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ARK

GROWTH AND DISTRIBUTION OF HOUSEHOLD INCOME IN CHINA BETWEEN 1995 AND 2002

I

INTRODUCTION

This paper 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. The CASS surveys still remain the only source of 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 the official definition that underlies the published income data in China.[2] This third round of the CASS survey in 2002 was also the first time that a separate survey of the migrant households was carried out. This provides an opportunity for the first time to get a more comprehensive picture of income and its distribution in urban China and China as a whole including the so-called floating migrant population in urban areas. Since several earlier papers and books have provided a detailed analysis of the change in income and its distribution between 1988 and 1995, this paper will focus on the analysis of the change between 1995 and 2002. References to the year 1988 will be made to compare changes between 1995 and 2002 with the corresponding changes between 1988 and 2002.

Table 1 summarizes the basic features of the CASS surveys for 1995 and 2002.[3] The rural sample of the 2002 survey includes two additional provinces, Guangxi and Xinjiang. The urban residents sample includes the same 11 provinces in

[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] These issues have been discussed in detail in the published results of the 1988 and 1995 CASS surveys. See, for example, Khan, Griffin, Riskin and Zhao, 1992 and Khan and Riskin, 1998.

[3] Similar details for the 1988 survey can be found in Khan and Riskin, 1998.

both years. The urban migrant survey of 2002 covers the same 11 provinces as does the urban resident survey. Between the two surveys, the province of Sichuan was divided up into two separate entities: Chongqing (with the same status as that of large metropolitan centers like Beijing and Shanghai) and Sichuan (consisting of the rest of former Sichuan). In this paper Chongqing and Sichuan are combined together into Sichuan in order to make results comparable with those of the earlier survey years.

Table 1

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
Provinces Included in 2002 but not in 1995		Guangxi Xinjiang
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)

Note: The 2002 urban sample enumerated 7,000 households of which 165 had to be rejected due to a variety of problems.

Since papers on the results of the 1988 and 1995 CASS surveys have dealt in details with income definition and methodological issues, discussions on these issues are kept at a minimum in the present paper. Most of the remaining details on these are relegated to the annex.[4]

II
RURAL INCOME AND ITS DISTRIBUTION

1. The Level, Composition and Sources of Growth of Income

Table 2 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 estimate 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 (SSB), based on *their* definition and survey. But the difference for 2002 is lower than it was for 1995 or 1988. 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 as compared to 46 per cent for 1995 and 39 per cent for 1988, in each case our estimate being larger than the official estimate.[5]

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. Using the per cent change in the rural consumer price index of the NBS between 1995 and 2002 – 8.17 per cent – as the deflator, the annual growth rate in real per capita rural income is 5.47 per cent according to the NBS estimates and 4.07 per cent according to our survey estimates.[6]

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[4] These details are to be found in Griffin and Zhao, 1993, Khan and Riskin, 2001 and in references cited in them.

[5] See the annex for a detailed discussion of these differences.

[6] Note that the growth rate according to the survey estimates would rise to 5 per cent if "net individual income from enterprises other than compensation for labor" is excluded from the income estimate for 1995. See the annex for the relevance of this point.

Table 2

Per Capita Disposable Rural Income (Current Yuan per Year)

Sources	1995 Amount	1995 Per Cent	2002 Amount	2002 Per Cent	Annual Real Growth Rate
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.

There have been major changes in the composition of income between 1995 and 2002 due to different rates of growth of different sources of income (Table 3).[7] Wages were the fastest growing component of income so that the proportion of income contributed by wages increased sharply. Wages accounted for more than half of the incremental income between the two surveys. This was due to relatively rapid growth in rural employment (Table 4).

[7] 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 1. This component is now added together with the residual "other income" category.

Table 3

Contribution of Different Sources to Rural Income Growth (%)

	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 larger negative.

It is uncertain how accurate and conceptually meaningful the estimate of total rural employment, reported from NBS estimates, is. The largest component of employment is employment in family farms,[8] which appears to have declined modestly over the period. Per capita rural employment however increased by as much as 11 per cent. This was due to a decline in the absolute size of the rural population. 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, the annual rate of decline until 2002 being 1.33 per cent.

More remarkable, and helpful in explaining the sharp rise in wage income, is the increase in non-farm wage employment. After several years of stagnation, employment in Township and Village Enterprises (TVEs) 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. In line with

[8] This is not shown separately in Table 4. But this probably accounts for almost the entire difference between total employment and non-farm wage employment.

the increase in non-farm wage employment there was a fairly rapid increase in income from non-farm enterprises.

Table 4

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 have been obtained from the *China Statistical Yearbook 2003*.

Income from family farming constitutes the 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.[9] 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 over the period under review.[10] Note that the

[9] The growth rate in agricultural value added is calculated from Table 3-4 in NBS, 2003.

[10] Until recently it was possible to make a more direct estimate of agriculture's terms of trade as the ratio of the "General Purchasing Price Index of Farm Products" to the "General Rural Retail Price Index of Industrial Products". Both these indices are shown in NBS, *China Statistical Yearbook 2000*, p. 290. The index of terms of trade for agriculture, thus calculated, had the following values for selected years: 1978: 100; 1988: 177 (steady increase in the intervening period, the index peaking in 1988); 1993: 154 (steady fall between 1988 and 1993, the year in which the index bottomed out); 1994: 184; 1995: 192 (sharp rise for two years which was followed by only a small decline in 1996); 1999: 151 (steady fall since 1996).

meager increase in per capita income from farming, after the erosion due to the decline in terms of trade, 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.

Next two sources of income, in terms of their importance as contributors to the increment to per capita income, are rental value of housing (18 per cent of increment in income) and income from non-farm activities (16 per cent of incremental income). This is consistent with the expectation that these are income-elastic components of personal income.

Public intermediation through taxes and subsidies tended to slow down the rate of increase in disposable income. Decrease in net subsidies (increase in net taxes) accounted for 7.5 per cent reduction in personal disposable income.

Changes in contributions made by the other sources of income were relatively insignificant as a proportion of incremental income. The share of income from non-housing property increased, but it continued to be very small. The residual category of other income fell as a proportion of income. As explained above, and shown by the change in the share of the memo item in Table 1, this is more than fully explained by the reclassification and addition of "net individual income from enterprises other than labor remuneration" to this category.

2. The Distribution of Rural Income

Inequality is measured, as in the studies reporting the past CASS surveys, by the Gini ratio and the contributions of individual components of income to inequality are measured by concentration ratios (also called pseudo-Gini ratios). The concentration ratio for the i-th component of income (say income from farming) is estimated from the "pseudo-Lorenz" distribution of the i-th source of income, which shows the cumulative

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After 2000 the NBS stopped publishing the two indices on which these terms of trade estimates are based. The comparison of the change in real growth in value added and the real growth in personal income suggests that this decline has continued until 2002.

proportion of income from this source (in the present example income from farming) accruing to the cumulative proportion of population ranked in ascending order of *per capita income* (not per capita income from farming). The estimation of the concentration ratio in relation to the pseudo-Lorenz distribution follows exactly the same procedure as the estimation of the Gini ratio in relation to the Lorenz distribution. The relationship between the Gini ratio and the concentration ratios is as follows:

$$G = ? q_i C_i$$

where q_i is the proportion of income contributed by the i-th source of income, C_i is the concentration ratio of the i-th source of income and G is the Gini ratio. The contribution of the i-th source of income to inequality (Gini ratio) is given by $q_i C_i$ and the per cent of overall inequality (Gini ratio) contributed by the i-th source of income is given by $100(q_i C_i/G)$. If $C_i < G$, the i-th component is considered to be equalizing; a rise in its share of income would reduce inequality. If $C_i > G$, the i-th component is considered to be disequalizing; a rise in its share of income would increase inequality.

Table 5 shows the Gini ratio of rural income and the concentration ratios of the sources of rural income for 2002 and the corresponding estimates from our survey of 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.[11] The decline in the Gini ratio 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 became even more equalizing and net taxes became 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 contribution to the reduction in inequality was due to the distribution of farm income, already a strongly equalizing source of income back in 1995, but much more strongly equalizing 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.

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

Table 5

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

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, while in 1995 they were massively disequalizing, in 2002 they are only moderately disequalizing. The contribution of wages to the Gini ratio fell by 0.025. It is interesting to note that wages derived from local TVEs are far more disequalizing than other wages for 2002, a phenomenon for which there is no comparable information for 1995.

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

Table 6

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 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 6 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.

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. 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. The coefficient is not significant at 5 per cent level, but is significant at 10 per cent level. 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.

Table 7

Provincial Incomes and Gini Ratios: Rural China

	Per Capita Income		Gini Ratio		% Change in	Annual % Change
	1995	2002	1995	2002	Gini 1995-2002	in Per Cap Income
Rural China	2309	3302	0.416	0.375	-9.86	4.07
Gansu	1138	2006	0.359	0.335	-6.69	7.23
Guizhou	1213	1670	0.304	0.301	-0.99	3.51
Shanxi	1408	2711	0.324	0.313	-3.40	8.59
Shaanxi	1477	2139	0.398	0.306	-23.12	4.26
Yunnan	1516	1875	0.299	0.300	+0.33	1.93
Hunan	1533	3099	0.302	0.330	+9.27	9.34
Sichuan	1583	2730	0.340	0.256	-24.71	6.89
Jiangxi	1801	2749	0.287	0.282	-1.74	5.04
Anhui	1827	2533	0.272	0.265	-2.57	3.61
Henan	1872	2782	0.275	0.260	-5.45	4.64
Hubei	1922	2985	0.311	0.287	-7.72	5.30
Hebei	2057	3426	0.282	0.302	+7.09	6.36
Liaoning	2172	3234	0.337	0.328	-2.67	4.67
Jilin	2376	3068	0.338	0.276	-18.34	2.56
Shandong	2745	3806	0.432	0.340	-21.30	3.61
Zhejiang	4270	7526	0.362	0.384	+6.08	7.22
Jiangsu	4507	5666	0.375	0.314	-16.27	2.17
Guangdong	4522	5220	0.390	0.322	-17.44	0.93
Beijing	5240	6715	0.305	0.409	+ 34.10	2.45
Guangxi	-	2101	-	0.235	-	-
Xinjiang	-	2566	-	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.

The reduction in inter-provincial inequality was one of the elements helping the reduction in rural inequality which was broad based. As Table 7 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 favorable 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 urban areas during this period.[12] 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 (*houkou)*. 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.

III
URBAN RESIDENTS' INCOME AND ITS DISTRIBUTION

1. The Level, Composition and Sources of Growth of Income

Table 8 shows per capita personal income estimated for the urban resident households for 2002 and the corresponding estimates based on the 1995 CASS survey. 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 the urban households" as estimated by the NBS according to its own definition based on their national survey. This difference for 2002 is 29 per cent as compared to 33 per cent in 1995 and 55 per cent in 1988.[13] This decline over time is due to the trend decline in the value of subsidies that are included in our definition but mostly excluded from the NBS definition. By 2002 net subsidies had declined to less than 2 per cent of income as compared to 11 per cent in 1995. Ninety three per cent of the difference between our income estimate and the NBS estimate is explained by the items that are included by us and excluded by the NBS: subsidies and the rental value of housing. 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.

[12] 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 (Zai Liang, and Zhongdong Ma, "China's Floating Population: New Evidence from the 2000 Census", Department of Sociology, SUNY at Albany (manuscript). It seems that for a large proportion of those who have ceased to remain rural residents the formerly rural location 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.

[13] The NBS estimate of per capita income is 7,702.80 Yuan. See NBS, 2003, Table 10-4.

Urban per capita income in 2002 is 2.96 times the rural per capita income. This ratio was 2.47 in 1995. During the period between 1995 and 2002 the consumer price index is estimated to have increased a little faster for the urban residents than for the rural residents – at 10.59 per cent as compared to 8.17 per cent for the rural areas over the period as a whole. Even at 1995 purchasing power the ratio of urban per capita income to rural per capita income is 2.89. Such a staggering level of urban/rural inequality is almost unheard of in the developing world.

Table 8

Per Capita Disposable Urban Income (Current Yuan per Year)

	1995		2002		Annual Real Growth Rate
	Amount	Per Cent	Amount	Per Cent	
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

The rate of growth in per capita real urban income between 1995 and 2002 was 6.4 per cent, less than 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 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 than either urban or rural personal income. The annual growth rate in per capita personal income was 7.06 per

cent during this period. The corresponding growth rate in per capita personal income during 1988-95 was 5.08 per cent per year.[14] 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 consumption with respect to per capita GDP was 0.63 in the pre-1995 period and 0.98 in the post-1995 period. It is possible that this change in macroeconomic policy, permitting a much higher incremental share of GDP to accrue to households than in the past, was a conscious policy to induce a faster growth in personal income and consumption in the post-Asian crisis period when China was concerned that the slower growth in the rest of Asia and the world economy would result in a decline in the growth rate in external demand.[15] We do not have enough details to document how the change in the distribution of incremental income in favor of households was brought about. Clearly the policy changes mostly benefited the urban households who experienced a much faster growth in income than what they experienced in the past or what the rural households experienced in either 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 the retirees (which includes payments to laid-off workers) while together the share of these two sources of income increased from 73 per cent of total income to 74 per cent. 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 which expanded the share of the

[14] These growth rates are based on the weighted averages or 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).

[15] *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, the first full year after the Asian crisis hit some of the East Asian countries. Thereafter it fell steadily to 2.24 per cent in 2001. It stood at 2.60 per cent in 2002. Final consumption in China as a proportion of GDP fell sharply from 0.64 in 1988 to 0.57 in 1995. It seems that China succeeded in arresting this decline and raising it to 0.58 in 2002. All data for these estimates are from NBS, 2003.

rental value of owned housing.[16] 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.[17]

Table 9

Sources of Urban Income Growth between 1995 and 2002 (Per cent)

	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

Wages as a source of income has grown 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 nine per cent. This was due to 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 unemployment insurance. 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.*

[16] 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.

[17] 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.

Table 10

Urban Employment
(Numbers in 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
Cooperative & Joint Enterprises	0.53	2.06
Limited Liability & Share Holding	3.17	16.21
Private	4.85	19.99
Foreign Incl. Taiwan, Macao and Hong Kong Funded	5.13	7.58
Self Employment	15.60	22.69

Note: The source of the data is the *China Statistical Yearbook 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 5th National Population Census". This probably means that the components are from independent labor-force type surveys which incompletely count individual employment in informal activities which are captured by the population census.

2. The Distribution of Urban Income

The urban Gini ratio fell by four per cent between 1995 and 2002 (Table 11). 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. The impact of the disequalization of wages on the distribution of income was blunted somewhat by the fall in 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 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.[18]

Table 11

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

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

[18] The authors of this study have wondered in the past about the strongly equalizing effect of this source of income as well as its very small contribution to income. It is not until we get to the next section that this issue becomes clearer: these are small-scale activities which are predominant among the migrants. The few among the residents who engage in these activities seem to belong to low income groups.

contribution to the reduction of the Gini ratio, that was large enough to outweigh the disequalizing effect of wages, was due to housing reform. 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. 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.

Table 12

Provincial Incomes and Gini Ratios: Urban China

	Income		Gini Ratio		% Change in	Annual % Change
	1995	2002	1995	2002	Gini 1995-2002	in Per Capita Income
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

Unlike rural inequality, the fall in urban inequality was not broad based. Of the eleven provinces, inequality actually increased in eight and remained the same in one. In

only two provinces, Liaoning and Gansu, urban inequality fell. 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 by 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 10 per cent level.

IV

THE INCOME OF THE MIGRANTS AND ITS DISTRIBUTION

1. The Level and Composition of Migrants' Income

CASS survey for 2002 for the first time included a sample of floating migrant households. The questionnaire used for the enumeration of the migrants' income characteristics was however substantially abbreviated as compared to the questionnaire used for the enumeration of the income of the urban residents. Even so, it appears that the coverage of their income has been reasonably comprehensive and comparable to the coverage of the income of the residents. There are two categories of urban residents' income for 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 does not seem likely that they would have any income of this type. Similarly, migrant households are unlikely to have received any housing subsidy as they are excluded from any entitlement to public or collective housing.

Table 13 shows the migrants' income, its sources and distribution. Table 14 shows the sources of employment of the migrants and comparative data for the urban residents. 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.

Table 13

Composition and Distribution of Income of the Floating 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	18.16	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

By far the highest proportion of the migrants' income, nearly three-fifths, is derived from individual enterprise, a source that contributes less than three per cent of income of the residents. This matches the very high proportion of migrants (58 per cent) and a very low proportion of the residents (less than 6 per cent) engaged in self-employment. Wages account for a far smaller proportion of income for the migrants than for the residents. This reflects the difference between the two groups with respect to the composition of wage employment. The migrants are generally excluded from public sector employment and are heavily concentrated in informal employment. Seventy per cent employment of the urban residents is still derived from government, official institutions and state-owned enterprises. In contrast, less than seven per cent employment of the migrants is derived from state-owned enterprises and none from the government agencies and institutions.

Table 14

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) Government Agency; (3) Institutions; 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 (probably organizations like teaching and medical institutions) and "Other" categories of non-enterprise employers. Residual category includes those individuals who are shown to be employed without any indication of employment category. Note that the apparent discrepancy between this Table and Table 10 is due to the difference in categories and definitions. Data for this Table are derived from the CASS survey while the data for Table 10 are from NBS sources.

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 the migrants than for the residents while the proportion employed in informal (rural) enterprises is much higher for the migrants than for the

residents.[19] The result is a much smaller share of income derived from wages by the migrants (34 per cent) than by the residents (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 of housing for the migrants. Their share of the rental value of housing is low because they have not been the beneficiary of housing reform leading to the privatization of housing. Their housing assets are derived entirely from own investment in construction at market cost, or possibly higher than market cost in order to overcome the disadvantage that is caused by the lack of residence entitlement. The migrants are subject to a small net tax while the residents receive a net subsidy. It is worth noting that the survey has not fully captured the discriminatory effect of the lack of access to public services on the migrants' real income.

One final difference between the income of the migrants and the income of the residents 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.

2. The Distribution of Migrants' Income

Inequality among the migrants is greater than the inequality among either the urban residents or the rural population. While this is established by a comparison of the respective Gini ratios for China as a whole, the inequality among the migrants looks worse when comparison is made at the provincial level. The Gini ratio for the migrants is almost 20 per cent higher than the Gini ratio for the urban residents for China as a whole. The average per cent difference between provincial Gini ratios for the two groups is however much higher, 33 per cent. For only two provinces, Sichuan and Guangdong, the migrants' Gini is lower than the residents' Gini. In the other nine provinces the migrants'

[19] The "rural" enterprises that employ nearly 12 per cent of the migrant workers and a negligible 0.1 per cent 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.

Gini exceeds the residents' Gini by an average of 39 per cent. The overall inequality among the migrants is less due to inter-provincial income difference than is the overall inequality among the urban residents.[20]

Table 15

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

The greater inequality in the distribution of income for the migrants principally derives from the fact that their largest source of income, from individual enterprise, has a strongly disequalizing effect on income distribution. This does not seem to be due to the regional difference in earning from this source. With the exception of Anhui, this source of income has a disequalizing effect on provincial income distribution everywhere else. Market return to individual enterprise clearly reflects the considerable difference among

[20] 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 ratio is however higher for the migrants: 0.124 as compared to 0.093 for the residents.

the migrants in terms of entrepreneurial ability and resource endowment. Despite significant increase in its differentiation since the beginning of reforms, the wage structure, 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.

V

NATIONAL INCOME DISTRIBUTION WITHOUT THE MIGRANTS

Overall distribution of income for China as a whole was estimated for the earlier years of 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 actual population.[21] Migrants were not included in those samples. To arrive at a comparable estimate of national inequality we therefore need to exclude the migrants and construct a national sample by aggregating the rural and urban samples in such a way that the individuals belonging to urban households represent 39 per cent of all individuals, which was the proportion of China's urban population in 2002 according to official estimates. The urban sample of the 2002 CASS survey represents 35.2 per cent of all individuals included in the urban and rural samples together. It was therefore necessary to randomly select 1,209 urban households from the urban sample and add them to the original samples to form the new national sample of 8,044 urban households and 9,200 rural households.[22] Table 16 shows the Gini and concentration ratios estimated from this national sample.

[21] In both 1988 and 1995 rural population was under-sampled so that the combined national sample was formed by augmenting the rural sample by randomly adding the requisite number of rural households from the original sample, so that in the final sample the randomly drawn rural households were counted twice as two separate rural households.

[22] If the average size of these additional urban households turns out to be the same as for the average of the original urban sample, then there would be 37,996 (61 per cent of the total) rural individuals and 24,293 (39

The first noteworthy feature of the results is that inequality for China as a whole has remained virtually unchanged since 1995. This has 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 has widened very sharply.

Table 16

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.

per cent) urban individuals in the aggregate national sample. The actual numbers turn out to be slightly different because the average size of the additional 1209 urban households will not be exactly the same as that for the original sample.

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 locations. In 2002 this effect has become 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 over one per cent. The concentration ratio of rural income is only five 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 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 by 1.5 per cent.

The share of urban income has increased from one-half in 1995 to nearly two-thirds in 2002. Of the overall increment in real personal income in China between 1995 and 2002, the increase in rural personal income accounted for only 14 per cent while the increase in urban personal income accounted for the remaining 84 per cent.[23] This was partly due to a rise in the proportion of population in urban areas and partly due to the sharp increase in urban/rural inequality. Between 1995 and 2002 rural income has become more equalizing and urban income has become less disequalizing. Even so, overall inequality has 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. This applies to wages, income from non-farm enterprise and the other components which 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 the components of urban income have strongly disequalizing effect on national income

[23] 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.

distribution. This included those components of income, like income from individual enterprise, which 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.

VI

NATIONAL AND URBAN INCOME DISTRIBUTION INCLUDING THE MIGRANTS

The analysis of urban and national inequality in the preceding sections suffers from the neglect of the floating migrants. The 2002 CASS survey makes it possible to estimate urban and national inequality by including the migrants. Although there are no comparable estimates for earlier years, a comparison between inequality with and without the migrants should provide useful insights into China's evolving income distribution.

There is little consensus about the magnitude of the floating migrants. A recent study based on the 2000 population census concluded that the floating migrants were 17.2 per cent of the urban population in that year.[24] In this paper we have used a slightly higher figure of 18 per cent.[25]

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.[26]

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[24] Zai Liang and Zhongdong Ma, 2003.

[25] 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 per cent and an annual increase of 5.22 per cent in urban population between 1995 and 2002. These demographic figures indicate that migrants from rural to urban areas must have been larger if one simply counts those who have moved out since 1995. 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.

[26] Of the total of 63,958 individuals in the three samples, the shares of the three groups are: rural 59.4 per cent, urban 32.3 per cent and migrants 8.3 per cent. The migrants are most over-sampled. By randomly selecting 2,025 rural households and 1,218 urban households and adding them to the original samples we

Table 17

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

Tables 17 and 18 respectively show the distribution of urban income and the overall national distribution of income including the migrants. The inclusion of the

obtain an aggregate national sample with 11,225 rural households (46,360 individuals), 8,053 urban resident households (24,320 individuals) and 2,000 migrant households (with 5,320 individuals). These give us the desired population shares for the three groups. Note that the number of individuals in the parentheses assumes that the average size of the added households is the same as the average household size in the original sample. In practice there is a slight discrepancy.

migrants makes the urban income distribution more unequal: the Gini ratio for urban income distribution including the migrants is 0.338 as compared 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 favor of the migrants would improve the overall urban income distribution. This sounds paradoxical in view of the greater inequality of the distribution of the migrants' income than of the residents' income, but 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. All other components of urban income have a disequalizing effect on the distribution of overall urban income. 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. It is particularly interesting to note that income from individual enterprise, a component having a disequalizing effect on the distribution of income for the migrants, has a strongly equalizing effect on the distribution of overall urban income.

The inclusion of the migrants slightly reduces the overall national income inequality. This again is apparently paradoxical since the migrants' income is more unequally distributed than the incomes of the rural and urban residents, but is explained by the fact that the migrants, having an average income which is roughly halfway between the average rural and urban incomes, are clustered closer to the middle of the overall income distribution. Another way to look at it is to consider that the national distribution with the migrants is the combined distribution of rural income and urban income *with the migrants* whereas the national distribution without the migrants is the combined distribution of rural income and urban income *without the migrants.* Although the distribution of urban income with the migrants is more unequal, the disparity between urban income with the migrants and the rural income is less than the disparity between urban income without the migrants and the rural income. Overall inequality depends on inequality in the two groups and the inequality between the two groups. While inequality of one of the groups has increased, the inequality between the two groups has fallen. The latter effect has dominated the former.

Table 18

National Income Inequality Including the Migrants: 2002

	Per Cent of Income	Gini/Concen-tration 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

Of the three, rural income is the only one that 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 has made 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 higher concentration ratio 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 of the urban residents, inequality would fall (the concentration ratio being much lower for the migrants than for the urban residents). As we have argued earlier, the effect of migration on rural income must be positive because it reduces the pressure of population on limited land and rural resources. Note that although migrants' income is disequalizing, several of its individual components, including wages, are not.

Urban residents' income and its distribution contribute most of the overall inequality, though a little less than in the case of national distribution without the migrants. All that was said about the effect of individual components of rural and urban residents' income on overall national distribution without the migrants holds in the present case though in each case the effect is a little less extreme.

VII
AN OVERVIEW AND CONCLUSIONS

In the period between 1995 and 2002 the inequality of the distribution of rural income in China 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 both a reduction in inter-provincial inequality and a reduction in inequality in most of the provinces. Besides the reduction in inter-provincial inequality, the impetus for greater equality came from a further improvement in the distribution of farm income and wage income and a reduction in the

regressivity of net taxes. The continued improvement of the distribution of farm income was facilitated by the continued equality of access to land. The improved equality of wage income was probably largely due to a better regional balance in the access of the rural population to wage employment. 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. There seems to have been a fall in agriculture's terms of trade. Among the factors that facilitated the growth that the rural economy achieved in per capita terms, despite the fall in agriculture's terms of trade, is the fall in rural population. For the first time China experienced a steady absolute fall in rural population after it peaked in 1995.

During this period personal income growth in urban China was extremely high, perhaps the consequence of a conscious shift in macroeconomic policies to promote growth in domestic consumption demand in the aftermath of the Asian crisis when China faced the problem of declining growth in *net* external demand. The distribution of urban income also became more equal, albeit to a lesser extent than the rural distribution, with a four per cent decline in the Gini ratio. Much of the impetus for the reduced urban inequality came from a reduction in inter-provincial inequality. Urban income inequality increased in most of the provinces. The largest component of urban income, wages, became more disequalizing over the period. In terms of the contribution of individual components of income, the increased equality of urban income distribution was mainly a matter of housing reform and the reform of public finance. Housing subsidies, which were disproportionately appropriated by the 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. Together with an increase in social-protection payments to the laid-off urban workers, these changes more than offset the increased inequality of wage distribution. One notable point about the factors behind the improved distribution of urban income – the change in the distribution of rental value of housing, housing subsidies and other subsidies – is that these are not captured by the official data which exclude these from income definition.

Table 19

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
The Floating 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
Overall National Gini Ratio		
Excluding the migrants	0.452	0.450
Including the migrants		0.448

On the average the migrants nearly double their income by moving from rural to urban areas although their income still remains less than two-thirds of the income of the urban residents on a per capita basis and only one-half on a per worker basis. While the difference between the incomes and earnings of the migrants and the urban residents may be due to many factors, it appears that an important contribution was made to it by the discriminatory treatment of the migrants, who were excluded from much of the formal

labor market, public services, and asset redistribution programs like the housing reform. Migrants have a higher inequality in the distribution of income than either the rural or the urban residents. This is perhaps related to the composition of their income which is dominated by income from individual enterprise in which earnings are differentiated according to individual endowment of labor, skill and other resources, which must vary a good deal among the migrants. There is less inter-provincial difference in migrants' earnings than in the earnings of the urban residents.

The inequality of overall national income distribution for China, accounting for the rural and urban residents, has changed little between 1995 and 2002. This national Gini ratio of 0.45 continues to make China one of the most unequal of Asian societies. The virtual constancy of the national Gini, despite the fall in both rural and urban Gini ratios, is due to the sharply widened urban/rural inequality which is one of the highest among all the countries for which estimates are available.

The inclusion of the migrants increases the inequality of urban income distribution but slightly reduces the inequality of overall national income distribution. The former is consistent with the greater inequality among the migrants than among the urban residents. The latter is due to the fact that the combination of the migrants with the urban residents increases urban inequality but reduces the urban/rural difference in income. The first has a disequalizing effect on the overall distribution while the second has an equalizing effect and it is the second effect which dominates.

In their earlier writings the present authors identified the principal causes of the increased inequality in China between 1988 and 1995 as: (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.[27] It appears that there has been important policy response to deal 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

[27] See Khan and Riskin, 1998 and 2001.

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. While the strategy is not directly focused on poverty reduction in the western region, it is highly likely that improved public expenditure in these poor provinces has started benefiting the poor and, more importantly for our present purpose, has served as the impetus for reduced inter-provincial inequality. In October 2001 the government issued a new program called the "Outline for Poverty Alleviation and Development of China's Rural Areas (2001-2010)". This 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.[28] As discussed above, the 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,

[28] For details see, ADB 2002.

though some of its worst consequences have been partly alleviated by the system of protection described above.

There is a need and a scope for further progress in all these areas. 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. 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; a program for the rapid promotion of non-farm rural 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' price for farm products which had been introduced in 1994. With the exception of rice, domestic prices of grains are currently the same as or higher than the world price. It therefore seems that improving agriculture's *net barter terms of trade* by raising producers' price is not a sustainable policy. Some possibility of reducing input prices may exist in so far as the domestic price of fertilizer appears to be higher than the world price. Future improvement in farm income must however be based on improved *single factoral terms of trade* for agriculture by way of increased labor productivity. The success of this critically depends on the continued liberalization of the labor market so that agriculture can continue to shed its still considerable surplus labor for employment elsewhere.

The promotion of rural non-farm activities must deal with the problem that this has so far been a strongly disequalizing source of income and its disequalizing effect on the distribution of rural income has been increasing rather sharply. Thus an increase in rural income and a reduction in rural poverty by the promotion of non-farm activities must simultaneously implement measures to improve the access of the poor to these activities.

Migration has helped ease the problem of rural poverty and its continuation is highly desirable. Political limits of feasible migration are probably close to being reached especially if one considers the urgency of reducing the discrimination that urban migrants are now subjected.

Thus a policy of improved rural income must combine all three policies: 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 labor out of rural areas.

* * *

ANNEX

An Explanation of the Difference between Our Estimates and the NBS Estimates of Rural Income

The difference between the NBS estimate and our survey estimate is partly due to the difference in the components of income between the two definitions of income and partly due to the difference in the coverage of the components that are common in both definitions. Let us consider each separately.

There are three elements of income – "receipt from enterprises" (non-labor income from township, village and other enterprises which, in the classification adopted in Table 1, is included in "other income" and shown separately as a memo item); net subsidies received from the state and the collective which has a negative value; and rental value of housing – that are included in our income definition but excluded from the NBS definition.[29] Together these three components account for 15 per cent of *NBS income* in 2002. In 1995 they accounted for 25 per cent of NBS income. This difference is largely explained by the sharp fall in receipts from enterprises between 1995 and 2002. The survey in 1995 had an item called "net individual income from private and other enterprises other than compensation for labor" (question 206 in the survey questionnaire). There is no corresponding item in the survey in 2002. This item was 98 per cent of

[29] Perhaps a more accurate statement concerning receipts from enterprises and net subsidies is that our income definition covers numerous elements that are not known to be considered in the NBS income definition.

receipt from enterprises in 1995. Once this is removed from 1995 income, the difference in the ratio of these three items excluded from the NBS definition to *NBS income* between 1995 and 2002 almost vanishes: the rest of the difference is explained by the rising share of net taxes between the two years which appears to be an accurate description of change in reality. There is however a discrepancy in definition of net taxes. The survey in 2002 shows an item called "payment made for days of unpaid work fixed by the government which were not completed" which has been treated as a tax. The1995 survey did not contain any such item. The average value of this item is however only 4.18 Yuan. Its exclusion would still leave net taxes as high as 2.46 per cent (net subsidies - 2.46 per cent) of income in 2002, indicating a sharp rise in its share over 1995.

Consider next the difference between our survey estimate and the NBS estimate of income due to the different ways of measuring the components of income that feature in both the definitions. For these components our survey estimate is 19 per cent higher than the NBS estimate. In 1995 ours was 21 per cent higher. This slight convergence between our estimate and the NBS estimate may be due to the reduction in the share of the elements of the broad categories that are excluded by the NBS but included by our survey (e.g., in individual wages, the survey includes income in kind, unemployment benefit etc. which the NBS excludes from their estimate of wages or what they call "laborer's remuneration", *laodongzhe shouru* in Chinese).

It is interesting to note that if "net individual income from enterprises other than labor remuneration" is excluded from our income estimates for 1995, the difference between our survey estimate of income and the NBS estimate of income changes from 39 per cent in 1988 to 37 per cent in 1995 and 33 per cent in 2002, indicating a slow, steady and plausible convergence over time due to a gradual reduction in elements such as income in kind that explain the difference between the survey estimate and the NBS estimate of the common components. It is possible that "net income from enterprise other than labor remuneration" in 1995 was an illegitimate duplication of something included elsewhere. Unfortunately, it is not possible to arrive at a conclusive judgment on this issue.

Estimates of Rural Gini Ratios Based on the NBS Income Data for the Households in the CASS survey

The rural survey for 2002 also collected data on income according to the NBS definition for all years from 1998 to 2002 for the households in our sample. It also reports (consumption) expenditure, according to NBS definition, for 1998 to 2001. For years prior to 2002 some of the households in our sample were not in the NBS samples for those years so that the number of households for which estimates according to NBS definition were recorded gradually falls from 9200 in 2002 to 8930 in 1998. Gini ratios of income and expenditure distributions for these household for the years 1998 to 2002, perhaps the only available Gini estimates, made outside the NBS, which are based on unit record NBS data (albeit of a sub-sample of their larger original sample), are as follows:

	Income Gini	Expenditure Gini
1998	0.350	0.345
1999	0.350	0.339
2000	0.360	0.362
2001	0.360	0.368
2002	0.367	-

Two points are of interest. First, for 2002 inequality is higher for our income definition than for NBS definition. This reaffirms the fact that the NBS definition of income excludes components and elements that are more unequally distributed than the rest of income. Note also that, according to the NBS definition, there was a slow and steady increase in inequality over the period under review. This trend does not necessarily apply to income according to our definition. However, if it did it would imply that inequality, according to our income definition, dropped rather sharply after 1995 for no more than two years, and thereafter started creeping up.

The second point of interest is that, contrary to usual expectation, the distribution of consumption is more unequal than the distribution of income for 2000 and 2001. Indeed the difference between income and consumption Gini is very small for 1998 as well. This is a question that can not be further analyzed in the absence of detailed information on the contents of income and consumption according to the NBS.

The urban survey also records household income data according to NBS estimate for 1998-2001. Unfortunately, it does not record information on household size, which makes it impossible to estimate Gini ratios.

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