

# INEQUALITY AND POVERTY IN CHINA IN THE POST-REFORM PERIOD: AN OVERVIEW

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## **I. Introduction: The Background<sup>1</sup>**

This paper presents an overview of the evolution of inequality and poverty in China during the reform period which is usually dated to have begun in 1979, after the Third Plenum of the 11<sup>th</sup> Central Committee of the Chinese Communist Party in December 1978 started the irreversible process of dismantling the Maoist system. The findings of this paper are based on three household surveys that an international group of economists implemented in collaboration with the Economics Institute of the Chinese Academy of Social Sciences.<sup>2</sup> These surveys give estimates of income and a variety of related household characteristics for the years 1988, 1995 and 2002. Estimates of income from these surveys are the only ones, available for a large sample of individual households, which conform to standard international definitions. Income estimates from official surveys are available for highly aggregated groups and suffer from numerous omissions and inaccuracies.<sup>3</sup> The data from the three surveys provide the most reliable and inter-temporally comparable basis for the analysis of changes in inequality and poverty in China during the last quarter century of historically-unprecedented growth. Admittedly, we do not have a comparable benchmark for 1978; but plausible guesses can be made of the benchmark circumstances and the changes are so momentous that their basic features stand out unambiguously even after allowance is made for significant error in the benchmark figures. Since the canvas is vast, this paper draws with a broad brush

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<sup>1</sup> The author is grateful to all his collaborators in the research project on China Income Distribution Survey, housed at the Economics Institute of the Chinese Academy of Social Sciences (CASS). He is particularly grateful to his co-authors, Carl Riskin, Keith Griffin and Zhao Renwei and to Li Shi of the Economics Institute of the CASS. The paper draws upon the author's collaborative research on the three rounds of the survey, especially Khan et al., 1992; Khan and Riskin, 1998; Khan and Riskin 2001; and Khan and Riskin, 2005.

<sup>2</sup> The details of these surveys are reported in Khan and Riskin, 2001 and Khan and Riskin, 2005.

<sup>3</sup> See the sources cited in the previous footnote for a discussion of these limitations in the official income estimates.

leaving the details to be pursued by a perusal of the other reports based on the findings of the surveys cited in the references.

Available estimates of inequality for and around the year China embarked on reforms are subject to substantial uncertainties. For example, World Bank estimates of the Gini ratio for rural China for the year 1979 has varied between 0.257 and 0.28.<sup>4</sup> The estimate of the urban Gini ratio from the World Bank sources for the same time period is about 0.16. Even though it is well known that urban China at the time was dominated by a highly egalitarian and rigid system of state-determined wages, which was the overwhelming determinant of income for practically the entire urban population, this seems to be a very low estimate of inequality. This paper puts the rural Gini for 1979 to be somewhere between 0.25 and 0.28 and the urban Gini to be below 0.2. The magnitude of the Gini ratio for China as a whole is also a matter of guess in the absence of any direct estimate. In view of the extremely high disparity between average urban income and average rural income that prevailed even in those days, one would like to guess that it was higher than the rural Gini. But again it seems most unlikely that it was any higher than 0.3.

Chinese reforms began with a slogan that few human societies would ever proudly inscribe on their banner: “fight egalitarianism”. To be fair, they were waging a struggle against the policy of arbitrary and artificial equality of the Maoist period – mockingly called by its critics the “iron rice bowl” – which was inefficient and unjust in so far as it guaranteed a certain living standard irrespective of the effort made by the income recipients and thus led to a lack of incentive to work. The underlying argument was that the reform of the system of distribution would reduce equality while at the same time improving the system of incentives by tying income to effort. This would lead to a greater efficiency of resource use and a higher rate of economic growth which would increase the absolute incomes of the poor who would now have a little lower share of a much larger total output. Incomes of all would rise and poverty fall although inequality

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<sup>4</sup> The former estimate appears in World Bank, 1985 while the later estimate, made by a World Bank working group on poverty in developing countries, is quoted in Ahmad and Wang, 1990.

would be greater, all compared to *the counterfactual of the continuation of the Maoist strategy*. This paper examines the extent to which this vision has succeeded.

## II. The Evolution of Inequality since the Beginning of Reforms

This paper uses the Gini ratio and the “pseudo-Gini” or “concentration” ratios to measure the distribution of income and to “decompose” it into its sources. The method of measuring them may be summarized as follows. Households are ranked in ascending order of per capita income and their per capita total income and per capita income from each of the different sources are calculated. Plotting cumulative shares of total income for the cumulative proportions of *population*, one gets the Lorenz distribution of income. For the *i-th* component of income, one can similarly derive a "pseudo-Lorenz distribution" in which cumulative shares of the *i-th* source of income are plotted against the cumulative proportions of population the latter being obtained from a ranking of individuals according to *per capita overall income* rather than per capita income from the *i-th* source. As the Gini ratio is estimated from the Lorenz distribution of income, so is the "pseudo-Gini ratio" or the "concentration ratio" for the *i-th* source of income estimated from the pseudo-Lorenz distribution of the *i-th* income component. The Gini ratio is the weighted average of the concentration ratios of the components of income where the weights are the shares of the respective components in total income:<sup>5</sup>

$$G = \sum_{i=1}^n q_i C_i$$

where,

G = Gini ratio of total income;

$q_i$  = the ratio of the *i-th* source of income to total income; and

$C_i$  = the pseudo-Gini or concentration ratio (hereafter the concentration ratio) for the *i-th* source of income.

From the above equation it follows that the proportion of the Gini ratio contributed by the *i-th* component of income is given by  $(q_i C_i)/G$ .

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<sup>5</sup> For the application of this method of decomposing the Gini ratio, see Fei, Ranis and Kuo 1978; Fields 1980; and Kakwani 1980 and 1986. Fields 1980 is a useful source for further explanation of the method and for references to other applications of this kind of decomposition of the Gini ratio.

A component of income having a concentration ratio that is greater (smaller) than the Gini ratio is said to be "disequalizing" (equalizing); relatively high proportions of it accrue to the higher (lower) income groups. A change in the Gini ratio over time can be caused by two distinct kinds of changes: a change in the composition of income between equalizing and disequalizing categories; and a change in the concentration ratio, the degree of inequality of distribution, of an individual source of income. Over time the Gini ratio declines (increases) if:

- (a) An equalizing component of income becomes more (less) equalizing or a disequalizing component becomes less (more) disequalizing.
- (b) If equalizing components are income-elastic (income-inelastic), i.e., their share of total income rises (falls) as total income grows.

Basic findings of the three surveys are summarized in Table 1. At the beginning of reforms China was one of the most egalitarian of the developing countries with a Gini ratio below 0.3, perhaps the lowest of the observed Gini ratios of all the developing Asian countries at that time. By the mid-1990s its income distribution had become one of the most unequal among the Asian developing countries. There was a sharp rise in inequality during the first decade of reforms. This increase continued at about the same rate until the mid-1990s. By the year 2002 however the overall income inequality for China as a whole had remained unchanged since the mid-1990s.

Looking at inequalities within the rural and urban societies separately, the trends are somewhat different from those for national inequality. Rural inequality rose sharply during the first decade of reforms and almost as sharply in the period thereafter until the mid-1990s. By the year 2002 however rural inequality had fallen somewhat. Urban inequality increased modestly during the first decade of reforms but much faster thereafter until the mid-1990s. By the year 2002 urban inequality too had fallen somewhat.

Table 1

## Some Basic Indicators

	Circa 1978	1988	1995	2002
<i>Gini Ratios</i>				
Rural	0.25 – 0.28	0.338	0.416	0.375
Urban (Excluding Floating Migrants)	<0.20	0.233	0.332	0.318
China (Excluding Floating Migrants)	Approx 0.30	0.382	0.452	0.450
Floating Migrants	-	-	-	0.380
Urban (Including Floating Migrants)	-	-	-	0.338
China (Including Floating Migrants)	-	-	-	0.448
<i>Indicators of Spatial Inequality</i>				
Urban Income/Rural Income (Excluding Migrants)	-	2.42	2.47	2.96
Coefficient of Variation of Per Capita Provincial Income				
Rural		0.33	0.53	0.47
Urban		0.37	0.39	0.31
<i>Annual Per cent Rates of Increase in Real Per Capita Personal Income Since the Preceding Period</i>				
Rural		...	4.71	4.07
Urban (Excluding Migrants)		...	4.48	6.44

That overall national inequality for China remained unchanged between 1995 and 2002, despite the fall in rural and urban inequality during the same period, is explained by an increase in the disparity between average urban income and average rural income. Urban-rural disparity, always high in China, has steadily increased during the reform period.

The rise in rural inequality between 1988 and 1995 was largely driven by the rise in inequality in rural income among the provinces and the fall in rural inequality between 1995 and 2002 was equally largely driven by the fall in inequality in rural incomes among provinces (see the coefficients of variation of per capita provincial rural income in Table 1). Changes in urban inequality are similarly associated with changes in intra-provincial urban income inequality.

The two kinds of spatial inequality – one between provinces within the rural and urban areas and the other between urban and rural areas across provinces – thus have been very important determinants of overall inequality in China. Until the mid-1990s trends in these two kinds of spatial inequality converged to produce sharp increase in overall inequality. Between 1995 and 2002, inter-provincial inequality fell to help reduce inequality within both the rural and urban societies; but the rise in urban-rural inequality offset this change and prevented a decline in overall national inequality.

#### IIA. Sources of Inequality in the Early Reform Period: An Analysis of the 1988 Survey

A full analysis of the sources of rising inequality during the first reform decade is not possible because the estimates for 1978 are not based on comparable data and do not provide necessary details. And yet an examination of the sources of inequality in 1988, as revealed by the survey data, provides useful insights. These data are summarized in Tables 2 and 3 respectively for rural and urban areas. Although the urban survey for 2002 collected information on the so-called floating migrants, the estimates of urban income

and inequality for 2002 in Table 3 exclude the floating migrants for comparability with the 1988 and 1995 estimates which were based on surveys which excluded them.

This initial phase of reforms was dominated by the reform of the rural economy which went through decollectivization and a de-facto land reform, effectively instituting an egalitarian system of peasant farming. Reforms began with a sharp improvement in agriculture's terms of trade which, for a period, reduced China's extraordinarily high urban-rural inequality. These improvements were however halted and reversed around the mid-1980s, largely due to adverse effect they had on public saving and investment.

Table 2

	Rural Gini and Concentration Ratios								
	Per cent of Income			Gini/Concentration Ratio			Per Cent of Gini Contributed by		
	1988	1995	2002	1988	1995	2002	1988	1995	2002
Individual wages etc.	11.13	22.38	29.46	0.662	0.738	0.455	21.8	39.7	35.7
Net farm income	...	46.44	38.97	...	0.238	0.202	...	26.6	21.0
Net income from household non-farm activities	...	9.71	11.82	...	0.484	0.558	...	11.3	17.7
<i>Net income from farm and Non-farm activities</i>	<i>74.21</i>	<i>56.15</i>	<i>50.79</i>	<i>0.282</i>	<i>0.281</i>	<i>0.285</i>	<i>61.9</i>	<i>37.9</i>	<i>38.7</i>
Property income	0.17	0.43	0.60	0.484	0.543	0.777	0.3	0.6	1.2
Rental value of owned housing	9.67	11.61	13.77	0.281	0.321	0.377	8.0	9.0	13.8
Net transfer from state and collective	-1.90	-0.48	-2.62	0.052	-1.759	0.106	-0.3	2.0	-0.7
Other income (including private transfer)	6.71	9.91	8.01	0.418	0.463	0.515	8.3	11.0	11.0
TOTAL	100.00	100.00	100.00	0.338	0.416	0.375	100.0	100.0	100.0

## *Sources of Rural Inequality*

The largest contribution to both income and the Gini ratio was due to household production activities. Unfortunately, for this year we can not separate farm income from non-farm enterprise income.<sup>6</sup> But it is possible to divide total income from production activities into net cash income (gross cash income from sales of farm and non-farm produce less the cost of all farm and non-farm inputs including inputs into self-consumed output) and gross value of self-consumed output. The former had a disequalizing effect on income distribution while the latter had a strongly equalizing effect. It almost certainly indicates that non-farm income was disequalizing, perhaps strongly so.

Other than farming, the only source that stands out as having an equalizing effect on distribution is the rental value of housing owned by the rural population. There was a substantial private housing boom in rural areas in the first decade of reforms and access to it seems to have been relatively equal.

All other sources of income were disequalizing. Wages were the most disequalizing source of income. It seems to be largely a regional phenomenon: households in richer provinces and regions had greater access to wage employment which in effect meant that individuals ranked high in the distribution scale derived higher proportions of their income in the form wages. Property income was very small but rather strongly disequalizing. Miscellaneous income, mostly private transfer, was also strongly disequalizing. To the extent that this income was due to remittances made by household members working as urban migrants, this indicates that the rural living standard and the incidence of urban migration were strongly associated. Oddly net taxes were very strongly disequalizing: the fiscal system was strongly regressive in so far as it resulted in a positive (negative) net transfer from the state and collective entities to relatively richer (poorer) households.

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<sup>6</sup> This is because the 1988 survey questionnaire failed to obtain information separately for inputs into farming and inputs into non-farm household enterprises. The later surveys collected this information.



It is possible to guess the principal changes in the sources of rural inequality. The replacement of collective agriculture by a de-facto system of private peasant farming was a source of increased inequality in so far as the egalitarian distribution of collective peasant income was replaced by the more unequal distribution of private income from household farming and non-farm activities. But inequality from this source of income was held in check by the equality of access to land ensured by the de-facto land reform that followed decollectivization, as issue that is discussed at greater length later. Equality of access to land may also have helped the universal private housing and a relatively equal distribution of its rental value. Strongly disequalizing wages probably reflect the high degree of regional inequality in the distribution of non-farm sources of (wage) employment, including employment from township and village enterprises (TVEs). Most new sources of income – income from property, income from remittances and income from non-farm enterprises – were disequalizing in so far as the emerging private activities provided an opportunity for individuals and households to translate their different skills and labor endowments into different levels of earnings. Finally, public finance came to de-emphasize transfers from richer to poorer regions; and much of the safety net was dismantled while subsidies for the better-off households were retained.

Table 3

	Urban Gini and Concentration Ratios								
	Per Cent of Income			Gini/Concentration Ratio			Per Cent of Gini Contributed by		
	1988	1995	2002	1988	1995	2002	1988	1995	2002
Wages	44.42	61.30	59.54	0.178	0.247	0.315	33.9	45.6	59.0
Pensions/Retirees' Income	6.83	11.69	14.78	0.335	0.316	0.307	9.8	11.1	14.3
Individual Enterprises	0.74	0.53	2.74	0.413	0.042	0.037	1.3	0.1	0.3
Income from Property	0.49	1.27	0.55	0.437	0.484	0.471	0.9	1.9	0.8
Housing Subsidy in Kind	18.14	9.74	1.87	0.311	0.516	0.316	24.2	15.1	1.9
Other Net Subsidies	20.94	1.25	0.07	0.188	0.296	-2.158	16.9	1.1	-0.5
Rental Value of Housing	3.90	11.39	17.65	0.338	0.639	0.378	5.7	21.9	21.0
Other Income	4.53	2.84	2.78	0.383	0.371	0.359	7.5	3.2	3.1
TOTAL INCOME	100.00	100.00	100.00	0.233	0.332	0.318	100.0	100.0	100.0

## *Sources of Urban Inequality*

Unlike most developing countries, the distribution of urban income in China was much more equal than the distribution of rural income. This is partly a legacy of the Maoist period when urban income, largely earnings in state enterprises, was determined by a highly egalitarian structure of wages imposed by the state. Wages, the largest component of urban income in 1988, was also the most equalizing source. State enterprises were still the dominant source of urban employment and their wage structure had undergone little change. The only other equalizing source of income was non-housing subsidy, mostly due to the inclusion of food subsidy in them. Urban food distribution was still in place and its effect on income distribution was equalizing.<sup>7</sup>

All other components of income exerted disequalizing effects on the distribution of urban income. Housing subsidy, the difference between the estimated market rent and the actual rent paid by the occupants of public housing, was the most important source of income after wages and non-housing subsidies and it was rather strongly disequalizing. Rental value of privately-owned housing, at this early stage of housing reform, was disequalizing, a phenomenon that perhaps indicates that in urban areas only the households with relatively high incomes managed to obtain ownership of privatized housing. All other sources of income, including income from private enterprise and property, each mostly small, were disequalizing.<sup>8</sup>

Change in urban inequality during the first decade of reforms was small relative to the change in rural inequality. And yet it is possible to identify the early indications of the sources of inequality; they consisted of the new sources of income: private housing, individual enterprise and other sources of property income. Also wages may have started showing early signs of differentiation. Curiously, intermediation through public finance,

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<sup>7</sup> The detailed study of the 1988 survey, reported in Khan et al., 1992, reports the concentration ratio for ration coupon subsidies to be 0.13, the lowest of all such ratios.

<sup>8</sup> Individual enterprises and property accounted for minuscule proportions of income. It is likely that the survey failed to capture much of the income from these sources. Also, as the 2002 survey shows, much of small individual enterprises were operated by the floating migrants who could not be included in the 1988 and 1995 surveys for lack of sample frames that included information about them.

especially in the distribution of housing subsidy, was a major source of the level of inequality.

### *Overall Distribution for China*

Overall inequality for China is higher than the inequality for either rural or urban China. This indicates that urban-rural inequality dominated intra-rural and intra-urban inequalities in China. If there were redistribution in favour of rural China, inequality would fall. Also, for China as a whole, the increase in urban-rural income difference was the major source of increased inequality. As noted earlier, reforms in China began with improved terms of trade for agriculture and a fall in urban-rural inequality. This however was stopped and reversed in the mid 1980s because of its adverse effect on the rate of public saving and investment. Since then through the year 1988 and beyond, urban-rural inequality rose sharply. Public investment in rural areas remained low. The restriction on migration and the discriminatory treatment of the floating migrants further exacerbated the urban-rural inequality.

Another interesting point worth noting is that the disequalizing effect of public finance comes out much more sharply in the overall Chinese context: all urban subsidies taken together is massively disequalizing in the context of China as a whole with a concentration ratio of 0.74. Even food subsidies, equalizing in the urban context, is disequalizing in the overall context of China: their recipients, relatively poor among the urban population, are relatively rich among the Chinese population taken as a whole.<sup>9</sup>

### IIB. Sources of Inequality during Integration into the Global Economy, 1988-1995

The period between 1988 and 1995 witnessed a sharp acceleration in the process of China's integration into the global economy. Since the mid 1980s the focus of development strategy changed from an emphasis on the rural economy to an all-out

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<sup>9</sup> Details of these findings are reported in Khan et al., 1992.

emphasis on globalization. This was a period of sharply increasing inequality. By 1995 China had become one of the most unequal of the Asian societies.

### *Inequality in Rural China*

Inequality within rural China increased rapidly, the Gini ratio rising to almost 0.42. The most important cause of the rise in rural Gini was the rising share of wages in income and a further increase in its disequalizing effect. Again the main reason seems to be the regional inequality of access to wage income.

For this year we could separate farm income from income from non-farm enterprises. The former was strongly equalizing while the latter was disequalizing. Indeed farm income and rental value of housing were the only equalizing components of rural income in China in this year. The main explanation of the strongly equalizing distribution of farm income is the equality of access to land that the decollectivization program insisted on maintaining by refusing to create a land market. This is an issue to which this paper returns later.

All other sources of rural income became more disequalizing in 1995 than in 1988 as their shares of rural income rose; each of these changes reinforced the effect of the other on increasing rural inequality. It is worth emphasizing that net taxes became even more disequalizing; the top two deciles paid negative taxes while the lower deciles of population bore more than the aggregate burden of net taxes.

### *Inequality in Urban China*

Urban inequality rose even faster than rural inequality during this period. This was due an across the board rise in the inequality of income distribution from different sources.<sup>10</sup>

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<sup>10</sup> The only sources which became more equalizing are income from individual enterprise and pensions/retirees' income. The former seems spurious: as noted above, the survey may have missed most individual enterprises.

Wages came to be distributed more unequally though it remained an equalizing source. This was almost certainly a desirable change in so far as the old structure of wages was not sufficiently differentiated to promote incentive to work. This might have proved beneficial except for two things. First, employment growth fell sharply and unemployment rose due mainly to the reform of state and collective enterprises, a subject that is discussed in greater detail later. Secondly, the disequalizing effect of the greater differentiation of the wage structure could have been easily offset by a reform of public subsidies, either by a reduction in their disequalizing effect by better targeting or simply by a reduction in the volume of disequalizing subsidies (e.g., public housing). This opportunity was foregone. Actually the equalizing subsidies on food were drastically curtailed. The disequalizing subsidies, mainly on housing, were largely retained and they became far more disequalizing than before.

Another source of the increase in urban inequality was the rise in the share of rental value of owned housing and an increase in its disequalizing effect. Housing reform at this relatively early stage appears to have resulted in the acquisition of housing at subsidized prices by the richer households.

#### *Overall Distribution for China*

Once again, overall inequality for China was higher either urban or rural inequality, a result of the further rise in the urban-rural disparity in income. Note that the two kinds of spatial inequality – urban/rural and inter-provincial – both increased during this period. All the instruments of discrimination against the rural society identified for the preceding period – adverse terms of trade for agriculture, low share of public investment and obstacles to migration to urban areas – continued and/or were exacerbated during this period. Urban-rural inequality would have shown a greater rise except for a temporary upward adjustment in agriculture's terms of trade in 1994, which was reversed two years later.

It is useful to summarize the main aspects of public policy, unrelated to the natural forces of inequality unleashed by the transition to capitalism, that were contributing to rising inequality. These were:

- (a) Increased inter-regional inequality;
- (b) Slow and disequalizing rural growth leading to a rise in the urban-rural inequality;
- (c) Regressive public transfers and taxes;
- (d) Slow growth of employment and a lack of social protection for the unemployed; and
- (e) Restriction on and discrimination against migration from rural areas.

Most of these policies were related to the particular kind of integration into the global economy that China promoted. Globalization led to the concentration of growth in the 11 coastal provinces which accounted for 80 per cent of exports. Of these 11 provinces and Beijing, 8 are ranked as the richest 8 provinces in China. They had a disproportionate concentration of both foreign direct investment and public investment to attract it. Rural provinces thus received a lower priority. In more recent years, the WTO rules acted as an additional constraint limiting China's ability to improve agriculture's terms of trade. Globalization made it impossible to continue with the old policy of tolerating excess employment in state enterprises which were under pressure to become internationally competitive and to seek international partners. Single-minded pursuit of globalization resulted in the commitment of public investment to infrastructure development directly related to the promotion of export and foreign direct investment in the rich urban areas. Same priorities led to the avoidance of the commitment of resources for the social protection of the laid-off workers.

### IIC. Inequality in the Period of Adjustment to the Asian Crisis, 1995-2002

Much of the changes in 2002, juxtaposed against the situation in 1995, were results of China's policies around the turn of the century which were heavily influenced

by China's reaction to the Asian crisis that struck the region in 1997. It thus makes sense to describe this period as that of China's adjustment to the Asian crisis. Although China continued its export-oriented policies, it made certain adjustments in the wake of the Asian crisis and those had an effect on income distribution. Furthermore, rising inequality had come to be recognized as a major social problem and certain policies were consciously and specifically adopted to arrest it.

The main changes in income distribution may be summarized as follows: rural inequality fell significantly; urban inequality also fell, though by much less. But overall inequality remained about the same as in 1995 due to a further increase in urban-rural inequality. Also, for the first time the 2002 survey was able to enumerate the floating urban migrants and measure the consequences of their incorporation for the estimates of inequality and poverty.

### *Rural Inequality*

Rural inequality fell significantly. The decline in rural inequality was broad based: it fell in 15 of the 19 provinces covered by both 1995 and 2002 surveys. The principal sources of reduced rural inequality were: (a) an increase in the equalizing effect of the distribution of farm income; (b) a sharp decline in the disequalizing effect of the distribution of individual wages; (c) a sharp fall in the regressivity of the system of taxes and subsidies; (d) an increase in rural-to-urban migration; and (e) a reduction in inter-provincial inequality.

The strongly equalizing distribution of farm income must be attributed primarily to the highly egalitarian system of peasant farming established and perpetuated by China's egalitarian distribution of land. Table 4 shows land distribution and its association with inequality in China in 1988, 1995 and 2002. The Gini ratio of land distribution is remarkably low by the standard of all available international estimates. Even this low inequality is almost certainly due to regional differences in land endowment rather than inequality in any region with given land endowment per rural

household. Over the period as a whole, there was no increase in the Gini ratio. By 2002 the “concentration” ratio of adjusted land had fallen close to zero, indicating that land in irrigated unit was absolutely equally accessible to all income groups. The “concentration” ratio for unadjusted land had turned slightly negative, indicating that the amount of land, unadjusted for the proportion irrigated, was a little more accessible to the lower income groups than to the higher income groups. Equality of access to land has assured an egalitarian distribution of income from farming and has constituted a strong source of basic income security in rural China.

Table 4  
Distribution of Per Capita Landholdings

	1988	1995	2002
Gini Ratio			
Unadjusted Land	0.499	0.431	0.488 (0.478)
Adjusted Land	0.465	0.414	0.458 (0.443)
“Concentration Ratio”			
Unadjusted Land	0.021	0.001	-0.013 (-0.019)
Adjusted Land	0.063	0.051	0.018 (0.012)

Note: “Unadjusted” Land is total land area irrespective of the proportion irrigated, while “adjusted” land counts an irrigated hectare as equivalent of two hectares of unirrigated land. The Gini ratio is estimated from the Lorenz distribution of per capita land, in which individuals are ranked according to per capita landholding. The “concentration ratio” is estimated from the Lorenz distribution of per capita land, in which individuals are ranked according to per capita income. Figures in parentheses for 2002 are estimates based on the same 19 provinces that were in the 1995 sample (i.e., excluding Xinjiang and Guangxi). For sources of the 1988 and 1995 estimates see Khan and Riskin 2001, p. 108.



The reduction in the disequalizing effect of wages is perhaps partly explained by the rapid growth in rural employment and a reduction in the regional inequality of access to wage employment. Cross-sectional evidence for 2002 suggests that the unequal distribution of wage income is largely attributable to the high regional inequality in the distribution of income rather than to the inequality of the distribution of wage income within a given region. The simple average of the concentration ratios of wage income for the 21 provinces is just 0.310 as compared to the concentration ratio of wage income for entire rural China of 0.455, a clear indication that inter-provincial inequality dominates inequality within the provinces in the distribution of wage income.<sup>11</sup> Direct comparison of provincial concentration ratios between 1995 and 2002 is not possible because of the absence of comparable estimates for 1995. It however appears that much of the impetus for reduced concentration of wage income was provided by the reduced regional inequality of income – and wage income – among provinces.

There are two kinds of evidence for a reduction in regional inequality in the distribution of rural income. Spearman's rank correlation coefficient between provincial rank in per capita rural income in 1995 and the provincial rank in the rate of growth in rural income between 1995 and 2002 is -0.44 for the 19 provinces that are common in the two samples, indicating a negative relationship between initial income level and the growth rate of income.<sup>12</sup> Secondly, largely as a result of this negative relationship between the initial level and the rate of growth of income, the coefficient of variation of per capita rural income among the 19 common provinces fell from 0.53 in 1995 to 0.47 in 2002. This may reflect the early results of the recent policy of the government to shift the focus of poverty reduction towards the promotion of a greater regional balance in development.

In the changes described above declining rural population played an important part in helping both the growth and the favorable change in the distribution of rural income. China's actual rural population in 2002 would have been 911.5 million if it had

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<sup>11</sup> For provincial concentration and Gini ratios see Khan and Riskin, 2005.

<sup>12</sup> The coefficient is significant at 10 per cent level.

grown at the same rate as national population, 0.843 per cent per year, since 1995. This means that a total of 129 million people moved out of rural China to urban areas during this period.<sup>13</sup> They have moved to existing or newly-created urban locations. This has been made possible by the de-facto flexibility in China's rigid system of residence permits (*hukou*). The growth in rural income might have been lower and the incremental distribution of income might have been worse had all these increased population remained in rural China and competed for the meager land and other rural resources.

### *Urban Inequality*

The decline in urban inequality was more modest – the Gini ratio fell by only 4 per cent – and less robust- in only two out of 11 provinces in the sample the Gini ratio fell. The decline in overall urban inequality was largely due to a fall in inter-provincial inequality: the coefficient of variation for per capita provincial income fell from 0.39 in 1995 to 0.31 in 2002. Also Spearman's rank correlation coefficient between the provincial rank in per capita income in 1995 and the provincial rank in the growth rate in income between 1995 and 2002 is negative (-0.673) and significant at 10 per cent level.

Looking at individual sources of income for urban China as a whole, the principal source of income, wages, became more disequalizing over the period. This is the continuation of a long-term trend. Wages were highly, and almost certainly artificially and inefficiently, equalizing in 1988 with a concentration ratio of only 0.178. It rose to 0.247 in 1995 and to 0.315 in 2002. Clearly, with the progress of reform of the state-owned and collective enterprises and the rapid growth of private, foreign and mixed-ownership enterprises, the structure of wages have become very unequal. Income of retired members is a mildly equalizing source of income.

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<sup>13</sup> This is far in excess of the estimated increase in the number of floating migrants over the period. The total level of floating migrants are estimated to have increased from about 60 million in 1995 to about 80 million in 2000 (see Khan and Riskin, 2005 for the source). It seems that for a large proportion of those who have ceased to remain rural residents the formerly rural locations of their residence have been converted into new urban locations. Be that as it may, they have ceased to claim land and employment resources of the rural economy.

Most other sources of urban income contributed less to the Gini ratio in absolute terms in 2002 than in 1995. Income from property, though a disequalizing component, contributed to a slight reduction in inequality due to a fall in its share of income. Non-housing subsidies, though reduced to an insignificant level, had a dramatic improvement in distribution and thus contributed to a lessening of inequality. But the really substantial contribution to the reduction of the Gini ratio, that was large enough to outweigh the disequalizing effect of wages, was due to housing reform. In the past housing subsidy in kind – the difference between market and actual rent paid for public housing – was largely appropriated by the higher income groups, as reflected in its high concentration ratio in 1995 (0.516). The sharp reduction in these subsidies – and a better targeting of the remaining subsidies – led to a fall of 0.044 in its contribution to the Gini ratio. Rental value of owned housing also became substantially less disequalizing as homeownership became widespread. While this source of income remained disequalizing, its absolute contribution to the Gini ratio fell by 0.006. Thus, while it is possible that homeownership was acquired disproportionately by the richer income groups, the inequality of homeownership *at the conclusion of housing reform* appears to be lower than the inequality of access to housing service under the old system of public ownership of housing. *Note that if these findings are right, then income distribution estimates based on the official data of the National Bureau of Statistics will not capture the fall in urban inequality because they exclude housing subsidy and rental value of housing.*<sup>14</sup>

#### *Overall Distribution for China*

Despite the reduction in rural and urban inequality, the overall Gini ratio for China remained virtually unchanged. This was due to a further increase in urban-rural inequality between 1995 and 2002.

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<sup>14</sup> This indeed seems to be the case: just as official estimates understated the rise in inequality in the past because of their exclusion of certain disequalizing components from their income definition, so they overstated the rise in inequality (failed to capture a fall in inequality) in a period when those disequalizing components were sharply falling as a proportion of income.

## IID. The Distribution of Migrants' Income

All the above estimates exclude the so-called floating migrants in urban China who could not be included in the surveys for 1988 and 1995. The survey for 2002 for the first time included a sample of floating migrant households. Table 5 summarizes the data on the sources and distribution of income of the migrants for 2002.<sup>15</sup>

Table 5  
Composition and Distribution of Income of the  
Floating Migrants to Urban China

	Per cent of Income	Gini/Concen- tration Ratio
Wages	34.40	0.250
Individual Enterprise	59.04	0.429
Property	0.29	0.189
Net Subsidies	-0.95	0.208
Rental Value of Housing	4.88	0.658
Other (Including Pensions)	2.34	0.408
TOTAL INCOME	100.0	0.380

Per capita income of the migrants is approximately halfway between the per capita incomes of the rural and the urban resident households. By migrating from rural to urban China an average migrant household nearly doubles its per capita income although its per capita income remains 35 per cent below that of an urban resident household.<sup>16</sup>

Inequality among the migrants is greater than the inequality among either the urban residents or the rural population. The Gini ratio for the migrants is almost 20 per cent higher than the Gini ratio for the urban residents. The greater inequality in the distribution of income for the migrants principally derives from the fact that their largest

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<sup>15</sup> See Khan and Riskin, 2005 for a discussion of the migrants' survey and the problem of comparability of the data for the migrants with the data for the rest of the population.

<sup>16</sup> For actual data see Khan and Riskin, 2005.

source of income, from individual enterprise, has a strongly disequalizing effect on income distribution. Market return to individual enterprise clearly reflects the considerable difference among the migrants in terms of entrepreneurial ability and resource endowment. Despite significant increase in its differentiation since the beginning of reforms, the wage structure in the urban economy, on the other hand, still enforces a degree of equality among the residents who derive most of their income from wages. The greater inequality among the migrants is also explained by their lack of access to pension and unemployment benefits which serve as redistributive social protection for the residents. Finally, the migrants' homeownership is subject to greater obstacles than the residents' homeownership which probably explains the greater inequality of the distribution of rental value of housing for the migrants.

The distribution of combined urban income for the residents and the migrants *is more unequal* than the distribution of residents' income; the Gini ratio of combined income is 0.338 as compared to the Gini ratio of 0.318 for the urban residents' income alone. The overall distribution of income for China with migrants is however almost the same as the distribution without them.

### **III. Growth, Inequality and Poverty**

China's performance in poverty reduction has received international praise. According to World Bank estimates, between 1990 and 1998 the number of people living on less than constant 1993 purchasing power parity (PPP) \$1 a day fell by 147 million in China. During the same period the number of people in the rest of the developing world living on less than PPP\$1 a day increased by 70 million.<sup>17</sup> It is however far from the truth that China has overcome the problem of poverty. China's poverty performance suffers from a number of outstanding blemishes. First, available estimates suggest that China has a higher incidence of poverty than most countries at a comparable standard of living (as measured by per capita PPP\$ income). For example, in 2001 it had more than

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<sup>17</sup> World Bank, 2000, Table 1.1.

twice the rate of poverty thus measured (proportion of population below PPP\$ 1 per day) than Indonesia, a large Asian country which had a 28 per cent lower per capita PPP\$ income.<sup>18</sup> Secondly, prolonged periods of rapid growth in per capita income have been witnessed unchanged or even rising proportion of the population in poverty. Thus, for example, World Bank researchers estimated on the basis of official household survey data that the proportion of the population in poverty remained unchanged or increased a little during 1996-1999, a period during which per capita real income grew at 7 per cent per year.<sup>19</sup> During this period the actual number of people in poverty rose very substantially.<sup>20</sup> Finally, China has recently officially acknowledged a reversal in its poverty performance: in 2003 the number of rural population in poverty has been officially estimated to have increased by 0.8 million, the first such increase since the beginning of reforms.<sup>21</sup>

To what extent has rising inequality provided China with a poverty outcome which is below what it could achieve? Were the authors of China's reform right in emphasizing growth while ignoring the distributional consequences of their strategy? The relationship among growth in income, distribution of income and poverty reduction for rural and urban China is brought out respectively by Tables 6 and 7 which compare performance between two time periods - the period between 1988 and 1995 ("the pre-1995 period") and the period between 1995 and 2002 (the "post-1995 period"). The details of the method of estimation of poverty from the survey data can be found in Khan, 2004. Poverty threshold, a person with an income below which is designated to be poor, is estimated for the benchmark year 1995. It is based on normative standards of daily food consumption with allowance for non-food consumption. For 1988 and 2002 the 1995 poverty thresholds are adjusted by the cost of living indices. Several alternative poverty

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<sup>18</sup> See World Bank, 2003, Tables 1.1 and 2.6 and Khan, 2004, Table 2.

<sup>19</sup> See Chen and Wang, 2001; also quoted in Khan, 2004, Table 1.

<sup>20</sup> According to Chen and Wang, 2001, the proportion of the population below 1993 PPP\$1.08 went up from 17.2 per cent in 1996 to 17.4 per cent in 1999. Applying these percentages to official population estimates, one gets an increase in 8.4 million poor over this period.

<sup>21</sup> *The Guardian* of July 20, 2004 reports this by quoting Liu Jian, the director of the Poverty Alleviation Office. It is noteworthy that the rise in the absolute number of poor has taken place despite a fall in the absolute size of the rural population, indicating a sharper rise in the proportion of rural population in poverty. Note that the analysis in this section ends in the year 2002 and does not extend to 2002.

thresholds, related to different food consumption norms, were used. Estimates shown in Tables 6 and 7 relate to the higher of the alternative poverty thresholds. For rural China both the headcount and the proportionate poverty gap (PPG) indices are used while for urban China only the former is used.

Table 6  
A Comparison of Growth, Inequality and Poverty Reduction  
in Rural China between Pre-1995 and Post-1995 Period

	Pre-1995 (Between 1988 and 1995)	Post-1995 (Between 1995 and 2002)
Annual Increase in Per Capita Income (%)	4.71	4.07
Change in Gini over the Entire Period (%)	+23.08	-9.86
Annual Reduction in Head- count Poverty (%)	2.88	11.36
<i>Gross</i> Elasticity of Headcount Poverty	0.61	2.79
Annual Reduction in PPG Index (%)	4.72	12.58
<i>Gross</i> Elasticity of PPG Index	1.00	3.09

Note: Gross Elasticity of poverty reduction is defined as the per cent reduction in the relevant poverty indicator divided by the per cent increase in per capita income.

For rural China the annual rate of increase in per capita income was somewhat slower during the post-1995 period than the pre-1995 period. But the rate of poverty reduction, measured by all the indicators, was a great deal faster during the post-1995 period than during the pre-1995 period. The explanation clearly lies in the fact that inequality increased sharply during the pre-1995 period while it fell significantly during the post-

1995 period. Inequality, as measured by the Gini ratio, went up by 23 per cent during the earlier period while it fell by 10 per cent during the later period.

*Gross* elasticity of poverty with respect to per capita income, as reported in the table, is simply the ratio of the observed percentage change in an indicator of poverty to the actual percentage change in per capita income. It does not measure the extent of change in an indicator of poverty *due to* a per cent change in income. A higher gross elasticity of poverty reduction represents a greater effectiveness of economic growth in reducing the incidence of poverty *due to favourable changes in the determinants of poverty other than income growth*. As shown in Table 6, the gross elasticity of headcount-poverty reduction is 4.6 times as high in the post-1995 period as in the pre-1995 period. The gross elasticity of PPG reduction is similarly 3.1 times as high for the later period as for the earlier period. Income growth was greatly more beneficial to the poor in the later period than in the earlier period. The immediate explanation of this lies in the fact that growth was inequality reducing in the later period while it was inequality inducing in the earlier period.

The difference between the pre-1995 period and the post-1995 period in terms of growth, inequality and poverty reduction for the residents of urban China is summarized in Table 7. Growth in per capita income was faster in the post-1995 period than in the pre-1995 period: 6.44 per cent per year as compared to 4.48 per cent.<sup>22</sup> But the truly remarkable change occurred in the distribution of income. In the pre-1995 period the Gini ratio increased by more than 42 per cent while in the post-1995 period it fell by a modest 4 per cent. The poverty outcome – measured as the change in headcount rate – was a tiny reduction of a third of a per cent per year in the pre-1995 period and a dramatic fall of 17 per cent per year in the post-1995 period.

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<sup>22</sup> It is worth noting that the rate of growth in personal income does not have a stable relationship with the rate of GNP or GDP growth. Annual growth in per capita GNP for China was 8.1 per cent during 1988-1995 and a lower 7.3 per cent between 1995 and 2002 according to official data. Growth in per capita personal income, for China as a whole, as measured by these surveys, was 5.1 per cent in the first period and a *higher* 7.1 per cent during the second period. Clearly, public policy with respect to distribution of income among households, business and the government changed in favor of the households in the second period. The faster growth in personal income in the second period was partly due to the rising share of the urban population whose personal income has been higher and increasing faster than that of the rural population.



Table 7

A Comparison of Growth, Inequality and Poverty Reduction  
in Urban China between Pre-1995 and Post-1995 Period

	Pre-1995 (Between 1988 and 1995)	Post-1995 (Between 1995 and 2002)
Annual Increase in Per Capita Income (%)	4.48	6.44
Change in Gini over the Entire Period (%)	+42.49	-4.22
Annual Reduction in Headcount Poverty Rate (%)	0.35	16.84
<i>Gross</i> Elasticity of Headcount	0.08	2.61

Note: Gross elasticity of poverty reduction is defined as the percent reduction in the relevant poverty indicator divided by the percent increase in per capita income.

The difference was due to the very different outcome with respect to the change in inequality. In the pre-1995 period the *gross* elasticity of poverty reduction – per cent change in poverty divided by the per cent change in per capita income – was an insignificant 0.08. In the post-1995 period it rose to 2.61. In the first period the potential poverty-reduction effect of income growth was largely offset by the increase in inequality. In the second period the poverty-reduction impact of income growth was accentuated by the improvement, albeit modest, in income distribution.<sup>23</sup>

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<sup>23</sup> The migrants have been excluded from the analysis of urban poverty comparison for the obvious reason that no information about them is available for 1988 and 1995. For 2002, for the same poverty threshold, the headcount rate of poverty among the migrants is 6.5 times as high as for the urban residents. This is due largely to their lower income, but also to the greater inequality among them. See Khan, 2004 for details.

#### **IV. Why Were Income Distribution and Poverty Outcomes Better Between 1995 and 2002?**

In explaining the sharp increase in inequality between 1988 and 1995 earlier in the paper we identified the following as the principal causal factors: (i) the increase in inter-regional inequality; (ii) slow and disequalizing rural income growth; (iii) regressive transfer to households and reduced transfer from rich to poor provinces; (iv) slow growth in employment and a lack of social protection for the laid-off workers; and (v) the restriction on and the discriminatory treatment of the migrants. The explanation for the better performance on distribution and poverty by the year 2002 is that important policy response has dealt with a number of these problems in recent years. China's poverty reduction strategy was significantly restructured around the turn of the millennium. In February 2000 the State Council adopted the "Great Western Development Strategy" which initiated a new approach for the promotion of economic development in all the western provinces as well as the relatively poor provinces in the central region. The Leading Group for Western Region Development was established, with the Prime Minister as the Chair, and an executive body, the Western Region Development Office, with the State Development Planning Commissioner as the Chair. The program has led to a large increase in investment in infrastructure development in this region. It is highly likely that improved public expenditure in these poor provinces has served as the impetus for reduced inter-provincial inequality. In October 2001 the government issued the "Outline for Poverty Alleviation and Development of China's Rural Areas (2001-2010)". This new plan emphasizes agriculture and farm production; the provision of education and training to the poor; the use of science and technology to promote the productivity of the poor; and the facilitation of out-migration and voluntary resettlement of people from ecologically disadvantaged areas. While the official system of residence registration has continued, there has been a great deal of de-facto liberalization of movement of labor out of rural areas.

Another element of the redirection of poverty reduction strategy in the late 1990s is the adoption of a program for the protection of the urban poor. Three instruments designed for this purpose are: (a) a living allowance for laid-off workers, which is the

largest, though a transitional, program; (b) unemployment insurance, which has been replacing the transitional living allowance for the laid-off workers; and (c) the Minimum Living Standard Scheme, which is a subsistence allowance paid out of the general revenue of the government.<sup>24</sup> Increase in the share of these items in urban household income and the improved distribution of this source of income have been a factor behind the reduction in urban inequality between 1995 and 2002.

Significant improvements have also taken place in reducing the disequalizing effect of the system of subsidies. The problem of employment growth in rural areas has eased, largely due to migration, but the problem of urban unemployment still remains serious, though some of its worst consequences have been partly alleviated by the system of protection described above.

Finally, the cause of poverty reduction was helped by a faster growth in personal income, albeit highly skewed in favor of the urban areas, during the second period.<sup>25</sup> This may have been due to policy changes in direct response to the Asian crisis. Policy makers in China were clearly concerned about their ability to maintain an increasing incremental share of growth in aggregate demand from external sources and this may have induced them to take measures to redistribute income in favor of the households in the hope of inducing them to increase their consumption. As shown in footnote 22 above, growth in personal income, as a proportion of GDP growth, was far slower in the pre-1995 period than in the post-1995 period. The policy seems to have paid off in so far as the precipitous decline in the ratio of final consumption to GDP and the ratio of household consumption to GDP between 1988 and 1995 was arrested over the period between 1995 and 2000. Net exports as a proportion of GDP peaked in 1997 and 1998 and thereafter started to decline.<sup>26</sup> China might not have succeeded in maintaining as high a growth in aggregate demand as actually occurred in this period if the ratio of

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<sup>24</sup> For details see, ADB 2002.

<sup>25</sup> Note that it is the level of per capita *personal* income, not per capita GDP or GNP, in terms of which poverty thresholds and poverty indicators are measured in the estimates of income poverty.

<sup>26</sup> Table 3-11 of NBS 2003 shows that net exports as a proportion of GDP rose steadily from -1.03 per cent in 1988 to 3.81 per cent in 1997 and 3.86 per cent in 1998. Thereafter it started a steady decline to 2.24 per cent in 2001. In 2002 it stood at 2.60 per cent.

domestic consumption continued to fall, as it did in the pre-1995 period. The principal beneficiaries of this policy of redistributing the incremental product in favor of the households were the urban residents. During this period the gap between the growth in urban and rural incomes greatly widened. Per capita personal income growth in rural China was slower in this period than in the preceding period. The much faster rate of reduction in rural poverty was due to a significant decline in the inequality of income during this period as compared to a sharp rise in inequality in the pre-1995 period.

One area in which success has eluded China is the reduction of the massive disparity between urban and rural income. Indeed urban/rural income inequality has increased sharply and this has held the overall inequality for China steady during a period of reduction in rural and urban Gini ratios.

Does the above trend of rising inequality for nearly two decades after the beginning of reforms, followed by a decline in urban and rural inequalities and a stabilization of the overall national inequality indicate that China is on the verge of making the so-called Kuznets transition? Is the course charted by the authors of the reform that, while economic growth would benefit some before it benefits all, the “rising tide would ultimately lift all boats” proving true? There is nothing in the evidence to suggest that the process of capitalist development in China will automatically accomplish such a transition. It has been demonstrated above that much of the increase in inequality in the 1980s and the 1990s were a matter of conscious choice. China’s policy makers could have moderated or arrested that trend. Similarly the halting and reversal of inequality in the late 1990s and the early 2000s did not happen in a *laissez faire* environment. It was brought about by major policy shifts. The future course of inequality in China will depend on whether these policy shifts would be continued and expanded or whether they are reversed and/or their possibilities come to be exhausted. In urban areas, the potential of many of the favorable policy shifts may actually have been exhausted. Most importantly, the disequalizing effect of urban subsidies has been eliminated. No further gain along these lines is possible. On the other hand, capitalist development still has quite a way to go by way of bringing about a greater differentiation of the wage structure. The

bridging of the urban-rural disparity is going to face increasing difficulty in the face of WTO obstacles to improving agriculture's terms of trade. Public policy for the moderation of inequality much increasingly concern itself with more difficult issues, requiring substantial reallocation of public resources: the institution of a comprehensive system of protection from unemployment; an orderly transfer of labor from agriculture; the creation of a minimal safety net for the poor; and above all a reduction in the urban-rural gap.

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