China's Household Income and Its Distribution, 1995 and 2002*

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ABSTRACT A new, independently designed household income survey for China in 2002 shows some decline in income inequality in both rural and urban China since 1995. However, the overall Gini ratio for China remained unchanged due to a rise in the urban–rural income gap. The reduction in rural inequality stemmed mainly from a fall in both inter-provincial inequality and inequality within most of the provinces, as well as from a further improvement in the distribution of wage income and farm income and a reduction in the regressiveness of net taxes. The reduction in urban inequality came from a fall in inter-provincial inequality and better distribution of imputed rental income and net taxes. The results raise questions about whether recent more equity-oriented policies, such as the "great western development strategy," began to reduce some dimensions of overall income inequality. For the first time, a special survey was implemented to furnish data on migrants living in towns and cities. Incorporating the migrants into the urban population raises urban inequality and reduces the urban–rural gap somewhat, but leaves the latter still very high by international standards.

This article reports the results of the CASS survey of households for 2002[1] and compares them with the results of the earlier CASS surveys of 1995 and 1988, both first reported in this journal.[2] The CASS surveys still remain the only available source of (almost) nation-wide household-level data on income and other individual and household characteristics in China. They also provide the only comprehensive data base for the application of an income definition that helps overcome the limitations of

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1. An independent international group of economists, in collaboration with the Economics Institute of the Chinese Academy of Social Sciences (CASS), first instituted a household survey in 1988 to estimate income and its distribution, in order to get around the problem that official data on household income were available only for highly aggregated groups, not individual households, and that the income definition underlying the official data suffered from numerous deficiencies. The survey was repeated in 1995 and, most recently, in 2002.

2. See A. R. Khan, Keith Griffin, Carl Riskin and Zhao Renwei, "Household income and its distribution in China," *The China Quarterly*, December 1992; A. R. Khan and Carl Riskin, "Income and inequality in China," *The China Quarterly*, June 1998.

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the official definition underlying the published income data in China.[3] This third round of the CASS survey in 2002 was the first time that a separate survey of the migrant households was carried out, providing an opportunity to get a more comprehensive picture of income and its distribution in China including the migrant population in urban areas. This article focuses on the analysis of the changes between 1995 and 2002, including comparisons with the corresponding changes between 1988 and 2002.

Income inequality is a multi-dimensional issue and we concentrate on the following aspects: inequality of household per capita income within the rural and urban populations examined separately; inequality for the combined national population including both sectors; regional (inter-provincial) inequality of rural and urban income; and the average urban–rural disparity of household per capita income. We also attempt to measure the impact on urban and national inequality of the migrant population living in towns and cities.

It is widely acknowledged that income inequality has risen sharply in China since the reform period began in about 1979; indeed, our previous reports on the surveys of 1988 and 1995 led us to conclude that China had changed from being one of the most equal countries in the developing world to one of the more unequal in its region. Table 1 presents recent Gini coefficients of inequality for a small sample of countries in Asia and Latin America for which the measure is available. Inequality in China by the turn of the millennium is seen to be substantially above that of other Asian countries and approaching the very high values found in Latin America.

The trend towards increased inequality appeared to be continuing in the second half of the 1990s. At the same time, however, policy began to address growing regional gaps directly, especially through the promotion of investment in western and interior provinces, and also began to address the growing problem of urban unemployment and related urban poverty. The spread of wage employment in rural areas, partly related to the western development plan, could also have countered growing inequality, since the very unequal incidence of rural non-farm employment has been a principal source of rural inequality.

The 2002 survey revealed a complex result: inequality of household income distribution somewhat unexpectedly declined, compared to 1995,

3. These issues have been discussed in detail in the published results of the 1988 and 1995 CASS surveys, for example Khan *et al*., "Household income" and Khan and Riskin, "Income and inequality." A research report in this journal (Chris Bramall, "The quality of China's household income surveys," *The China Quarterly*, No. 167 (2001)) provides a useful discussion of problems associated with household income surveys of China, including our own earlier ones. Some problems, such as under-representation of very poor, illiterate households and of very rich entrepreneurial ones, are endemic to such surveys, especially in developing countries. We share the belief that property income is understated by our surveys, although we are uncertain whether this problem has worsened between 1995 and 2002 (see n. 26). One particular and glaring weakness – the neglect of rural–urban migrants – we have attempted to remedy at least in part by means of the special survey of migrants included in the present study.

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Table l: **Comparative International Income Inequality, as measured by the Gini Coefficient**

Country	*Gini Coefficient*
Asia	
Bangladesh	31.8
Korea	31.6 (1998)
India	32.5
Indonesia	34.3 (2002)
China	44.7 (2001)
Latin America	
Costa Rica	46.5
Argentina	52.2 (2001)
Chile	57.1
Brazil	58.5 (2001)
United States	40.8

Note:
World Bank, *World Development Indicators*, 2004. Note that the World Bank practice is to present the estimates in the form of indices (coefficients multiplied by 100). The year is 2000 unless otherwise indicated. Except for Korea, estimates for all Asian countries, including China, are of *consumption* inequality which usually tends to be lower than *income* inequality. Note, however, that our own estimate of the Gini for China for 2002 is almost identical (Table 21) to the World Bank estimate of the *consumption* Gini for 2001.

in both rural and urban China taken separately. In both, the fall was connected to a marked decline in regional (inter-provincial) inequality. In rural but not urban China, the decrease was broad-based in that a majority of the provinces experienced declining inequality.[4] However, the Gini measure for China as a whole, including both urban and rural populations, showed no change from 1995. This is because a rise in the already very high gap between average urban and average rural incomes offset the fall in inequality within each sector, leaving overall national inequality unchanged. The increase in the rural–urban gap would have been even greater – and the advance of rural incomes smaller – had there not been a substantial decline in the rural population after 1995. This report underlines the importance of that watershed year, when the absolute size of the rural population peaked and began to fall.

When migrants are added to the urban population and their income included in urban income, both overall national inequality and the urban–rural gap decline somewhat, although China still has an exceptionally large urban–rural disparity. However, adding migrants to the urban population increases *urban* inequality because migrant incomes are generally below the urban average.

The bases for these major conclusions and others as well are laid out in the following sections. The article concludes with a brief overview and discussion of broad policy lessons, especially those relevant to ameliorat-

4. This conclusion should be regarded as tentative because the small sizes of provincial samples leave a large margin of error.

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Table 2: **Comparison of the Surveys for 1995 and 2002**

	1995	*2002*
Rural Sample		
Number of households	7,998	9,200
Number of persons	34,739	37,969
Average household size	4.343	4.127
Number of provinces	19	21
Urban Residents Sample		
Number of households	6,931	6,835
Number of persons	21,694	20,632
Average household size	3.131	3.018
Number of provinces	11	11
Urban Migrants Sample		
Number of households	None	2,000
Number of persons	None	5,318
Average household size	N.A.	2.659
Number of provinces	None	11 (Same as urban residents survey)

Notes:
Provinces included in the 2002 rural sample but not in 1995: Guanxi, Xinjiang. The 2002 urban sample enumerated 7,000 households of which 165 had to be rejected for a variety of problems.

ing the extraordinary urban–rural disparity in the conditions of post-WTO China.

The basic features of the CASS surveys for 1995 and 2002 are summarized in Table 2.[5] The rural sample of the 2002 survey includes two additional provinces, Guangxi and Xinjiang. The urban residents sample includes the same 11 provinces in both years. Between the 1995 and 2002 surveys, the municipality of Chongqing was broken out of Sichuan province and given separate provincial status. In this article, Chongqing is kept as part of Sichuan in order to make the results comparable with those of the earlier survey years. The urban migrant survey of 2002 covers the same 11 provinces as the urban resident survey.[6]

5. Similar details for the 1988 survey can be found in Khan and Riskin, "Income and inequality."

6. The sample of migrant households was chosen by first arbitrarily selecting the provincial capital city and one or two medium or small cities in each province included in the urban sample. City survey teams chose the neighbourhoods and households to survey in their cities, following the rule that 100 households be selected for each large city (mostly provincial capitals), and 50 households for medium or small cities. Only households living in resident communities (*jiedao)* were sampled, which ruled out including migrant workers living on construction sites or in factory dormitories. The number of households selected from any one *jiedao* was limited to ten. The sampling procedure lacked randomness but tried to achieve a fair degree of representation of the migrant population living in residential neighbourhoods.

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Rural Income and Its Distribution

The level, composition and sources of growth of income. Table 3 shows per capita household (personal) income, as defined by us, estimated from the household survey data, as well as its classification into sources of income. It also shows the corresponding estimates from our 1995 survey.

As in the case of the surveys of 1988 and 1995, income based on our definition and the survey data is higher than the official estimate by the National Bureau of Statistics (NBS), formerly the State Statistical Bureau. The NBS estimate of per capita income for 2002 is 2,475.60 *yuan*. The difference between our income estimate and the NBS estimate is thus 33 per cent for 2002, down substantially from the differences of 46 per cent for 1995 and 39 per cent for 1988. In each case our estimate was larger than the official estimate. This difference is accounted for by, first, our inclusion of income elements that are excluded from the NBS definition of income, and secondly, differences in estimates of elements included in both definitions. The first category includes "receipts from enterprises" (included in "other income" and listed as a memo item in Table 3); net subsidies received from the state and the collective (which has a negative value); and rental value of housing. Together, these components come to 15 per cent of NBS income in 2002, or a little less than half the difference between the two estimates. Thus, a little more

Table 3: **Per Capita Disposable Rural Income (Current *Yuan* per Year)**

	1995		*2002*		*Annual real growth rate*
Sources	*Amount*	*Per cent*	*Amount*	*Per cent*	
Individual wages	516.78	22.38	1,017.88	30.82	8.94
Net farm income	1,072.15	46.44	1,261.74	38.21	1.21
Net income from household non-farm activities	224.08	9.71	382.61	11.59	6.74
Property income	9.98	0.43	19.54	0.59	8.85
Rental value of owned housing	267.93	11.61	445.97	13.50	6.35
Net subsidies from the state and collective	− 10.99	− 0.48	− 85.52	− 2.59	32.56
Other income including private transfer	228.70	9.91	260.21	7.88	0.72
Total	2,308.63	100.00	3,302.43	100.00	4.07
Memo item					
Receipt from enterprises	139.89	6.06	2.91	0.09	− 43.13

Note:
The growth rate in "net subsidies" is actually the growth rate in net taxes since net subsidies are a negative amount.

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Table 4: **Contribution of Different Sources to Rural Income Growth, 1995 to 2002 (%)**

	Incremental share	*Annual growth*
Wages	50.4	8.9
Farm income	19.1	1.2
Non-farm enterprise	16.0	6.7
Property & house ownership	18.9	6.8
Net subsidies	− 7.5	32.7
Miscellaneous	3.2	0.7

Note:
Net subsidies were negative in the benchmark year. Their high growth rate indicates that their value became a larger negative.

than half the difference comes from differences in estimates of commonly included elements of income, for which our estimates are 19 per cent higher than those of NBS.[7]

One of the consequences of the fall in the ratio of our survey income and the NBS income between 1995 and 2002 is that the rate of increase in real income between 1995 and 2002 is lower according to our estimate than according to the NBS. Deflating by the per cent change in the rural consumer price index of the NBS between 1995 and 2002 – 8.17 per cent – our estimates yield an annual growth rate in real per capita rural income of either 4.07 or 5.0 per cent,[8] compared to 5.47 per cent according to the NBS estimates.

There have been major changes in the composition of income between 1995 and 2002 (Table 4).[9] Wages were the fastest growing component of income, its share increasing sharply. Indeed, wages accounted for more than half of the change in income between the two surveys. This was due to relatively rapid growth in rural wage employment (Table 5).

The year 1995 marks a watershed in China's demographic transition in that the absolute size of the rural population peaked in that year and started declining rapidly thereafter at an annual rate of 1.33 per cent up to 2002. Rural employment, however, remained almost unchanged so that on a per capita basis it increased by 11 per cent. There was also a marked shift in the structure of rural employment. The largest component, employment in family farms,[10] declined modestly over the period.

7. Some parts of these common income elements, however, are excluded by NBS, such as income in kind and unemployment benefits. This may help to explain the overall difference in estimates. A fuller discussion of these issues is contained in an annex that may be obtained from the authors.

8. The growth rate according to the survey estimates rises to 5% if "net individual income from enterprises other than compensation for labour" is excluded from the income estimate for 1995. This item was absent from the 2002 survey. See annex available from the authors for a discussion of this point.

9. In view of the fall of "receipt from enterprises" to an insignificant level in 2002, this is abolished as an independent category although retained as a memo item in Table 3. This component is now added together with the residual "other income" category.

10. This is not shown separately in Table 5, but probably accounts for almost the entire difference between total employment and non-farm wage employment.

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Table 5: **Changes in Rural Employment**

	1995	*2002*
Rural population (million)	859.5	782.4
Total rural employment (million)	490.3	489.6
Employment per person	0.57	0.63
Non-farm wage employment (million)	133.3	147.0
TVE	(128.6)	(132.9)
Private	(4.7)	(14.1)
Non-farm wage employment per person	0.155	0.188

Note:
Data are from the National Bureau of Statistics, *Statistical Yearbook of China* (*SYOC*) *2003,* Beijing 2003.

More remarkable is the increase in non-farm wage employment. After several years of stagnation, employment in township and village enterprises started increasing in the late 1990s. Private wage employment in rural China, still a small component of total employment, increased at an extraordinarily rapid annual rate of 17 per cent. Together these sources of wage employment increased by 21 per cent on a *per capita* basis over the period. There was also a fairly rapid increase in income from household non-farm activities.

Income from family farming constitutes a distant second largest share of incremental income. The annual rate of growth of this source of income was however very small. This deserves a closer look. Per capita real agricultural value added, defined as value added in agriculture at constant prices divided by the rural population, increased at an annual rate of 4.7 per cent, representing a 3.3 per cent growth in real value added in agriculture and a negative 1.33 per cent growth in rural population.[11] Per capita real personal income of rural households from farming however increased at only 1.2 per cent per year. This suggests a decline in agriculture's terms of trade for the period under review. Note that the meagre increase in per capita income from farming was made possible by the fall in rural population. With an unchanged or increasing population, per capita income from farming might even have fallen due both to diminishing returns, given the scarcity of land, and to the larger number of persons among which to share the income.

Rental value of housing provided 18 per cent of income from non-farm activities, 16 per cent of the total increment in income. This is consistent with the expectation that these are income-elastic components of personal income. Public intermediation through taxes and subsidies was a drag on disposable income: a decrease in net subsidies (increase in net taxes) reduced it by 7.5 per cent. Changes in contributions made by the other sources of income were relatively insignificant as a proportion of incremental income.

11. The growth rate in agricultural value added is calculated from Table 3–4 in National Bureau of Statistics, *SYOC 2003*.

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Finally, the overall importance of remittances from out-migrant family members is of interest. Not reported directly in Table 3, such remittances averaged about 3 per cent of total per capita income over the entire rural sample.[12] This is far below some recent estimates of the importance of remittances in rural income.[13]

The distribution of rural income. Inequality is measured by the Gini ratio, as in our past reports on CASS surveys, and the contributions of individual components of income to inequality are measured by concentration ratios (also called pseudo-Gini ratios). The concentration ratio for wage income (say) is a measure of the inequality of distribution of wage income among all income recipients (not just recipients of wage income). An income component's concentration ratio, multiplied by its share of total income, gives that component's contribution to the overall Gini ratio. The Gini is thus the sum of the concentration ratios of components, each multiplied by its share of income.[14]

Table 6 shows the Gini ratio of rural income and the concentration ratios of the sources of rural income for 2002 and the corresponding estimates from 1995. Rural income inequality declined between 1995 and 2002. Just over half of the increase in the Gini ratio between 1988 and 1995 has been reversed.[15] The decline was brought about by the changed distribution of two sources of income and the change in the distribution of net taxes: compared to 1995, wage income became far less disequalizing, farm income even more equalizing and net taxes far less regressive. The contribution of these three sources to the Gini ratio fell by 0.069, far more than the 0.041 decline in the Gini ratio. In other words, every other component of income had a disequalizing effect.

The most important factor was the distribution of farm income, already a strongly equalizing source of income back in 1995, but much more so in 2002. Its contribution to the Gini ratio fell by 0.033, more than 80 per cent of the total fall in the Gini ratio. The next most important source of the fall in inequality is the sharp decline in the disequalizing effect of the distribution of individual wages. Wages are still a disequalizing source of income, but now only moderately so. The contribution of wages to the Gini ratio fell by 0.025.

Net subsidies – or rather net taxes, because the average value is negative – is the third source of reduction in inequality. In 1995 its

12. The survey instrument asked for remittances from those normally living outside the household and separately for earnings obtained outside the village of family members normally living *in* the household. The figure reported in the text was a sum of these two, but with the second component limited to those who had lived at least 180 days outside the village.

13. See e.g. *Asian Labour News* at http://www.asianlabour.org/archives/001031.html, which cites a finding of a research institute of the Ministry of Agriculture that "the contribution [to average peasant income] from migrant workers' earnings rose … to more than 40%" in 2003. However, a rough calculation comparing the total remittances claimed by this article with total rural income from the Statistical Yearbook, yields a contribution of about 19% from remittances.

14. For a fuller explanation, see Khan and Riskin, "Income and inequality."

15. The Gini ratio of rural income distribution estimated from the 1988 CASS survey was 0.338.

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Table 6: **Rural Gini and Concentration Ratios**

	Per cent of income		*Gini/concentration ratio*		*Per cent of Gini contributed by*	
	1995	*2002*	*1995*	*2002*	*1995*	*2002*
Individual wages	22.38	29.46	0.738	0.455	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
Property income	0.43	0.60	0.543	0.777	0.6	1.2
Rental value of owned housing	11.61	13.77	0.321	0.377	9.0	13.8
Net transfer from state and collective	− 0.48	− 2.62	− 1.759	0.106	2.0	− 0.7
Other income (including private transfer)	9.91	8.01	0.463	0.515	11.0	11.0
Total	100.00	100.00	0.416	0.375	100.0	100.0

concentration ratio was negative, indicating that the lowest income groups paid more than the total amount of net taxes, while the higher income groups received a net subsidy. Perhaps because in 2002 more taxes are reported and captured, the concentration ratio has turned positive, but still is far lower than the Gini ratio, indicating a strongly regressive distribution of net taxes.

The strongly equalizing distribution of farm income can be attributed primarily to China's egalitarian distribution of land. Table 7 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 a result of regional differences in land endowment rather than inequality in any region with given land endowment per rural household. 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 slightly more accessible to the lower income groups than to the higher income groups.[16] 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.

The reduction in the disequalizing effect of wages is perhaps partly explained by the rapid growth in rural employment and a reduction in the

16. This reflects the fact that per capita land holdings are higher (population density lower) in poor and dry regions than in better off irrigated ones.

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Table 7: **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 (excluding Xinjiang and Guangxi). For sources of the 1988 and 1995 estimates see Khan and Riskin *Inequality and Poverty in China*, p. 108.

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 examined individually 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. 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.

Regional inequality. Inter-provincial inequality and its change over time has received much attention, occasioned partly by the Chinese government's changing approach to the issue of achieving geographic balance in development, and partly by interest in theoretical predictions about regional inequality, such as those associated with the Kuznets Curve and of the newer literature on convergence.[17]

17. Simon Kuznets, in "Economic growth and income inequality," *American Economic Review*, 1955; and "Quantitative aspects of the economic growth of nations," *Economic Development & Cultural Change*, 1963, hypothesized that early industrialization causes income inequality to increase up to some level of GDP per capita, at which it starts to decrease again. The convergence view, which developed from the neoclassical growth model of Solow (Robert M. Solow, "A contribution to the theory of economic growth," *Quarterly Journal of Economics*, Vol. 70 (1956)) and others, argues that the spread of markets with development tends to equalize returns to factors of production everywhere. See Robert Barro and Xavier Sala-i-Martin, "Convergence across states and regions," *Brookings Papers on Economic Activity*, No. 1 (1991).

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The literature on regional inequality since 1979 generally agrees that there was a trend of regional convergence in GDP per capita until 1990, followed by divergence since, but insufficient divergence to restore the 1979 distribution. The inter-provincial coefficient of variation thus fell overall by about one-third. However, at least until 1995, the behaviour of per capita personal income was quite different; after a short period of convergence ending in 1982, there was steady divergence in inter-provincial personal income.[18] Moreover, Naughton finds that, when province specific deflators are used, much of the convergence trend even for GDP per capita disappears.[19] The different behaviour of GDP per capita and personal income has preoccupied us in the past, and we address it here as well.[20]

Our own findings suggest that regional inequality in the distribution of personal disposable income declined between 1995 and 2002. As regards 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; this indicates a negative relationship between initial income level and the growth rate of income. The coefficient is not significant at the 5 per cent level, but is significant at the 10 per cent level. Consistent with this, 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. A similar finding holds for urban income, for which regional inequality fell more sharply still (see below).

The reduction in rural inter-provincial inequality was one of the elements helping the reduction in rural inequality which was broad based. As Table 8 shows, inequality fell in 14 of the 19 provinces that are included in the surveys of both years.

In the above the important role of declining rural population in helping both the growth and the favourable change in the distribution of rural income has been emphasized. China's actual rural population in 2002 would have been 911.5 million if it had 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 existing or newly created urban areas during this period.[21] The growth in rural income

18. See Justin Yifu Lin, Cai Fang and Li Zhou, "Social consequences of economic reform in China: an analysis of regional disparity in the transition period" (Beijing, UNDP, 1997).

19. See Barry Naughton, "Provincial economic growth in China: causes and consequences of regional differentiation," in Mary-Frances Renard, M. Audibert, J. F. Brun, J.L. Combes, and P. Guillaumont, *China and Its Regions: Economic Growth and Reform in Chinese Provinces (New Horizons in International Business Series)* (Northampton, MA: Edward Elgar, 2002).

20. See Khan and Riskin, "Income and inequality."

21. This is well in excess of the estimated total net rural–urban migration over the period, which is put at about 72 million persons between 1995 and 2000 (inclusive), or about 100.5 million, assuming net migration in 2001 and 2002 was similar in size to that in 2000. The excess loss of rural population of about 28.5 million is probably due mainly to the re-definition of formerly rural places as "towns." The number is, indeed, similar to Chan and Hu's rough estimate of a 30 million increase in urban population over the entire decade of the 1990s due to new town formation alone. See Kam Wing Chan and Ying Hu, "Urbanization in China:

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Table 8: **Provincial Incomes and Gini Ratios: Rural China**

	Per capita income		*Gini ratio*		*% Change in Gini 1995–2002*	*Annual % change in per cap income*
	1995	*2002*	*1995*	*2002*		
Rural China	2,309	3,302	0.416	0.375	− 9.86	4.07
Gansu	1,138	2,006	0.359	0.335	− 6.69	7.23
Guizhou	1,213	1,670	0.304	0.301	− 0.99	3.51
Shanxi	1,408	2,711	0.324	0.313	− 3.40	8.59
Shaanxi	1,477	2,139	0.398	0.306	− 23.12	4.26
Yunnan	1,516	1,875	0.299	0.300	+ 0.33	1.93
Hunan	1,533	3,099	0.302	0.330	+ 9.27	9.34
Sichuan	1,583	2,730	0.340	0.256	− 24.71	6.89
Jiangxi	1,801	2,749	0.287	0.282	− 1.74	5.04
Anhui	1,827	2,533	0.272	0.265	− 2.57	3.61
Henan	1,872	2,782	0.275	0.260	− 5.45	4.64
Hubei	1,922	2,985	0.311	0.287	− 7.72	5.30
Hebei	2,057	3,426	0.282	0.302	+ 7.09	6.36
Liaoning	2,172	3,234	0.337	0.328	− 2.67	4.67
Jilin	2,376	3,068	0.338	0.276	− 18.34	2.56
Shandong	2,745	3,806	0.432	0.340	− 21.30	3.61
Zhejiang	4,270	7,526	0.362	0.384	+ 6.08	7.22
Jiangsu	4,507	5,666	0.375	0.314	− 16.27	2.17
Guangdong	4,522	5,220	0.390	0.322	− 17.44	0.93
Beijing	5,240	6,715	0.305	0.409	+ 34.10	2.45
Guangxi	–	2,101	–	0.235	–	–
Xinjiang	–	2,566	–	0.336	–	–

Note:
Incomes are in current *yuan* per year. Growth rates are in real terms. They are obtained, first, by deflating the 2002 income by the rural CPI (1.0817) and then by estimating the annual compound growth rate.

might have been lower and the incremental distribution of income might have been worse had all of the increased population remained in rural China and competed for the meagre land and other rural resources.

Urban Residents' Income and Its Distribution

The level, composition and sources of growth of income. Table 9 shows per capita personal income estimated for urban resident households for 2002 and the corresponding estimates based on the 1995 CASS survey.

footnote continued

new definition, different series, and revised trends," *The China Review*, Vol. 3, No. 2 (Fall 2003); also Zai Liang and Zhingdong Ma, "China's floating population: new evidence from the 2000 census," *Population and Development Review*, Vol. 30, No. 3 (September 2004), pp. 467–488.

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Table 9: **Per Capita Disposable Urban Income (Current *Yuan* per Year)**

	1995		*2002*		
	Amount	*Per cent*	*Amount*	*Per cent*	*Annual real growth rate*
Individual wages	3,497.77	61.30	5,814.74	59.54	5.99
Income of retired members	667.14	11.69	1,443.74	14.78	10.06
Individual enterprise	30.23	0.53	267.90	2.74	34.62
Income from property	72.28	1.27	53.92	0.55	− 5.47
Housing subsidy in kind	555.66	9.74	183.09	1.87	− 15.89
Other net subsidies	71.12	1.25	7.17	0.07	− 28.98
Rental value of owned housing	650.12	11.39	1,723.52	17.65	13.30
Other income	161.87	2.84	271.81	2.78	6.15
Total	5,706.19	100.00	9,765.90	100.00	6.44

As in the prior years, income according to our definition and based on the CASS sample is higher than the "per capita annual disposable income of urban households" as estimated by the NBS according to its own definition based on its national survey. The difference for 2002 is 29 per cent as compared to 33 per cent in 1995 and 55 per cent in 1988.[22] This decline over time is due to the trend decline in the value of subsidies that we include but are mostly excluded by the NBS. By 2002 net subsidies had declined to less than 2 per cent of income as compared to 11 per cent in 1995.[23] Some 93 per cent of the difference between our income estimate and the NBS estimate is explained by subsidies and the rental value of housing that are included by us and excluded by the NBS. The difference in the components that are common in the two income definitions is very small. For the common components, our income estimate is less than 2 per cent higher than the NBS estimate.

The rate of growth in per capita real urban income between 1995 and 2002 was 6.4 per cent, less than the 7.2 per cent according to the NBS estimates. The difference was due to the slower than average growth of the components that are included in our income definition and excluded from the NBS definition. This in turn was due to the sharp absolute fall in subsidies. Still, the rate of growth in urban income was three-fifths

22. The NBS estimate of per capita income is 7,702.80 *yuan*. See NBS, *SYOC 2003*, Table 10–4.

23. Chris Bramall ("The quality of China's household income surveys") has argued that our 1995 study greatly underestimated urban subsidies. The basis for this claim was some rough but very high estimates of urban subsidies by the National Bureau of Statistics. While ours may not fully encompass all urban subsidies, they are based upon specific information collected by our survey instruments. We believe, for reasons we will furnish on request, that they are superior to the speculative numbers (called "crude estimates" by the World Bank) of the NBS exercise.

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faster than the rate of growth in rural income. It was also 44 per cent faster than the rate of growth in urban income between 1988 and 1995.

It is worth noting that rapid urbanization during the period under review meant that per capita personal income in China grew at a faster annual rate – 7.06 per cent – than either urban or rural personal income. The corresponding growth rate in per capita personal income during 1988–95 was 5.08 per cent per year.[24] The growth rate in per capita real GDP, based on the official NBS estimates, was 8.12 per cent during 1988–95 and a lower 7.22 per cent during 1995–2002. Thus the elasticity of per capita personal income with respect to per capita GDP rose from 0.63 in the pre-1995 period to 0.98 in the post-1995 period.

During the period under review a number of significant changes in the composition of urban income took place. There was a fall in the share of wages and a rise in the share of incomes for retirees (which includes payments to laid-off workers) while together the share of these two sources of income remained stable. Housing subsidies in kind – the difference between the market rent and actual rent paid by those occupying public and collective housing – fell sharply while the rental value of owned housing went up; the contribution of these two sources together fell a little, from 21 per cent of income to 20 per cent. Housing reform brought down the subsidies by widening homeownership – some 78 per cent of the urban sample households reported owning their own housing, up from 41.7 per cent in 1995 and only 13.8 per cent in 1988 – which expanded the share of the rental value of owned housing.[25] The share of income from individual enterprise increased sharply although it remained low in absolute terms. The shares of property income and non-housing subsidies, already very low in 1995, fell further.[26]

Wage income grew at a slower rate than overall income. This is due to the worsening urban employment situation. Employment *per person* in urban China fell by more than 9 per cent. This reflected a dramatic fall in employment in state and collective enterprises caused by their restructuring away from the past system of using employment as a concealed method of income maintenance. There has been a rapid increase in employment in private, foreign, joint-stock enterprises and self employment categories, but these have not been fast enough to offset the fall in state and collective enterprises on a per capita basis.

24. These growth rates are based on the weighted averages of rural and urban per capita personal incomes from CASS surveys for the three years, weights being proportional to actual rural and urban populations (ignoring the migrants for whom no information is available for 1995).

25. It should be noted that the estimation of the rental value of urban housing reverted back to the method adopted in 1988, the interest on housing equity. In 1995 we used the direct information on actual house rent. The same information proved unusable for 2002.

26. It is hard to tell if the fall in the share of property income simply reflects the worsening of the problem of capturing enough income under this heading in the past. It is however possible that the main source of income from non-housing property, interest on savings deposit, actually fell due to the fall in the rate of interest.

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Table 10: **Sources of Urban Income Growth between 1995 and 2002 (%)**

	Incremental share	*Annual real growth*
Wage	57.1	6.0
Pensions and retirees' income	19.1	10.1
Individual enterprises	5.9	34.6
Income from property	− 0.4	− 5.5
Net subsidies	− 10.8	− 16.9
Rental value of owned housing	26.4	13.3
Other	2.7	6.2
Total income	100.0	6.4

Table 11: **Urban Employment (millions)**

	1995	*2002*
Total employment	190.40	247.80
Total population	351.74	502.12
Employment per person	0.54	0.49
Employment categories		
State and collective enterprises	144.08	82.85
Co-operative & joint enterprises	0.53	2.06
Limited liability & share holding	3.17	16.21
Private	4.85	19.99
Foreign including Taiwan, Macau and Hong Kong funded	5.13	7.58
Self employment	15.60	22.69

Note:
The source of the data is the *NBS, SYOC 2003*. A cryptic note states that the components do not add to the totals which "have been adjusted in accordance with the data obtained from the Fifth National Population Census." This probably means that the components are from independent labour-force type surveys which incompletely count individual employment in informal activities, which are captured by the population census.

The distribution of urban income. The urban Gini ratio fell by 4 per cent between 1995 and 2002 (Table 12). 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 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, the progress of reform of the state-owned and collective enterprises and the rapid growth of private, foreign and mixed-ownership enterprises have made the structure of wages quite unequal. The impact of the disequalization of wages on the distribution of income was blunted somewhat by the fall in

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Table 12: **Urban Gini and Concentration Ratios**

	Per cent of income		*Gini/concentration ratio*		*Per cent of Gini contributed by*	
	1995	*2002*	*1995*	*2002*	*1995*	*2002*
Wages	61.30	59.54	0.247	0.315	45.6	59.0
Pensions/retirees' income	11.69	14.78	0.316	0.307	11.1	14.3
Individual enterprises	0.53	2.74	0.042	0.037	0.1	0.3
Income from property	1.27	0.55	0.484	0.471	1.9	0.8
Housing subsidy in kind	9.74	1.87	0.516	0.316	15.1	1.9
Other net subsidies	1.25	0.07	0.296	− 2.158	1.1	− 0.5
Rental value of housing	11.39	17.65	0.639	0.378	21.9	21.0
Other income	2.84	2.78	0.371	0.359	3.2	3.1
Total income	100.00	100.00	0.332	0.318	100.0	100.0

the share of wages in income. Even so wages contributed a net increase of 0.036, in absolute terms a full 2.6 times the total fall in the urban Gini ratio. Income of retired members is a mildly equalizing source of income. Its absolute contribution to the Gini ratio also went up, but only by 0.008, less than the rise in its share of income. Individual enterprise, a strongly equalizing source of income for the urban residents, also made a slightly higher absolute contribution to the Gini ratio because of the sharp rise in its share.[27]

All 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 source of the reduction in the Gini ratio, large enough to outweigh the disequalizing effect of wages, was housing reform. In 1995, 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 (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

27. The strongly equalizing effect of this source of income, as well as its very small contribution to income, seems to be due to its coming from mostly small-scale activities concentrated among low income groups. Predominant among the migrants (see next section) it is not reported by many full status residents.

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Table 13: **Provincial Incomes and Gini Ratios: Urban China**

	Income		*Gini ratio*		*% change in Gini 1995–2002*	*Annual % change in per cap income*
	1995	*2002*	*1995*	*2002*		
Urban China	5,706	9,766	0.332	0.318	− 4.22	6.44
Shanxi	3,737	7,641	0.256	0.307	+ 19.92	9.18
Henan	3,927	7,492	0.284	0.284	0	8.10
Anhui	4,436	7,952	0.223	0.274	+ 22.87	7.14
Yunnan	4,717	9,155	0.223	0.250	+ 12.11	8.37
Hubei	4,846	8,356	0.233	0.251	+ 7.73	6.55
Sichuan	4,936	8,290	0.264	0.303	+ 14.77	6.15
Liaoning	5,630	10,079	0.299	0.263	− 12.04	7.12
Gansu	5,665	7,602	0.482	0.256	− 46.89	2.80
Jiangsu	5,982	10,918	0.236	0.302	+ 27.97	7.42
Beijing	9,276	16,050	0.264	0.279	+ 5.68	6.60
Guangdong	10,938	15,205	0.316	0.328	+ 3.80	3.32

0.006. Note that if these findings are right, then income distribution estimates based on the NBS data will not capture the fall in urban inequality because they exclude housing subsidy and rental value of housing.

The fall in urban inequality was not broad based like that of rural inequality. Of the eleven provinces, inequality actually increased in eight and remained the same in one. The reduction in the overall urban Gini ratio, despite the increase in most of the provincial urban Gini ratios, clearly indicates that there was a reduction in inter-provincial inequality in income. Support for this is found in the decline in the coefficient of variation for per capita provincial income 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 the 10 per cent level.

The Income of the Migrants and Its Distribution

The level and composition of migrants' income. The CASS survey for 2002 for the first time included a sample of migrant households. The questionnaire used for migrants was much shorter than that used for urban full status residents. Even so, it appears that coverage of their income was reasonably comprehensive and comparable to the coverage of the residents.[28] There are two categories of urban residents' income for

28. However, see n. 6 about the approach taken to sampling the migrants.

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Table 14: **Composition and Distribution of Income of the Migrants to Urban China**

	Per capita income		*Gini/concentration ratio*
	Amount	*% of total*	
Wages	2,189.18	34.40	0.250
Individual enterprise	3,758.01	59.04	0.429
Property	8.16	0.29	0.189
Net subsidies	− 60.33	− 0.95	0.208
Rental value of housing	310.50	4.88	0.658
Other (including pensions)	149.15	2.34	0.408
Total income	6,364.68	100.0	0.380

which no information was sought for the migrants: the income of the retirees and housing subsidy in kind. Since the migrants are by and large not covered by any retirement benefit scheme, it is likely that most would not have any income of this type. Similarly, migrant households are unlikely to have received such large housing subsidies as full status urban residents, as they are excluded from any entitlement to public or collective housing. Some migrants (such as construction workers and nannies) do receive housing on the work site, but even had they been included in the migrant sample it would have been very difficult to estimate its market value. While migrants' income is thus under-estimated by the amount of "housing subsidy" they received, it is unlikely to have been a very substantial sum.

Table 14 shows the migrants' income, its sources and distribution. Migrants' per capita income is approximately half-way between that 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 it remains 35 per cent below that of an urban resident household.

By far the highest proportion of the migrants' income, nearly three-fifths, is derived from individual enterprise, a source that contributes less than 3 per cent of income of full-status residents. This matches the very high proportion of migrants (58 per cent) and very low proportion of full-status residents (less than 6 per cent) engaged in self-employment (Table 15), and is partly accounted for by sample bias, that is, the exclusion of migrants living on construction sites or in factory dormitories from the sample. Wages account for a far smaller proportion of income for migrants than for residents. The migrants are often excluded from public sector employment and are heavily concentrated in informal employment, while some who were engaged in construction and factory employment were excluded from our sample. Some 70 per cent of the employment of the full status urban residents is still derived from government, official institutions and state-owned enterprises, in contrast

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Table 15: **Employment Characteristics of the Migrants and the Residents of Urban China**

	Migrants	*Residents*
Per cent of household members in employment	65.0	49.9
Per cent of those employed in:		
Government and institutions	–	30.8
Other non-enterprise institutions	–	9.6
Enterprises:		
State-owned enterprises (including local)	6.7	29.5
Urban collective	3.6	6.1
Private farm	7.1	3.3
Sino-foreign joint venture	0.5	1.5
Foreign companies	0.1	0.4
State share holding company	0.4	3.3
Other share holding company	1.8	7.2
Rural private & individual enterprise	11.8	0.1
Enterprises under other ownership	6.3	0.4
Self employed	58.3	5.6
Residual	3.5	2.1

Note:
– means zero. For urban residents a two-stage classification is adopted: the first stage consists of (1) enterprise; (2) Party/government agency; (3) institution; and (4) "other"; the second stage consists of a classification of enterprises into ownership categories. For the migrants there is just a one-stage classification into different kinds of enterprises, implying that none is employed in government, institutions (e.g. schools, hospitals) and "other" categories of non-enterprise employers. The Residual category includes those individuals who are shown to be employed without any indication of employment category. Note that the apparent discrepancy with Table 11 is due to the difference in categories and definitions. Data for this table are derived from the CASS survey while the data for Table 11 are from NBS sources.

to less than 7 per cent of the migrant sample employed in state-owned enterprises and none at all in government agencies and institutions.

The proportion employed in the other forms of formal enterprises – urban collectives, private firms, joint ventures, foreign enterprises, state and other share holding companies – is also smaller for migrants than for residents while the proportion employed in informal (rural) enterprises is much higher for migrants than for residents.[29] The result is a much smaller share of migrants' income derived from wages (34 per cent) than of residents' income (58 per cent).

Other notable differences in the composition of income consist of an insignificant share of pensions and a much smaller share of rental value

29. The "rural" enterprises that employ nearly 12% of the migrant workers and a negligible 0.1% of the urban resident workers may be the "agricultural" enterprises located in the rural periphery of urban districts. Alternatively, this may mean that periodically a proportion of urban migrants revert back to rural areas for employment. The survey is unclear on this subject.

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of owned housing for migrants. Only 11 per cent of the sample owned their housing, compared to 78 per cent of full status residents. The share of rental value of housing would be even lower had the migrant sample included those living on construction sites and in factories. Moreover, those who did own their residence were not beneficiaries of the subsidies contained in the housing reform that led to privatization. Their housing assets had to be acquired through construction or at market cost, or possibly higher than market cost in order to overcome the disadvantage caused by the lack of residence entitlement. The migrants are subject to a small net tax while the residents receive a net subsidy. Of course, the survey did not fully capture the discriminatory effect of the lack of access to public services on the migrants' real income.

One final difference between migrant and resident income needs to be stressed. Migrants have a higher number of workers per household member, 0.65 as compared to 0.5 for the residents. Thus, while the per capita income of the migrants is 65 per cent of that of the residents, the income per working migrant is only 50 per cent of the income per working resident.

The distribution of migrants' income. Inequality among migrants is almost 20 per cent greater than among either the urban or rural populations. It looks even worse when comparison is made at the provincial level. The average difference between provincial Gini ratios for migrants and for full status urban residents is 33 per cent. In nine of eleven provinces the migrants' Gini exceeds the residents' Gini, the average difference being 39 per cent. Overall inequality among migrants is less

Table 16: **Income and Inequality: the Migrants**

	Per capita income		*Gini ratio*	
	Amount	*Proportion of residents' income*	*Level*	*Proportion of residents' Gini*
All China	6,365	0.65	0.380	1.19
Shanxi	4,768	0.62	0.370	1.21
Henan	5,435	0.73	0.362	1.27
Anhui	5,078	0.64	0.362	1.32
Yunnan	5,885	0.64	0.447	1.79
Hubei	5,192	0.62	0.323	1.29
Sichuan	6,282	0.76	0.292	0.96
Liaoning	6,711	0.67	0.365	1.39
Gansu	5,001	0.66	0.409	1.60
Jiangsu	9,135	0.84	0.384	1.27
Beijing	8,668	0.54	0.391	1.40
Guangdong	8,077	0.53	0.306	0.93

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due to inter-provincial income difference than is the overall inequality among urban residents.[30]

The greater inequality in the distribution of income for the migrants derives principally from the fact that their largest source of income, from individual enterprise, has a strongly disequalizing effect on income distribution. Market returns to individual enterprise reflect the considerable differences among migrants in entrepreneurial ability and resource endowment. 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 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.

National Income Distribution Without the Migrants

Overall distribution of income for China as a whole was estimated for the earlier years of the CASS survey by combining the urban and rural samples in such a way that in the aggregate sample the proportions of rural and urban individuals were the same as their proportions in the actual population. Migrants were not included in those samples. To arrive at a comparable estimate of national inequality for 2002, we have excluded the migrants and augmented the urban sample by adding the appropriate number of randomly selected households from it to make the combined sample reflect the actual population shares (39 per cent urban, 61 per cent rural). Table 17 shows the Gini and concentration ratios estimated from this national sample.

The first notable feature of the results is that inequality for China as a whole has remained virtually unchanged since 1995. This happened despite the fall in both the rural and urban Gini ratios. The explanation lies in the fact that the inequality between urban and rural China grew very sharply.

As in previous years, the Gini ratio for China as a whole is greater than the Gini ratios for either rural or urban China, indicating the dominance of urban/rural inequality over inequality within each of these groups. In 2002 this effect became much stronger: the national Gini ratio was 21 per cent higher than the average of the rural and urban Gini ratios in 1995. In 2002 this difference widened to 30 per cent.

Urban income and its distribution contribute more than 98 per cent to overall inequality while rural income and its distribution contribute just under 2 per cent. The concentration ratio of rural income is only 5 per cent of the Gini ratio, indicating that it has a strongly equalizing effect on the distribution of overall income. The concentration ratio of urban income is 50 per cent higher than the overall Gini ratio, indicating that it

30. The coefficient of variation in provincial per capita incomes is 0.246 for the migrants and 0.308 for the residents. The coefficient of variation in provincial Gini ratios is however higher for the migrants: 0.124 as compared to 0.093 for the residents.

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Table 17: **National Income Inequality Excluding the Migrants**

	Per cent of income		*Gini/concentration ratio*		*Per cent of Gini contributed by*	
	1995	*2002*	*1995*	*2002*	*1995*	*2002*
Total rural income	(49.09)	(34.62)	0.192	0.023	(20.9)	(1.8)
Wages	10.71	10.67	0.567	0.100	13.4	2.4
Net farm income	23.04	13.23	− 0.001	− 0.153	− 0.1	− 4.5
Net income from non-farm activities	4.80	4.01	0.266	0.212	2.8	1.9
Property income	0.22	0.20	0.327	0.493	0.2	0.2
Rental value of housing	5.74	4.68	0.090	0.026	1.1	0.3
Net transfer from state	− 0.26	− 0.90	− 1.924	− 0.224	1.1	0.4
Other income	4.84	2.73	0.218	0.172	2.4	1.0
Total urban income	(50.89)	(65.38)	0.703	0.677	(79.1)	(98.4)
Wages	31.20	38.85	0.664	0.676	45.8	58.4
Income of retirees	5.95	9.67	0.698	0.673	9.2	14.5
Individual enterprise	0.27	1.81	0.516	0.516	0.3	2.1
Property income	0.64	0.37	0.776	0.745	1.1	0.6
Housing subsidy in kind	4.96	1.22	0.789	0.676	8.7	1.8
Other net subsidies	0.63	0.07	0.687	− 0.268	1.0	–
Rental value of housing	5.80	11.53	0.840	0.707	10.8	18.1
Other income	1.44	1.86	0.719	0.698	2.3	2.9
Total income	100.00	100.00	0.452	0.450	100.0	100.0

Note:
– means negligible.

has a strongly disequalizing effect on the overall income distribution. Indeed a one percentage point shift in the share of income from urban to rural population, with urban and rural distributions unchanged, would reduce the overall national Gini by 0.007 or 1.5 per cent.

The increase in urban income accounted for fully 84 per cent of the increment in real personal income between 1995 and 2002, as its share of total income increased from one-half to nearly two-thirds.[31] This was due partly to urbanization and partly to the sharp increase in urban/rural inequality. Thus, overall inequality increased because of the large increase in the share of urban income which, though less disequalizing in 2002 than in 1995, is strongly disequalizing.

With the exception of property income, all sources of rural income have a strongly equalizing effect on national income distribution, even

31. These estimates ignore any change due to the change in the number and incomes of the migrants for whom no information is available for 1995.

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those which, like wages, have a disequalizing effect on *rural* income distribution. The dramatically equalizing effect of farm income in the overall national context deserves particular notice. With the exception of net subsidies, all components of urban income have a strongly disequalizing effect on national income distribution, including those, such as income from individual enterprise, that have an equalizing effect on *urban* income distribution. The strongly equalizing effect of non-housing subsidies in the overall national context deserves to be noted as a dramatic shift in the distributional outcome of such subsidies between 1995 and 2002.

National and Urban Income Distribution Including the Migrants

The 2002 CASS survey makes it possible to improve on the foregoing analysis by including migrants in the estimate of urban and national inequality. There is much uncertainty about the total number of migrants in urban areas. A recent study based on the 2000 population census concluded that they were 17.2 per cent of the urban population in that year.[32] In this article we have used a slightly higher figure of 18 per cent.[33]

China's population in 2002 is thus classified into three categories: 61 per cent rural residents, 32 per cent urban residents and 7 per cent migrants into urban areas. The urban and rural samples have been augmented by adding randomly selected households from the respective samples to make the combined sample reflect these population shares.

Tables 18 and 19 respectively show the distribution of urban income and the overall national distribution of income including the migrants. The inclusion of the migrants makes the urban income distribution more unequal: the Gini ratio for urban income distribution including the migrants is 0.338 as compared to the Gini ratio of 0.318 excluding the migrants. Nearly 99 per cent of the urban Gini ratio is contributed by the urban residents' income and its distribution. A redistribution of income in favour of the migrants would improve the overall urban income distribution. This is explained by the simple fact that the migrants are much poorer than the residents. The only components of urban income that have an equalizing effect on the overall urban income distribution are individual enterprise and net subsidies, both very small. In contrast, with the exception of the rental value of housing, every components of migrants' income has an equalizing effect on the distribution of overall urban income. Even income from individual enterprise,

32. Liang and Ma, "China's floating population."

33. There are reasons to believe that even this may be an underestimate of the actual number of migrants. Official statistics show an annual decline in rural population of 1.33% and an annual increase of 5.22% in urban population between 1995 and 2002. Assuming the same population share of rural China in 2002 as in 1995, there would have been 129 million more people in rural China than the actual number in 2002. Of course, some urbanization was simply a matter of re-defining formerly rural localities as urban.

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Table 18: **Urban Income Inequality Including the Migrants: 2002**

	Per cent of income	*Gini/concentration ratio*	*Per cent of Gini contributed by*
Total urban residents' income	(87.52)	0.381	(98.7)
Wages	51.92	0.379	58.2
Income of retirees	13.01	0.372	14.3
Individual enterprise	2.48	0.119	0.9
Property income	0.48	0.533	0.8
Housing subsidy in kind	1.70	0.377	1.9
Other net subsidies	0.07	− 1.446	− 0.3
Rental value of housing	15.46	0.436	19.9
Other income	2.41	0.421	3.0
Total migrants' income	(12.48)	0.039	(1.4)
Wages	4.29	− 0.143	− 1.8
Individual enterprise	7.37	0.111	2.4
Property income	0.04	− 0.156	–
Net subsidies	− 0.12	− 0.151	0.1
Rental value of housing	0.60	0.393	0.7
Other income	0.29	0.097	0.1
Total income	100.00	0.338	100.0

which has a disequalizing effect on the distribution of migrant income, has a strongly equalizing effect on the distribution of overall urban income.

The inclusion of the migrants slightly reduces overall national income inequality. This is explained by the fact that the migrants, having an average income which is roughly half-way between the average rural and urban incomes, are clustered closer to the middle of the overall income distribution.

Only rural income has an equalizing effect on overall national distribution, although this effect is less extreme than in the case of the national distribution without the migrants. This is because the inclusion of the migrants makes the rural population less poor relative to the rest of the population.

Migrants' income has a disequalizing effect on the overall national income distribution as shown by its concentration ratio being higher than the Gini ratio. This needs careful interpretation. If there is an increase in the share of the migrants' income which is offset by a proportionate reduction in both rural and urban residents' income, the Gini ratio would rise. If however there is an increase in the migrants' income with a corresponding decline in the income only of *urban* residents, inequality would fall. Note that although migrants' income is disequalizing, several of its individual components, including wages, are not.

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Table 19: **National Income Inequality Including the Migrants: 2002**

	Per cent of income	*Gini/concentration ratio*	*Per cent of Gini contributed by*
Total rural income	(36.03)	0.048	(3.9)
Wages	11.03	0.123	3.0
Net farm income	13.82	− 0.128	− 3.9
Net income from non-farm activities	4.15	0.235	2.2
Property income	0.21	0.519	0.2
Rental value of housing	4.89	0.051	0.6
Net transfer from state	− 0.93	− 0.209	0.4
Other income	2.86	0.206	1.3
Total urban residents' income	(55.99)	0.700	(87.5)
Wages	33.22	0.700	51.9
Income of retirees	8.32	0.698	13.0
Individual enterprise	1.59	0.550	2.0
Property income	0.30	0.761	0.5
Housing subsidy in kind	1.08	0.703	1.7
Other net subsidies	0.04	− 0.673	− 0.1
Rental value of housing	9.89	0.729	16.1
Other income	1.54	0.709	2.4
Total migrants' income	(7.98)	0.482	(8.6)
Wages	2.75	0.379	2.3
Individual enterprise	4.71	0.522	5.5
Property income	0.02	0.338	–
Net subsidies	− 0.08	0.344	− 0.1
Rental value of housing	0.39	0.697	0.6
Other income	0.19	0.504	0.2
Total income	100.00	0.448	100.0

Urban residents' income and its distribution contribute most of the overall inequality, although a little less than in the case of national distribution without the migrants.

Urban–Rural Income Inequality

Urban per capita income was nominally 3.01 times the rural per capita income (Table 20), up from an already very high ratio of 2.47 in 1995. At 1995 purchasing power the ratio is 2.95. When migrants are included, the weighted average urban income falls to 2.82 times the rural. Still, such a high level of urban/rural inequality is rare in the developing world. Because housing markets remain incomplete and imperfect in China, we also show the ratios for income excluding the imputed rental value of owned housing. The urban–rural income gap *excluding* migrants falls from 3.01 (including imputed housing income) to 2.82 (without it) because urban residents' housing income advantage exceeds their overall

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Table 20: **Urban–Rural Income Inequality With and Without Migrants**

	Including imputed housing income	*Excluding imputed housing income*
Migrants' total per capita income	6,364.68	6,054.18
Migrant share of urban population	0.18	0.18
Urban residents' total per capita income	9950.99	8042.38
Urban residents' share of urban population	0.82	0.82
Urban per capita income, weighted average	9,305.45	7,589.93
Rural total income	3,302.43	2,856.46
1995 urban/rural income ratio	2.47	–
2002 urban/rural income ratio, without migrants, nominal	3.01	2.82
at 1995 cost of living	2.95	–
Migrant/rural income ratio	1.93	2.12
Urban/rural income ratio, with migrants in urban population	2.82	2.66

income advantage over rural residents. With migrants included in the urban population, the urban–rural income gap falls from 2.82 when imputed housing income is counted to 2.66 when it is not counted. Migrants on average have 44 per cent less imputed rent income than rural residents, so the migrant/rural income ratio *rises* to 2.12 from 1.93 when imputed housing income is ignored.

Thus, including migrants in the income distribution makes little difference to the picture of an extraordinarily large urban–rural income gap by international comparative standards. Indeed, even if the migrant share of the urban population is double our estimate of 18 per cent, the urban–rural income ratio would still be very high at 2.62. This can be partly blamed on the past extraordinary administrative separation of urban and rural China, which created a huge disequilibrium that resumed labour mobility has not yet been able to eliminate. However, the fact that the gap has grown in recent years despite increased mobility suggests that China's growth strategy remains highly urban-biased.

An Overview and Conclusions

In the period between 1995 and 2002, inequality in the distribution of rural income fell by almost 10 per cent as measured by the Gini ratio, recording a reversal of the trend that had characterized much of the period since the beginning of reforms. The reduction in inequality was due to a reduction in both inter-provincial inequality and inequality in most of the

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Table 21: **A Summary of the Main Indicators**

	1995	*2002*
Rural residents		
Gini ratio	0.416	0.375
Per capita income (current *yuan* per year)	2,309	3,302
Real annual per capita income growth rate in the preceding seven years (%)	4.71	4.07
Urban residents		
Gini ratio	0.332	0.318
Per capita income (current *yuan* per year)	5,706	9,766
Real annual per capita income growth rate in the preceding seven years	4.48	6.44
Migrants		
Gini ratio	–	0.380
Per capita income (current *yuan* per year)	–	6,365
Urban residents and migrants combined		
Gini ratio	–	0.338
Per capita income (current *yuan* per year)	–	9,160
Urban–rural income gap		
Excluding migrants (current *yuan*)	2.47	3.01
Including migrants in urban population	–	2.82
Overall national Gini ratio		
Excluding migrants	0.452	0.450
Including migrants	–	0.448

provinces. Improvement in the distribution of farm income and wage income and a reduction in the regressivity of net taxes all contributed to this result. During the period under review the rate of growth of rural income was slower than in the recent past and much slower than the rate of growth of urban income. The decline in rural population after 1995 was an important factor behind the growth in per capita income of the rural population.

Personal income growth in urban China was extremely high, and its distribution became more equal, with a 4 per cent decline in the urban Gini ratio. Much of the impetus for reduced urban inequality came from a fall in inter-provincial inequality, from housing reform and from the reform of public finance. Housing subsidies, which were disproportionately appropriated by better-off households, were sharply reduced and the remaining subsidies, especially non-housing subsidies, were much better targeted to the poorer households. As homeownership became more widespread, its benefits became more broad-based and less disequalizing. These changes are not captured by official data which exclude them from income. Together with an increase in social-protection payments to

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laid-off urban workers, they more than offset the increased inequality of wage distribution.

On average migrants nearly double their income by moving from rural to urban areas although their income still remains less than two-thirds that of full status urban residents on a per capita basis and only one-half on a per worker basis. The difference between migrant and urban resident incomes came partly from the exclusion of the former from much of the formal labour market, public services and asset redistribution programmes like the housing reform. Migrants have greater income inequality than either rural or urban residents. This is perhaps related to the importance in migrant income of individual enterprise, for which earnings are highly sensitive to varying individual endowments of labour, skill and other resources.

Despite the fall in both rural and urban Gini ratios, that of 0.45 for overall national income distribution was little changed from 1995, due to the sharply widened urban/rural inequality. Although somewhat reduced when migrants are included in the urban population, the urban–rural gap remains very high by international comparative standards. The inclusion of the migrants increases the inequality of urban income distribution but slightly reduces the inequality of overall national income distribution.

In their earlier writings the present authors identified the principal causes of the increased inequality in China between 1988 and 1995 as: first, the increase in inter-regional inequality; secondly, slow and disequalizing rural income growth; thirdly, regressive transfer to households and reduced transfer from rich to poor provinces; fourthly, slow growth in employment and a lack of social protection for laid-off workers; and finally, the restrictions on and discriminatory treatment of migrants.[34] It appears that there have been policy responses dealing with a number of these problems in recent years, including a restructured poverty reduction strategy; adoption of the "great western development strategy" in February 2000, which led to a large increase in infrastructure investment in this region; liberalization of the *hukou* system, facilitating a great deal of de-facto movement of labour out of rural areas[35]; and the adoption of a programme for the protection of the urban poor.[36] The disequalizing effect of the system of urban subsidies has also been substantially reduced. Migration has somewhat eased the problem of employment growth in rural areas, but urban unemployment remains serious, despite partial alleviation of some of its worst consequences by the new system of protection.

However, success in reducing the massive and still growing disparity between urban and rural income has eluded China. One can think of three kinds of strategies to bring about a faster growth in rural income: an improvement in agriculture's terms of trade; promotion of non-farm rural

34. See Khan and Riskin, "Income and inequality" and *Inequality and Poverty in China*.

35. For a convenient summary of the reforms in the *hukou* system, see Zhang Ye, "Hope for China's migrant women workers," *China Business Review*, May–June, 2002.

36. For details see Hussain, *Urban Poverty in PRC*.

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activities; and a more rapid and non-discriminatory system of migration from rural to urban areas. The failure to maintain improved terms of trade for agriculture after 1996 seems to be a complex phenomenon. During this period the reform for WTO accession appears to have limited the sustainability of high producers' prices for farm products which had been introduced in 1994. With the exception of rice, domestic prices of grains rose to or above the level of world prices. Thus, improving agriculture's net barter terms of trade by raising producers' prices is not a sustainable policy. Future improvement in farm income must be based principally on improved single factoral terms of trade[37] for agriculture by way of increased labour productivity. The success of this critically depends on the continued liberalization of the labour market so that agriculture can continue to shed its still considerable surplus labour for employment elsewhere.

Rural non-farm household production activities have been a highly disequalizing income source, so their promotion must be accompanied by efforts to improve the capacity of poorer regions and people to engage in such activities. Similarly, wage-earning opportunities where possible should be promoted for poorer sections of the rural workforce.

Migration has helped ease the problem of rural poverty and its continuation is highly desirable, accompanied by efforts to reduce the discrimination to which urban migrants are still subjected.

Thus a policy to increase rural income should combine all three approaches: improving factor productivity in agriculture; promoting rural non-farm activities while improving the access of the poor to these activities; and continuing an orderly flow of labour out of rural areas.

37. "Single factoral terms of trade" measures the command of a unit of a factor of production (here, labour) over imports and is calculated by multiplying the net barter terms of trade (ratio of export to import prices) by an index of labour productivity in the export sector.

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