.40	-22.59
	(2)	11.36	1.55	6.22	5.56	8.39	-86.37	301.80	-82.61	-10.61	50.88	-26.14
	(3)	12.52	1.88	7.04	6.25	9.25	-84.99	274.77	-77.80	-11.30	48.03	-26.15
	(4)	15.29	2.79	9.12	8.06	11.32	-81.75	226.78	-67.68	-11.60	40.49	-25.93
	(5)	28.80	9.84	20.82	18.51	21.86	-65.84	111.66	-38.32	-11.10	18.08	-24.11
	(6)	33.65	13.09	25.36	22.62	25.73	-61.10	93.73	-32.69	-10.82	13.76	-23.54
P2	(1)	3.02	0.17	1.64	1.18	2.46	-94.32	857.32	-83.97	-28.27	108.88	-18.55
	(2)	6.40	0.62	3.34	2.89	4.85	-90.34	440.30	-91.51	-13.35	67.79	-24.08
	(3)	7.10	0.76	3.76	3.28	5.36	-89.33	396.03	-88.93	-12.81	63.55	-24.53
	(4)	8.86	1.16	4.87	4.27	6.63	-86.88	319.18	-81.89	-12.27	55.16	-25.16
	(5)	18.06	4.60	11.88	10.49	13.57	-74.54	158.52	-51.94	-11.76	29.40	-24.85
	(6)	21.55	6.42	14.86	13.16	16.28	-70.23	131.56	-45.05	-11.43	23.70	-24.47
							θ = 0.8					
P0	(1)	9.53	0.83	4.28	4.05	7.40	-91.28	415.04	-122.74	-5.33	82.74	-22.33
	(2)	18.21	2.80	9.64	9.49	13.44	-84.62	244.20	-88.89	-1.59	41.72	-26.17
	(3)	20.27	3.57	11.27	10.86	14.99	-82.37	215.16	-79.96	-3.64	38.06	-26.08
	(4)	24.62	6.05	14.58	13.16	18.45	-75.42	140.88	-68.93	-9.71	40.20	-25.07
	(5)	44.91	18.42	34.57	30.56	34.72	-58.99	87.64	-29.93	-11.60	13.62	-22.70
	(6)	51.00	25.73	40.25	37.79	40.39	-49.56	56.48	-26.71	-6.13	6.90	-20.81
P1	(1)	3.36	0.22	1.80	1.32	2.89	-93.47	717.14	-87.32	-26.72	119.47	-14.14
	(2)	7.05	0.75	3.62	3.26	5.59	-89.42	385.83	-94.51	-10.09	71.71	-20.63
	(3)	7.85	0.91	4.07	3.72	6.16	-88.41	348.15	-92.57	-8.79	65.79	-21.47
	(4)	9.84	1.42	5.27	4.83	7.61	-85.53	270.45	-86.54	-8.34	57.48	-22.62
	(5)	20.29	5.70	13.42	11.94	15.67	-71.93	135.62	-51.17	-10.99	31.20	-22.75
	(6)	24.23	8.05	16.79	15.08	18.76	-66.76	108.45	-44.33	-10.14	24.38	-22.57
P2	(1)	1.69	0.11	1.13	0.59	1.53	-93.52	937.99	-48.60	-47.80	157.91	-9.39
	(2)	3.84	0.33	2.07	1.60	3.19	-91.47	532.06	-85.38	-22.73	98.90	-17.10
	(3)	4.30	0.39	2.30	1.84	3.53	-90.90	487.26	-87.14	-19.87	91.56	-17.98
	(4)	5.47	0.59	2.91	2.47	4.40	-89.27	395.52	-88.04	-15.14	77.93	-19.71
	(5)	12.13	2.54	7.27	6.48	9.41	-79.04	185.96	-66.81	-10.85	45.09	-22.46
	(6)	14.82	3.68	9.35	8.34	11.47	-75.14	153.86	-58.46	-10.78	37.54	-22.57
							θ = 0.5					
P0	(1)	4.38	0.41	2.16	1.69	3.94	-90.68	430.13	-102.38	-21.69	132.71	-9.95
	(2)	9.22	1.29	4.59	3.94	7.93	-85.96	254.61	-100.81	-14.18	101.27	-13.98
	(3)	10.27	1.60	5.18	4.65	8.44	-84.37	222.90	-98.17	-10.25	81.63	-17.74
	(4)	12.65	1.90	6.48	6.28	10.38	-84.99	241.11	-95.27	-3.02	65.09	-18.01
	(5)	26.63	8.88	17.35	15.57	21.72	-66.66	95.38	-53.50	-10.24	39.45	-18.46
	(6)	31.88	12.48	21.63	19.84	25.66	-60.85	73.25	-47.42	-8.26	29.34	-19.51
P1	(1)	1.37	0.14	1.08	0.40	1.39	-89.95	684.57	-26.76	-62.55	243.41	1.46
	(2)	3.32	0.35	1.88	1.34	3.08	-89.40	434.85	-76.36	-28.93	130.41	-7.15
	(3)	3.75	0.42	2.08	1.54	3.42	-88.72	392.96	-79.86	-26.33	122.68	-8.78
	(4)	4.83	0.60	2.59	2.07	4.24	-87.58	332.19	-86.36	-20.09	104.80	-12.18
	(5)	10.96	2.44	6.24	5.83	9.07	-77.76	156.04	-75.64	-6.56	55.58	-17.23
	(6)	13.58	3.59	8.13	7.51	11.15	-73.59	126.53	-67.18	-7.53	48.35	-17.94
P2	(1)	0.62	0.08	0.73	0.16	0.69	-87.46	844.33	15.52	-77.53	320.42	11.81
	(2)	1.67	0.17	1.18	0.60	1.63	-89.67	580.60	-42.22	-49.41	172.83	-2.94
	(3)	1.91	0.20	1.28	0.70	1.83	-89.53	539.37	-49.37	-45.09	160.78	-4.14
	(4)	2.53	0.28	1.55	0.99	2.35	-88.88	453.24	-62.59	-36.55	138.22	-7.04
	(5)	6.19	1.07	3.45	3.00	5.28	-82.80	224.29	-79.27	-13.08	75.98	-14.68
	(6)	7.80	1.58	4.44	3.97	6.56	-79.79	181.71	-75.67	-10.60	65.29	-15.89

Notes: (1): the official rural poverty line of 530 yuan in 1995 prices. (2): 850 yuan in 2002 prices, equivalent to 833.85 yuan in 1995 rural prices. (3): US$1.08 per day in 1993 PPP, equivalent to 892.85 yuan in 1995 rural prices. (4): US$1 per day in 1985 PPP, equivalent to 1035.50 yuan in 1995 rural prices. (5): US$2.15 per day in 1993 PPP, equivalent to 1777.40 yuan in 1995 rural prices. (6): US$2 per day in 1985 PP, equivalent to 2071.10 yuan in 1995 rural prices.

Table 1C Urban poverty levels and changes using CHNS data

		Levels of poverty measures					Percentage changes of poverty measures					
		1988	1990	1992	1996	1999	88-90	90-92	88-92	92-96	96-99	88-99
							θ = 1					
P0	(1)	1.64	1.56	3.83	4.01	5.61	-4.73	144.55	57.08	4.71	40.02	241.61
	(2)	3.02	1.85	4.82	4.48	7.22	-38.79	160.73	37.34	-7.12	61.22	138.97
	(3)	5.39	3.19	9.06	6.10	10.55	-40.92	184.22	40.45	-32.60	72.83	95.61
	(4)	5.64	3.30	9.57	6.17	10.95	-41.45	189.88	41.08	-35.45	77.36	94.30
	(5)	16.10	9.08	18.09	12.89	18.22	-43.63	99.30	10.99	-28.72	41.30	13.15
	(6)	30.80	15.96	28.70	19.92	26.96	-48.18	79.82	-7.32	-30.61	35.36	-12.48
P1	(1)	0.46	0.67	1.05	1.17	2.45	46.15	55.18	55.91	11.39	109.89	430.24
	(2)	0.74	0.83	1.56	1.62	3.07	12.58	87.23	52.56	3.65	89.55	314.15
	(3)	1.52	1.23	2.73	2.45	4.45	-19.09	122.92	44.56	-10.42	81.88	193.84
	(4)	1.61	1.27	2.89	2.53	4.60	-20.89	126.66	44.23	-12.24	81.47	185.58
	(5)	4.51	2.87	6.42	4.76	7.94	-36.48	123.69	29.63	-25.83	66.86	75.86
	(6)	8.94	5.00	10.42	7.47	11.24	-44.11	108.44	14.16	-28.26	50.38	25.68
P2	(1)	0.18	0.38	0.46	0.47	1.48	116.31	22.08	62.13	1.04	217.20	746.32
	(2)	0.29	0.49	0.71	0.74	1.85	65.62	44.88	58.32	4.36	151.03	528.64
	(3)	0.63	0.71	1.28	1.27	2.63	12.32	81.39	50.92	-1.00	107.18	317.84
	(4)	0.67	0.73	1.35	1.33	2.72	8.83	84.83	50.29	-2.00	104.95	304.01
	(5)	1.97	1.46	3.21	2.59	4.73	-25.91	120.31	38.74	-19.27	82.38	140.35
	(6)	3.92	2.47	5.36	4.05	6.74	-37.05	117.48	26.96	-24.50	66.51	72.11
							θ = 0.8					
P0	(1)	1.01	1.25	2.12	2.33	4.22	23.48	69.14	52.12	10.20	81.05	316.69
	(2)	1.38	1.59	2.35	3.25	4.78	15.55	47.31	41.25	38.58	47.07	246.91
	(3)	2.37	2.28	4.67	4.36	6.71	-4.06	105.11	49.18	-6.60	53.79	182.65
	(4)	2.84	2.28	4.85	4.57	7.17	-19.82	112.96	41.43	-5.67	56.92	152.76
	(5)	7.44	5.06	11.33	7.66	13.17	-31.95	123.68	34.31	-32.38	71.87	76.92
	(6)	14.70	8.88	16.96	12.92	18.44	-39.62	91.12	13.35	-23.87	42.78	25.44
P1	(1)	0.19	0.50	0.56	0.51	1.77	160.56	10.26	65.19	-7.67	243.46	811.07
	(2)	0.35	0.64	0.82	0.89	2.18	86.85	27.93	58.17	7.50	145.49	530.85
	(3)	0.69	0.93	1.47	1.61	3.01	35.42	57.37	53.08	9.51	87.57	337.75
	(4)	0.73	0.96	1.55	1.67	3.10	31.60	60.43	52.64	8.23	85.41	323.69
	(5)	2.11	1.77	3.68	3.10	5.51	-16.20	107.76	42.56	-15.91	78.02	160.63
	(6)	4.16	3.03	6.04	4.70	7.93	-27.27	99.76	31.17	-22.16	68.50	90.56
P2	(1)	0.07	0.28	0.26	0.19	1.07	329.76	-9.59	74.26	-27.45	473.85	1517.63
	(2)	0.12	0.37	0.38	0.33	1.33	195.78	4.27	67.58	-12.75	297.45	969.52
	(3)	0.28	0.54	0.69	0.72	1.85	89.55	27.62	58.66	3.97	157.91	548.70
	(4)	0.30	0.56	0.73	0.76	1.90	83.49	30.09	58.11	4.44	150.74	525.11
	(5)	0.92	1.00	1.75	1.68	3.26	9.49	74.58	47.68	-4.13	94.36	256.17
	(6)	1.83	1.58	3.04	2.59	4.71	-13.67	92.89	39.95	-15.04	81.89	157.34
							θ = 0.5					
P0	(1)	0.22	0.71	0.74	0.47	2.70	218.90	4.02	69.85	-36.29	473.77	1112.62
	(2)	0.41	0.94	1.10	1.11	2.82	131.51	16.84	63.03	0.98	154.25	594.49
	(3)	1.01	1.42	2.14	2.64	4.07	40.31	50.64	52.69	23.18	54.11	301.25
	(4)	1.03	1.56	2.14	2.78	4.18	51.31	36.95	51.74	29.78	50.29	304.19
	(5)	2.43	2.82	4.85	4.64	7.33	15.76	72.09	49.80	-4.21	57.90	201.31
	(6)	5.11	4.24	8.16	6.79	11.02	-17.04	92.58	37.41	-16.85	62.34	115.66
P1	(1)	0.05	0.36	0.29	0.14	1.17	560.04	-17.61	81.61	-51.46	725.16	2077.83
	(2)	0.10	0.44	0.40	0.22	1.42	339.70	-9.14	74.97	-43.38	534.19	1334.49
	(3)	0.24	0.62	0.64	0.58	1.87	152.89	4.29	62.08	-9.96	223.28	667.65
	(4)	0.26	0.64	0.68	0.63	1.92	143.04	6.47	61.35	-7.36	206.08	633.71
	(5)	0.73	1.16	1.49	1.69	3.15	59.14	28.31	51.02	13.63	85.80	331.08
	(6)	1.44	1.71	2.64	2.62	4.56	18.73	53.97	45.30	-0.63	74.29	216.62
P2	(1)	0.02	0.20	0.15	0.06	0.67	875.49	-27.52	85.86	-62.13	1109.42	3138.30
	(2)	0.04	0.26	0.20	0.09	0.85	606.02	-21.43	81.97	-55.33	842.65	2235.94
	(3)	0.09	0.37	0.33	0.21	1.17	304.56	-10.63	72.34	-35.27	451.82	1191.39
	(4)	0.10	0.38	0.34	0.23	1.21	285.82	-9.39	71.39	-32.90	422.96	1126.68
	(5)	0.32	0.67	0.75	0.77	1.96	109.74	11.30	57.16	3.24	153.41	510.73
	(6)	0.63	0.99	1.29	1.35	2.74	57.20	30.64	51.31	4.18	103.82	336.07

Notes: (1): 689.69 yuan in 1995 urban prices. (2): US$1.08 per day in 1993 PPP,equivalent to 816.39 yuan in 1995 urban prices. (3): US$1 per day in 1985 PPP, equivalent to 1059.6 yuan in 1995 urban prices. (4): 1200 yuan in 2002 prices, equivalent to 1085.1 yuan in 1995 urban prices. (5): US$2.15 per day in 1993 PPP, equivalent to 1625.2 yuan in 1995 urban prices. (6): US$2 per day in 1985 PPP, equivalent to 2119.2 yuan in 1995 urban prices.

Table 2A Decomposition and growth elasticity of poverty measures (θ = 1)

		P0						P1						P2					
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
	RCRE rural data																		
95-96	*G*	-0.60	-1.31	-2.10	-1.06	-3.05	-2.94	-0.41	-0.64	-0.71	-0.76	-1.75	-1.82	-0.22	-0.39	-0.42	-0.47	-1.07	-1.17
	I	1.46	3.08	4.11	4.71	4.67	4.28	1.25	1.62	1.77	1.97	3.13	3.23	0.78	1.14	1.21	1.30	2.29	2.42
96-97	*G*	-0.29	-0.49	-0.51	-0.57	-1.28	-1.37	-0.16	-0.26	-0.29	-0.32	-0.70	-0.73	-0.09	-0.16	-0.17	-0.19	-0.43	-0.47
	I	-0.79	0.20	-0.38	-1.15	1.01	0.65	-0.42	-0.44	-0.41	-0.44	0.06	0.12	-0.30	-0.41	-0.41	-0.41	-0.22	-0.18
97-98	*G*	0.25	0.97	0.53	0.72	1.64	1.88	0.21	0.36	0.39	0.43	0.99	1.03	0.11	0.21	0.23	0.26	0.62	0.68
	I	-1.03	-1.90	-1.59	-1.88	-1.07	-0.39	-0.54	-0.80	-0.86	-0.93	-0.60	-0.61	-0.32	-0.52	-0.56	-0.60	-0.75	-0.73
98-99	*G*	-0.10	-0.54	-0.60	-0.35	-0.46	-0.66	-0.10	-0.15	-0.16	-0.18	-0.41	-0.43	-0.06	-0.09	-0.10	-0.11	-0.26	-0.29
	I	4.18	2.97	3.08	3.60	0.62	-0.13	2.79	3.05	3.06	3.08	2.21	2.07	1.83	2.55	2.61	2.67	2.60	2.53
99-00	*G*	-1.06	-2.85	-4.12	-4.77	-5.46	-5.63	-0.86	-1.21	-1.36	-1.61	-3.75	-3.89	-0.61	-0.86	-0.92	-1.00	-2.33	-2.55
	I	-1.00	0.31	0.75	1.36	5.40	5.61	0.11	0.00	0.02	0.10	2.23	2.50	0.26	0.10	0.08	0.08	0.99	1.19
00-01	*G*	0.39	0.45	0.76	0.85	1.65	1.22	0.20	0.28	0.30	0.34	0.85	0.90	0.14	0.20	0.21	0.23	0.53	0.58
	I	1.04	0.94	0.97	0.10	-5.24	-3.78	0.17	0.48	0.51	0.52	-0.86	-1.15	0.07	0.24	0.27	0.31	-0.06	-0.20
01-02	*G*	-4.60	-6.31	-8.12	-8.44	-14.48	-14.54	-2.18	-3.32	-3.56	-3.88	-7.91	-8.41	-1.41	-2.24	-2.39	-2.58	-5.09	-5.54
	I	2.94	8.09	9.47	10.32	13.22	13.56	1.51	2.98	3.35	3.82	7.63	8.08	0.88	1.70	1.89	2.12	4.97	5.40
95-02	*G*	-8.36	-11.03	-12.13	-12.65	-22.98	-22.82	-3.19	-5.34	-5.75	-6.20	-12.26	-13.07	-1.79	-3.33	-3.61	-3.94	-7.93	-8.63
	I	9.15	14.64	14.39	16.09	20.14	20.57	4.76	7.29	7.78	8.33	13.38	13.95	2.85	4.80	5.15	5.55	9.71	10.30
	CHNS rural data																		
88-92	*G*	-5.21	-9.24	-10.05	-10.30	-13.34	-13.18	-1.96	-3.96	-4.34	-5.17	-8.25	-9.00	-1.05	-2.24	-2.48	-3.07	-5.63	-6.43
	I	-2.34	-0.65	-0.36	0.33	3.28	3.48	-0.96	-1.18	-1.14	-1.00	0.27	0.71	-0.33	-0.82	-0.86	-0.92	-0.54	-0.26
92-96	*G*	-0.86	-2.22	-2.14	-2.88	-3.66	-4.07	-0.34	-0.75	-0.84	-1.05	-1.93	-2.15	-0.17	-0.39	-0.45	-0.57	-1.21	-1.43
	I	1.04	-0.49	-0.69	-0.43	-1.73	-1.74	-0.01	0.09	0.04	-0.01	-0.38	-0.60	-0.29	-0.05	-0.04	-0.02	-0.19	-0.27
96-99	*G*	0.58	1.09	1.02	1.09	1.64	2.27	0.23	0.43	0.48	0.58	0.99	1.11	0.13	0.25	0.27	0.34	0.65	0.76
	I	2.85	4.15	4.23	3.53	0.16	-0.22	1.74	2.40	2.52	2.69	2.36	2.01	1.16	1.71	1.81	2.02	2.43	2.36
88-99	*G*	-5.77	-9.30	-9.88	-10.63	-15.19	-15.40	-2.41	-4.38	-4.72	-5.48	-8.54	-9.51	-1.42	-2.65	-2.90	-3.47	-5.95	-6.77
	I	1.82	1.93	1.88	1.97	1.54	1.95	1.12	1.42	1.45	1.52	1.60	1.59	0.86	1.11	1.15	1.24	1.46	1.50
	CHNS urban data																		
88-92	*G*	-1.44	-2.89	-3.14	-3.33	-9.08	-13.77	-0.54	-0.76	-1.34	-1.38	-3.00	-5.01	-0.26	-0.36	-0.66	-0.69	-1.51	-2.55
	I	3.63	4.69	6.80	7.26	11.07	11.67	1.13	1.58	2.56	2.66	4.90	6.49	0.54	0.78	1.31	1.37	2.76	4.00
92-96	*G*	-0.71	-0.72	-1.96	-2.28	-3.96	-5.80	-0.34	-0.43	-0.64	-0.67	-1.40	-2.20	-0.18	-0.24	-0.36	-0.37	-0.75	-1.18
	I	0.89	0.38	-0.99	-1.11	-1.24	-2.99	0.46	0.49	0.35	0.32	-0.25	-0.75	0.19	0.27	0.34	0.34	0.13	-0.13
96-99	*G*	0.26	0.54	0.53	0.67	1.16	2.74	0.19	0.23	0.32	0.33	0.62	0.93	0.11	0.14	0.20	0.20	0.36	0.53
	I	1.35	2.20	3.92	4.11	4.17	4.30	1.09	1.22	1.68	1.73	2.56	2.83	0.90	0.97	1.16	1.19	1.78	2.16
88-99	*G*	-2.36	-3.20	-4.36	-4.77	-10.22	-15.57	-0.86	-1.15	-1.72	-1.78	-3.48	-5.73	-0.47	-0.62	-0.95	-0.99	-1.89	-3.02
	I	6.33	7.40	9.52	10.09	12.33	11.73	2.85	3.48	4.65	4.77	6.90	8.03	1.78	2.18	2.96	3.04	4.65	5.85

Table 2B Decomposition and growth elasticity of poverty measures (? = 0.8)

		P0						P1						P2					
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
		RCRE rural data																	
95-96	*G*	-0.61	-0.29	-0.60	-1.14	-2.97	-3.73	-0.23	-0.41	-0.42	-0.46	-1.11	-1.22	-0.10	-0.25	-0.27	-0.30	-0.65	-0.72
	I	2.56	1.37	1.48	1.71	5.18	5.13	0.99	1.31	1.31	1.34	2.49	2.73	0.42	0.90	0.96	1.01	1.67	1.81
96-97	*G*	-0.23	-0.30	-0.18	-0.41	-1.13	-0.61	-0.09	-0.14	-0.14	-0.15	-0.37	-0.42	-0.04	-0.09	-0.09	-0.10	-0.22	-0.25
	I	-0.62	-0.55	-0.08	0.24	0.43	0.06	-0.35	-0.53	-0.52	-0.48	-0.17	-0.17	-0.23	-0.35	-0.38	-0.39	-0.32	-0.30
97-98	*G*	0.28	0.37	0.38	0.65	2.36	1.91	0.13	0.22	0.24	0.26	0.65	0.74	0.05	0.13	0.14	0.16	0.37	0.42
	I	-1.50	-0.97	-1.25	-0.85	0.12	0.94	-0.50	-0.59	-0.62	-0.65	-1.03	-0.90	-0.14	-0.40	-0.42	-0.45	-0.76	-0.79
98-99	*G*	-0.08	-0.12	0.00	-0.15	-0.40	-0.19	-0.04	-0.05	-0.06	-0.06	-0.15	-0.17	-0.02	-0.04	-0.04	-0.04	-0.08	-0.09
	I	5.16	4.58	4.30	3.63	-0.39	-1.49	2.22	2.97	3.07	3.12	2.66	2.36	1.10	2.05	2.18	2.31	2.71	2.68
99-00	*G*	-1.82	-1.69	-1.67	-1.71	-5.97	-6.81	-0.74	-0.96	-1.00	-1.06	-2.40	-2.71	-0.41	-0.69	-0.72	-0.77	-1.41	-1.58
	I	0.40	-0.55	-0.67	-0.13	4.52	5.45	0.38	0.04	0.00	-0.02	0.78	1.13	0.27	0.23	0.20	0.17	0.23	0.34
00-01	*G*	0.42	0.39	0.35	0.48	1.69	1.60	0.19	0.25	0.25	0.27	0.63	0.70	0.11	0.17	0.18	0.20	0.36	0.40
	I	0.41	0.78	0.74	0.40	-1.22	-2.15	0.02	0.20	0.25	0.27	-0.01	-0.13	0.02	0.08	0.10	0.12	0.23	0.18
01-02	*G*	-3.17	-4.07	-4.70	-5.19	-12.36	-12.80	-1.62	-2.28	-2.42	-2.61	-5.10	-5.65	-0.91	-1.55	-1.65	-1.77	-3.24	-3.56
	I	2.62	3.72	4.61	4.91	11.67	13.40	1.08	1.67	1.83	2.05	5.18	5.76	0.47	1.03	1.12	1.24	3.00	3.36
95-02	*G*	-4.22	-7.22	-7.67	-8.08	-17.61	-18.95	-1.81	-3.41	-3.69	-4.00	-8.00	-8.75	-1.02	-1.99	-2.19	-2.42	-5.00	-5.50
	I	8.04	9.90	10.37	10.54	19.14	19.66	3.25	5.12	5.46	5.83	10.05	10.80	1.61	3.24	3.50	3.80	6.87	7.40
		CHNS rural data																	
88-92	*G*	-3.20	-6.37	-7.23	-8.51	-12.63	-13.43	-1.15	-2.37	-2.65	-3.37	-6.27	-7.27	-0.61	-1.31	-1.46	-1.86	-3.99	-4.73
	I	-2.05	-2.20	-1.78	-1.53	2.29	2.68	-0.42	-1.06	-1.12	-1.19	-0.59	-0.17	0.06	-0.46	-0.54	-0.70	-0.86	-0.73
92-96	*G*	-0.39	-0.92	-0.99	-1.52	-2.25	-2.74	-0.15	-0.36	-0.40	-0.50	-1.15	-1.33	-0.08	-0.19	-0.21	-0.27	-0.67	-0.82
	I	0.16	0.76	0.58	0.10	-1.76	0.27	-0.33	-0.01	0.04	0.06	-0.32	-0.37	-0.46	-0.29	-0.25	-0.17	-0.12	-0.19
96-99	*G*	0.28	0.82	0.76	1.24	1.71	2.33	0.17	0.34	0.37	0.46	0.91	1.07	0.10	0.20	0.22	0.27	0.56	0.68
	I	3.07	3.13	3.37	4.05	2.45	0.28	1.40	1.99	2.07	2.32	2.81	2.61	0.84	1.39	1.47	1.66	2.36	2.46
88-99	*G*	-3.66	-6.62	-7.06	-8.27	-11.34	-12.39	-1.47	-2.69	-2.97	-3.61	-6.16	-7.00	-0.85	-1.60	-1.76	-2.15	-4.09	-4.75
	I	1.53	1.86	1.77	2.10	1.15	1.78	0.99	1.24	1.28	1.38	1.55	1.53	0.69	0.94	0.99	1.07	1.37	1.41
		CHNS urban data																	
88-92	*G*	-0.80	-1.49	-2.04	-2.39	-3.93	-8.33	-0.26	-0.39	-0.63	-0.67	-1.54	-2.67	-0.12	-0.18	-0.32	-0.33	-0.80	-1.33
	I	1.90	2.45	4.34	4.40	7.81	10.60	0.62	0.87	1.41	1.48	3.11	4.55	0.31	0.43	0.72	0.75	1.63	2.55
92-96	*G*	-0.86	-0.50	-0.86	-0.83	-1.93	-3.27	-0.20	-0.26	-0.36	-0.37	-0.75	-1.15	-0.08	-0.13	-0.20	-0.21	-0.39	-0.62
	I	1.08	1.40	0.55	0.55	-1.73	-0.78	0.16	0.32	0.49	0.49	0.17	-0.19	0.01	0.08	0.23	0.24	0.32	0.16
96-99	*G*	0.58	0.59	0.38	0.45	1.05	1.71	0.17	0.20	0.26	0.26	0.47	0.72	0.08	0.11	0.16	0.16	0.28	0.42
	I	1.31	0.94	1.97	2.15	4.45	3.81	1.08	1.09	1.15	1.17	1.94	2.50	0.80	0.88	0.97	0.98	1.30	1.70
88-99	*G*	-0.98	-1.59	-2.52	-2.67	-4.83	-8.37	-0.43	-0.58	-0.94	-0.98	-1.87	-2.93	-0.26	-0.33	-0.51	-0.53	-1.04	-1.60
	I	4.19	4.99	6.85	7.01	10.56	12.11	2.00	2.41	3.26	3.35	5.27	6.69	1.26	1.53	2.07	2.12	3.38	4.47

Table 2C Decomposition and growth elasticity of poverty measures (θ = 0.5)

		P0						P1						P2					
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
		RCRE rural data																	
95-96	*G*	-0.25	-0.46	-0.99	-0.56	-1.21	-1.33	-0.06	-0.19	-0.23	-0.27	-0.54	-0.61	-0.02	-0.09	-0.10	-0.12	-0.34	-0.37
	I	1.24	2.56	2.61	2.40	2.52	3.09	0.24	0.89	1.00	1.11	1.53	1.63	0.07	0.37	0.44	0.53	1.15	1.21
96-97	*G*	-0.16	0.00	-0.09	-0.24	-0.49	-0.42	-0.01	-0.05	-0.06	-0.07	-0.12	-0.15	0.00	-0.02	-0.03	-0.03	-0.08	-0.09
	I	-0.98	-0.24	-0.36	-0.41	0.10	0.34	-0.15	-0.48	-0.47	-0.47	-0.43	-0.42	-0.04	-0.25	-0.27	-0.30	-0.45	-0.45
97-98	*G*	0.12	0.38	0.27	0.48	0.56	0.56	0.01	0.11	0.12	0.14	0.30	0.34	0.00	0.04	0.05	0.06	0.18	0.20
	I	-0.46	-1.85	-1.38	-1.43	-0.06	-1.28	-0.06	-0.38	-0.46	-0.52	-0.63	-0.60	-0.01	-0.12	-0.16	-0.20	-0.50	-0.52
98-99	*G*	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.00	0.00	0.01	0.01	0.01	0.01
	I	3.24	5.27	5.16	4.66	1.52	1.96	0.72	2.08	2.29	2.48	2.99	2.88	0.20	0.97	1.13	1.30	2.45	2.52
99-00	*G*	-1.10	-1.88	-1.63	-1.08	-1.77	-2.20	-0.38	-0.72	-0.79	-0.84	-1.20	-1.25	-0.14	-0.40	-0.44	-0.50	-0.86	-0.91
	I	0.93	0.47	-0.01	0.09	0.40	0.76	0.25	0.38	0.37	0.35	0.05	0.09	0.10	0.24	0.26	0.28	0.17	0.16
00-01	*G*	0.21	0.24	0.79	0.24	1.00	0.48	0.10	0.23	0.24	0.27	0.38	0.41	0.04	0.12	0.14	0.15	0.26	0.28
	I	-0.70	0.17	0.49	0.54	0.29	0.28	0.11	-0.08	-0.05	-0.01	0.18	0.19	0.10	0.01	0.00	0.00	0.08	0.10
01-02	*G*	-2.28	-3.02	-3.26	-3.26	-5.56	-5.16	-0.72	-1.52	-1.63	-1.75	-2.67	-2.88	-0.27	-0.81	-0.91	-1.02	-1.87	-2.00
	I	1.81	2.90	2.41	2.48	4.93	5.55	0.22	1.06	1.17	1.26	2.22	2.45	0.01	0.42	0.51	0.60	1.41	1.55
95-02	*G*	-2.85	-3.33	-3.62	-3.93	-7.73	-8.88	-0.82	-1.67	-1.78	-1.92	-3.94	-4.27	-0.31	-0.92	-1.02	-1.14	-2.51	-2.74
	I	4.46	7.87	7.67	7.83	9.95	11.52	1.09	2.99	3.31	3.63	6.02	6.37	0.36	1.42	1.64	1.90	4.13	4.44
		CHNS rural data																	
88-92	*G*	-1.62	-2.87	-3.20	-4.08	-8.53	-10.04	-0.53	-1.10	-1.23	-1.58	-3.60	-4.41	-0.26	-0.60	-0.68	-0.86	-2.04	-2.56
	I	-0.60	-1.76	-1.88	-2.10	-0.75	-0.21	0.24	-0.33	-0.43	-0.66	-1.12	-1.05	0.38	0.11	0.04	-0.11	-0.70	-0.80
92-96	*G*	-0.06	-0.32	-0.34	-0.43	-1.07	-1.17	-0.04	-0.10	-0.12	-0.15	-0.39	-0.49	-0.02	-0.06	-0.06	-0.08	-0.21	-0.27
	I	-0.41	-0.33	-0.19	0.24	-0.71	-0.62	-0.63	-0.44	-0.43	-0.37	-0.02	-0.12	-0.54	-0.53	-0.52	-0.49	-0.24	-0.20
96-99	*G*	0.31	0.42	0.51	0.77	1.76	1.94	0.11	0.23	0.25	0.31	0.67	0.81	0.06	0.13	0.14	0.18	0.39	0.49
	I	1.94	3.57	3.28	3.32	4.39	3.88	0.87	1.51	1.64	1.86	2.57	2.82	0.47	0.90	0.99	1.18	1.89	2.11
88-99	*G*	-1.93	-3.02	-3.38	-3.94	-7.20	-8.07	-0.69	-1.27	-1.40	-1.72	-3.42	-4.03	-0.35	-0.75	-0.83	-1.02	-2.09	-2.53
	I	1.49	1.73	1.55	1.66	2.28	1.85	0.71	1.03	1.07	1.14	1.54	1.59	0.42	0.71	0.75	0.84	1.18	1.29
		CHNS urban data																	
88-92	*G*	-0.27	-0.47	-0.54	-0.63	-1.63	-2.93	-0.08	-0.12	-0.23	-0.24	-0.60	-1.06	-0.04	-0.06	-0.11	-0.12	-0.29	-0.51
	I	0.79	1.16	1.67	1.74	4.05	5.98	0.32	0.42	0.63	0.66	1.37	2.26	0.17	0.23	0.35	0.36	0.72	1.17
92-96	*G*	-0.06	-0.21	-0.57	-0.53	-0.90	-1.13	-0.04	-0.08	-0.16	-0.17	-0.28	-0.43	-0.02	-0.03	-0.07	-0.07	-0.15	-0.24
	I	-0.21	0.22	1.07	1.16	0.70	-0.25	-0.12	-0.09	0.10	0.12	0.48	0.41	-0.07	-0.08	-0.05	-0.04	0.17	0.29
96-99	*G*	0.18	0.20	0.56	0.54	0.79	1.14	0.09	0.11	0.20	0.21	0.32	0.49	0.05	0.07	0.10	0.11	0.20	0.28
	I	2.05	1.51	0.86	0.86	1.90	3.09	0.94	1.08	1.09	1.08	1.13	1.45	0.56	0.69	0.86	0.87	0.99	1.11
88-99	*G*	-0.13	-0.61	-0.75	-0.76	-1.91	-3.55	-0.17	-0.20	-0.35	-0.36	-0.71	-1.17	-0.13	-0.14	-0.20	-0.21	-0.39	-0.61
	I	2.61	3.02	3.80	3.90	6.81	9.46	1.29	1.53	1.97	2.02	3.13	4.29	0.77	0.96	1.28	1.32	2.02	2.72