

Explaining China's Changing Income Inequality: Market vs. Social Benefits

Qin Gao
Fordham University

Carl Riskin
Queens College, CUNY
Weatherhead East Asian Institute
Columbia University

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Introduction

Much of the world experienced markedly increasing economic inequality during the late 20th and early 21st centuries. This holds true for the elite countries of the OECD (Atkinson 2003), much of the developing world, including India, Nepal, Bangladesh and Sri Lanka in South Asia (World Bank 2006) and notably also the major transition countries, Russia (Kislitsyna 2003) and China (Chen and Ravallion 2004; Khan and Riskin 2005).

China's rise in income inequality has been especially sharp.¹ Understanding this trend and its causes is important for a number of reasons, including the impact that China's inequality and poverty trends have on those of the world as a whole, given China's enormous size.² Although much attention has focused on rising income inequality in China since the mid-1980s, recent empirical evidence indicates that the increase might have slowed or even halted in recent years, at least in some respects. Using the national China Household Income Project (CHIP) survey data, Khan and Riskin (1998; 2005) revealed declines in income inequality—slightly in urban areas but quite substantially in rural areas—from 1995 to 2002, after sharp increases between 1988 and 1995 in both areas. However, their measure of overall *national* inequality, after rising sharply from 1988 to 1995, remained unchanged between 1995 and 2002 as a continuing increase in the average urban-rural income disparity offset declining inequality within both urban and rural populations. The Gini ratios for overall national income inequality were thus 0.38 in 1988, 0.45 in 1995 and 0.45 again in 2002.

These findings challenge the trend of continuing increase in income inequality since 1985 shown by the National Bureau of Statistics (NBS) official data. Other studies, based upon NBS data, also reach different conclusions. For instance, Ravallion and Chen (2004) incorporate differences between urban and rural costs of living going back

to 1980. They find income inequality rising within both urban and rural populations between 1995 and 2001 and no trend in the average urban-rural income gap between 1980 and 1995. These conclusions together imply rising national inequality up to 2001, which indeed they find, although it dipped slightly in the mid-1990s.

Given that the NBS data leave out important (and rapidly changing) elements of real income, as conventionally measured, such as rental value of owner-occupied housing and various kinds of subsidies, we believe that the CHIP study provides a more reliable basis for understanding and analyzing the trends and driving forces of changing income inequality in China. We proceed to focus here on the apparent reversal of the trend toward increasing inequality within the urban and rural sectors, taken separately, and have nothing further to say about urban-rural or overall national inequality.

Riskin (2005) investigated the causes of the decline in urban and in rural inequality and found that, for rural China, it is explained partly by a large increase in wage-earning jobs in poorer regions of the country between 1995 and 2002, and partly by a decline in the extreme regressiveness of net taxes. Thus, both market forces and social policy changes seemed to be at work in stemming the tide of rising inequality. In urban China, however, the burden seemed to be entirely on social policies: Important subsidies that been regressively distributed became better targeted, while the size of social benefits programs targeted at the unemployed and poor urban residents grew as well.

In this chapter, we explore more fully the respective roles of market economy and social benefits – one component of social policy – in explaining changes in income inequality in urban and rural areas of China. Conceptually, these two central driving forces of changing income inequality could re-enforce or offset each other's impact: Suppose market reforms widen income gaps; then if social benefits are distributed regressively, they will re-enforce this market effect and further enlarge gaps. In contrast,

if social benefits are distributed progressively, they will offset the market impact and narrow income gaps. To examine empirically which of the two driving forces play a bigger role and to what degree can shed direct light on the changing income inequality trends in urban and rural China as well as any proposal for future policy changes.

Since Riskin's (2005) tentative conclusion that social policy was primarily responsible for at least temporarily halting the march toward greater inequality in China's cities and towns, our attention turns now to a more detailed look at that policy, and in particular at social benefit programs. Much of the literature has discussed the effects of China's market reforms on income inequality during the recent quarter century, with the focus of analysis varying from the overall growth rate to micro-level elements of the structure and characteristics of the market economy. The important redistributive role of social benefit transfers, however, has rarely been considered. Gao (2005; 2006) made the first set of efforts to explore the impact of social policies on changing income inequality using the CHIP data. She found that specific urban social benefits significantly reduced income inequality in both 1988 and 2002, but they were unable to close the rising income gap driven by growing market income inequality during the period. However, rural social benefits were distributed much more regressively and had little impact on income inequality during the same time period.

During China's recent economic, political, and social reforms, social benefits have played a significant role in accommodating the market economy as well as demographic transitions, and in maintaining certain levels of equity in the face of polarizing tendencies. In urban areas, the previous approach relied heavily upon an income maintenance system in the form of guaranteed employment by state enterprises, which was rendered feasible only by severe restrictions on population mobility. Guaranteed state employment of a restricted urban population then made possible an

elaborate system of in-kind or heavily subsidized benefits provided to urban residents by their work units.

Chinese post-reform social welfare policies were designed to replace this system of income supports and safety net with one deemed more appropriate to a market economy, one which provides pensions, health care, other supplementary supports and a safety net, e.g., the establishment of the Minimum Living Standard system and provision of unemployment subsidy and insurance in the cities, for the vulnerable who are left behind by the market economy. To build upon prior work, this chapter brings together the two sets of key factors – market developments and social policy changes – in explaining China’s income inequality and seeks to help understand the magnitude of their respective impact as well as how they interact with each other in shaping the income inequality picture in transition. We will present changes in levels and composition of household per capita income and the contributions to it of market earnings and social benefits over time. To achieve this, we make fuller use of the CHIP data by including the previously under-utilized data on various in-kind social benefits, including health, housing, food, and other in-kind transfers. We not only include them in the total household per capita income package, but explore the distinctive redistributive roles of each type of transfer in changing income inequality.

However, it is important to note the complex nature of both market economy and social policy in the Chinese context, as well as the interdependent relationship between the two forces. First, social policies have market consequences; e.g., the state decision in the late 1990s to invest heavily in infrastructure in backward western regions created wage-earning jobs among the rural population. The income from these jobs shows up as “market income” despite its source in state policy. Indeed, the market economy itself in China is far from being a *laissez faire* free model and has been guided and shaped by

government policies and interventions in a myriad of ways. The economic structural shift from a planned, public-sector dominated economy to a market, shared public-private economy was decided upon and implemented by the government.

Second, social policy reforms since the early 1980s in China have been heavily driven by economic reform objectives. They were initiated mainly to facilitate market economy reforms and to stimulate economic growth and efficiency through reducing the heavy financial burdens of welfare provision borne by the state-owned and collective enterprises. For example, the provision of pensions and health insurance were shifted from being solely the responsibility of state-owned and collective enterprises to being shared among employers, employees, and the government. Even during the process of implementing important social benefit program reforms, their economic consequences were emphasized over their social justice purposes. For example, the housing privatization process in urban China favored the more advantaged socioeconomic groups, for whom purchase access and higher subsidies were provided. At the same time, the government has taken a bigger and more direct role in social benefit provision, especially in urban areas, to provide a safety net for people left behind by the market economy (i.e., the elderly, unemployed, and those with lowest market income) to ensure a certain level of social justice and social stability (Gao 2006). Despite these various interactions between the two sets of forces, it is still be of interest to try to sort out the extent to which each is at work in shaping income inequality. While exact delineation of their respective roles is not possible, some broad conclusions about them are.

Data and Methods

This chapter uses all three waves (1988, 1995, and 2002) of data from the CHIP project, a national cross-sectional study collectively designed by a team of Chinese and

Western economists and conducted by the Institute of Economics at the Chinese Academy of Social Sciences. Samples of the CHIP study were drawn from larger NBS samples using a multistage stratified probability sampling method. The CHIP study is considered the best publicly available data source on household income and expenditures and includes sample provinces from eastern, central, and western regions of China (Riskin, Zhao & Li 2001).³ Appendix Table 1 presents the sample designs of the three waves of CHIP data.⁴

We adopt a comprehensive measure of total household per capita income, which includes “market income,” cash and in-kind social benefits, and private transfers, less taxes and fees paid. More specifically, in urban areas, “market income” (hereafter used without quotation marks) is made up of wages, income from private enterprises, property income, and rental value of owner-occupied housing; in rural areas, market income includes wages, income from family farming and non-farm activities, income from property, rental value of owner-occupied housing, remittance income sent back by members working outside of household, and other miscellaneous income.

Rental value of owner-occupied housing is included because it is a standard component of the conventional definition of income throughout the world. Owned housing is a valued asset whose services would be costly if rented in or out. Still, the reader should be aware of the somewhat tenuous basis for the estimates of this income component, which were made either by residents themselves or from calculations based upon house value. Such estimates may be very imperfect reflections of the actual market value of housing service, especially in an incompletely marketized economy. This caveat is particularly relevant here because rental value of owned housing turns out to play an important role in China’s changing income distribution. The fact that this role is consistent with our knowledge of the evolving context in China lends weight to the

decision not to exclude this important income component, but the results should be understood to be imprecise and subject to correction.

In both urban and rural areas, social benefits are composed of cash transfers and in-kind benefits, including health, housing, food, and other in-kind benefits. The inclusion of health benefits makes the conception of income used here broader than the conventional definition, and thus broader than that used by Khan and Riskin (1998; 2005).⁵ Cash transfers further include three sub-types: social insurance (mainly pensions, sometimes also living subsidies to the elders), supplementary income (price and regional subsidies in urban areas), and public assistance (living hardship subsidy, relief benefits, living subsidy for the urban laid-off and the Minimum Living Standard Assurance subsidy). Household per capita income is calculated to take into consideration household size and the economies afforded by resource pooling among household members. Official urban and rural Consumer Price Indices (CPI) are used to convert 1988 and 1995 values to constant 2002 values, for urban and rural areas respectively.⁶

Income Inequality Trend Revisited

We first try to see whether our measure of household income generates the same results for the trend of income inequality as that of Khan and Riskin (1998; 2005). Note that the only difference between our definition of household final income and theirs is that we include health subsidy (medical care expenses covered by the work unit, government, or collective, and the cash value of in-kind health services). Its distribution should therefore account for any difference in income inequality levels between our measure and that of Khan/Riskin.

[Table 1 about here]

When various cash and in-kind social benefit transfers are considered, we find that, in contrast with the pattern uncovered by Khan and Riskin (1998; 2005), in which urban inequality decreased slightly after 1995, our urban Gini for total income keeps increasing—although only very slightly—from 0.336 in 1995 to 0.345 in 2002, after a much sharper rise from 1988 (see Table 1). Such a change in urban income inequality trends therefore suggests that health subsidy, the social benefit included in our measure but not in Khan/Riskin, was distributed more regressively in 2002 than in 1995, which led to wider gaps in final household income. Indeed, “market income,” which omits health benefits as well as other social benefits, private transfers and taxes, follows the Khan/Riskin trend, with inequality declining slightly between 1995 and 2002.

The rural inequality trend estimated by our measure, however, remains consistent with that of Khan/Riskin. The rural Gini for total income declined quite significantly from 0.419 in 1995 to 0.374 in 2002, but remained higher than that of 1988 (0.357). The close correspondence between the Ginis for total and market income, in a context in which social benefits amounted to less than 1 percent of income in all three years (see Table 6), confirms that income inequality trends in rural China have been driven by changes in the market economy and the redistributive role of social benefits has been marginal.

Urban Income Inequality

The Changing Structures of Household Per Capita Income and Social Benefits

Household income levels and composition in urban China have experienced significant changes. Table 2 shows that the CPI-adjusted per capita household total income increased from ¥4,576 in 1988 to ¥6,521 in 1995 to ¥10,333 in 2002. However, the relative contribution of the income components—mainly market income and social

benefits—changed quite dramatically from 1988 to 1995, and only slightly between 1995 and 2002. Market income made up of 54% of total income in 1988, whereas social benefits contributed 44%, a strikingly high proportion, to total income. Families paid virtually no tax in 1988. By 1995, the share of market income had increased to 73% of total income, and that of social benefits dropped sharply to only 27%. Families paid slightly more taxes (1% of total income) in 1995 than in 1988. From 1995 to 2002, the share of market income increased again to 78%, while that of social benefits (25%) fell more slowly than before, and tax payments rose to 4% of total income.

[Table 2 about here]

The Market Role

The first clear pattern revealed by such results is the continuing absolute and relative increase in market income of urban households. Its value almost doubled from 1988 to 1995, and further increased to almost four-fifths of total income by 2002. Its rise was complemented by the relative decline in social benefits.

Table 3 details the effect of each income source in shaping urban income inequality over time. Column (1) of the top panel shows the share of each market income component in total household per capita income in the three years. Wage income, the largest component, increased from 49 percent in 1988 to 60 percent in 1995 and then fell back slightly to 58 percent in 2002. The other notable change from 1995 to 2002 was the sharp increase in rental value of owner-occupied housing, from 11 percent to about 17 percent of total income. This was a consequence of the implementation of housing reform, which privatized ownership of most urban housing. The increase in rental value of housing is mirrored by the fall in in-kind housing subsidy (from 10 percent in 1995 to 2 percent in 2002) going to renters, as the number of renters sharply declined.

[Table 3 about here]

Column (2) shows the concentration ratios of income sources, along with the Gini ratio for total income. The concentration (or “pseudo-Gini”) is a measure of the inequality of distribution of a particular income source (e.g., wages). It is measured analogously to the Gini itself, except that it measures the distribution of an income source over all income recipients, rather than just over recipients of that source (which would be a true Gini). It has the convenient property that, when multiplied by the source’s share of total income, and then summed over all sources, it yields the Gini for all income:

$$\sum q_i C_i = G$$

where q_i = the share of income source i in total income

C_i = the concentration ratio of income source i , and

G = the Gini ratio for total income

Thus, the product of the concentration ratio and income share of an income source can be interpreted as the absolute contribution of that source to total inequality.

These concentration ratios are shown in column (2) of Table 3. For components of market income, the most striking aspect is the great jump in inequality of rental value of owner-occupied housing between 1988 and 1995, followed by an equally sharp decline in inequality in 2002. The reason for this pattern is discussed below. The concentration ratio of total social benefits begins in 1988 (0.25) at a level about equal to the overall Gini coefficient (0.23); however, it then rises well above the Gini in 1995 and 2002, which implies that, contrary to the usual expectation that social benefits are to be targeted to the poor and vulnerable, in urban China they became a disequalizing component of income, in the sense that an increase in their share of income, *ceteris paribus*, would raise overall inequality. We discuss this further below.

The relative contributions of each source to the urban Gini are shown in column (3) of Table 3. The contributions of each market income (top panel) indicates that market

income inequality was dominated by wage income, whose contribution to overall inequality rose over time, reaching 51 percent in 2002. Rental value of owner-occupied housing also increased its contribution to overall inequality sharply between 1988 and 1995, but the ensuing years saw a decline both in inequality of this income source and in its contribution to the overall Gini coefficient.

Such a transition largely reflects the course of housing privatization in urban China. After a series of housing reform trials in different cities, the government started nation-wide housing reform in 1988, including rent increases and the sale of public housing mostly to its occupants (Gao 2006). Therefore, in 1988, few urban residents (18 percent in the CHIP sample) owned their own housing while the majority still lived in free or heavily subsidized public housing. As the reform progressed, by 1995, a bigger group of privileged urban residents had been given priority to purchase housing from their work units at heavily subsidized prices, yielding both a higher share of housing value in final income and a much higher inequality of distribution of this income source. The government began to build generally affordable and functional housing in 1998 and introduced the publicly accumulated housing fund nation-wide in 1999. These reforms, as well as the spread of subsidized purchase opportunities more widely among the urban population, greatly increased urban housing ownership while sharply reducing inequality in rental value of housing by 2002.

Effects of Tax Policies

Changes in tax policies in urban China accompanied the changes in market income. As shown in the bottom panel of Table 3, taxes in 1988 were slightly progressive, being distributed more unequally (concentration ratio=0.29) than total per capita income (Gini=0.23). However, they constituted only a very small share of total income (-0.19 percent) and thus had little impact on overall income inequality. By 1995, taxes had risen

to over 1 percent of income and were distributed somewhat less unequally (concentration ratio=0.27) than total income (Gini=0.34), signifying that taxes were now regressive. By 2002, the ratio of taxes to total per capita income came to over 4 percent and they were distributed proportionally to income (concentration ratio and Gini both equal to 0.35. This made their impact on the Gini ratio essentially equal to their share of income (-4.4 percent).

Impact of Social Benefits

A designated redistributive mechanism, social benefits have an important impact on urban income inequality. The structure and levels of social benefits in urban China have undergone significant changes since the major social welfare reforms were carried out in late 1980s (Gao 2006). Table 4 details the changing levels and compositions of social benefits in the three years.

[Table 4 about here]

First, cash transfers significantly increased during the period: their total value increased from ¥433 in 1988 to ¥721 in 1995 and ¥1,570 in 2002, and their share in total income grew greatly from 1988 (9 percent) to 2002 (15 percent). Among cash transfers, social insurance income—mainly pensions—dominated, especially in 1995 and 2002. Given that economic reforms required a reduction in pension coverage provided by urban state-owned and collective enterprises, as well as an increase in required contributions for pension benefits, such a transition reflected the rapid aging of population in urban China, as well as the beginnings of the new pension system based on contributions from enterprises, workers and the government.

The value of public assistance increased dramatically from its original minimal level (¥1 in 1988 and ¥2 in 1995 to ¥46 in 2002). Although public assistance still contributed only a very small portion of final per capita income, such an increase reflects

the beginnings of government's effort to provide a basic safety net to the newly emerged urban poor since the mid-to-late 1990s, mainly through the Minimum Living Standard Assurance program and unemployment living subsidy. Supplementary income (i.e., price and regional subsidies) decreased from ¥153 in 1988 to only ¥34 in 1995 and rose to ¥81 in 2002, but its share in total income dropped from 3 percent in 1988 to only 1 percent in 1995 and 2002.

Second, health benefits also increased during the period. The value of health benefits increased from ¥186 in 1988 to ¥325 in 1995 and ¥684 in 2002, and its contribution to total household per capita income increased from 4 percent to 5 percent and then to 7 percent. The welfare policy reforms, however, actually had cut the levels and coverage of health benefits. Such an increase in amounts, therefore, is most likely due to a combination of two trends during the period—the dramatic rise in health care costs and a much increased health consciousness among the public (Gao 2006). Whereas virtually all medical costs were publicly financed in the pre-reform era, by 2002 over half were paid out-of-pocket by patients.⁷

Both cash transfers and health benefits can be conceptualized as “equity-oriented” benefits. Do the above results indicate that the welfare reforms improved this set of benefits? One could argue that cash transfers were less necessary in past, pre-market reform days, so that their increase in value represents less an improvement in benefits than a cost of coping with the new levels of personal insecurity associated with the market. Moreover, the inequality of distribution of health benefits became quite extreme by 2002, which is not what one expects in a successful social benefits program. A closer look at the set of benefits can distinguish the “intended” and “unintended” aspects of equity promotion. The biggest increases were in pensions and health, which were largely the unintended consequences of demographic trends, in the one case, and of health care

price increases, in the other. Public assistance is the only component that can be clearly identified as an “intended equity oriented” benefit, serving as a safety net for the poor and vulnerable. Another embedded goal of public assistance, of course, is to prevent possible social unrest and ensure political stability. Nonetheless, many progressive policies have found their origin in practical political motives, which should not detract from their progressive identity. It is less clear whether changes in supplementary income were “intended” or not.

Third, two important in-kind benefits—housing and food—both decreased dramatically during the period. Housing benefit is the difference between estimated market rent and rent actually paid. It dropped from 19 percent of total income in 1988 to 10 percent in 1995 and only 2 percent in 2002. Such a trend echoes the government’s housing reform agenda, in which housing was gradually privatized through subsidized purchase—mainly since 1995—so that surviving housing benefits were only marginal. Food benefits were the second largest component—following housing—of in-kind benefits in 1988, contributing 11 percent of total income; they fell to only 1 percent in 1995 and 0 percent in 2002. “Other in-kind benefits” were minimal in all three years. Such declines in these in-kind benefits were mostly “market-induced” to reduce the excess burden held by state-owned and collective enterprises and to promote economic growth and efficiency.

The middle panel of Table 3 further explores the distributions of each social benefit component over all income recipients and their relative contributions to total inequality. Overall, total social benefits were distributed more and more unequally over time, both absolutely and relative to overall income inequality, as indicated in column (2). Compared to the overall Gini of 0.23 in 1988, the concentration ratio of total social benefits was 0.25 in 1988; in 1995, it was 0.41 (Gini=0.34), and in 2002, 0.46

(Gini=0.35). Contrasting cash and in-kind benefits, we find that the changing distribution patterns of the three types of cash benefits largely offset each other, yielding an almost constant concentration ratio for total cash benefits over time. More specifically, the inequality level of social insurance decreased after 1988 and that of supplementary income increased in 2002. Public assistance is the only category displaying a negative concentration ratio (except for the somewhat anomalous value in 1995), which signifies that more of it, appropriately, went to the poor than the rich. When it comes to in-kind benefits, all except for housing became more unequal over time, resulting in much increased concentration ratios for total in-kind benefits (from 0.23 in 1988 to 0.48 in 1995 and 0.67 in 2002). The concentration ratio of total in-kind benefits in 1988 was the same as the Gini for total income, while they were distributed much more unequally in later years (concentration ratios larger than Gini coefficients). Particularly striking is the very high concentration ratio for health benefits (0.83) in 2002, which all by itself explains 16 percentage points of the 19 percent contribution of all in-kind benefits to the overall Gini.

The contribution of total social benefits to overall inequality was 48 percent in 1988, and 33 percent in both 1995 and 2002, as shown in column (3) of Table 3. In 1988 total social benefits were contributing the same share (48 percent) of income inequality as was market income. However, as economic and social welfare reforms progressed, the relative contribution of market income to overall inequality grew rapidly, reaching 66 percent in 1995 and 70 percent in 2002, pushing that of social benefits lower (33 percent in 1995 and 2002).⁸ Among social benefits, in-kind benefits constantly contributed more to inequality than cash transfers although the difference between the two contributions declined over time.

Rural Income Inequality

Rural income inequality, regardless of which definition is used, increased significantly from 1998 to 1995 but then dropped again between 1995 and 2002. It was mainly driven by changes in wages, income from family farming and non-farm activities, rental value of owner-occupied housing, and taxes.

The Changing Structure of Household Per Capita Income and Social Benefits

Table 5 presents the changing patterns of household per capita income levels and structure in rural China. Consistent with the general sense, the real value of rural market income kept rising during the period: market income increased from ¥1,874 in 1988 to ¥2,500 in 1995 and ¥3,187 in 2002. At the same time, per capita social benefits for rural families remained at a minimal level, despite a slight increase from ¥11 in 1988 to about ¥20 in 1995 and 2002, making up only one percent of total income in all three years. Taxes and fees paid by families increased from ¥39 per capita in 1988 to ¥99 in 1995 and then declined to ¥85 in 2002, and their share in total income remained marginal and largely constant (from -2% in 1988 to -4% in 1995 and -3% in 2002). As a result, the positive (social benefits and private transfers) and negative transfers (taxes and fees) offset each other in contributing to the total income package, leaving market income the dominant income component, making up roughly 100% of total income, although the share was slightly higher in 1995 (102%) and lower in 2002 (99%). Therefore, even before considering the distribution of benefits and taxes, it is clear that market income played the dominant role in shaping income inequality in rural China, and the redistributive roles of social benefits and taxes were very small.

[TABLE 5 ABOUT HERE.]

The Market Role

Table 6 details the distribution patterns and contributions to inequality of various components of total household per capita income. Overall, market income was distributed slightly more equally than total income across all years, as indicated by slightly lower concentration ratios as compared to overall Gini coefficients in column (2). Conversely and notably, social benefits were more unequally distributed than total income, especially in 2002. Private transfers grew relative to total income and became more unequal. Taxes were regressive (very low concentration ratios) in all three years, becoming slightly less so in 2002. This and a decline in the tax rate in that year were the only aspect of tax policy that eased the burden on poorer peasants.

The separate components of market income had quite different effects on overall inequality. First, wages, which had been highly disequalizing in 1988 and 1995, became much less so in 2002 as its concentration ratio dropped sharply even as its share of income grew. Wages contributed 27 percent of overall inequality in 1988, 39 percent in 1995 and 36 percent in 2002. The reduction from 1995 to 2002 was a major contributor to the overall decline in rural inequality during that period.⁹

[TABLE 6 ABOUT HERE.]

Second, between 1995 and 2002, income from family farming activities both fell substantially as a share of total income and became somewhat more equally distributed. Both changes worked to reduce sharply the relative contribution of this income source to the overall Gini ratio (from 27 to 22 percent). The opposite happened to income from family non-farm activities: it both increased as a share of total income and became even more unequally distributed than it had already been.¹⁰ These changes caused the relative contribution of family non-farm income to overall inequality to grow from 12 percent of the Gini in 1995 to 18 percent in 2002.

Third, and very importantly, the share of rental value of owner-occupied housing in total household per capita income grew continuously from 9 percent in 1988 to 12 percent in 1995 to 14 percent in 2002. As the same time, the distribution of this income component became more and more unequal over time: its concentration ratio (0.29) started well below the overall Gini (0.36) in 1988 and, while rising, remained lower than the faster rising Gini in 1995. By 2002, however, its concentration ratio increased to 0.37, identical to the overall Gini. Correspondingly, the rental value of owner-occupied housing accounted for more and more of overall income inequality over time, contributing 8 percent of the Gini in 1988, 9 percent in 1995, and 14 percent in 2002. Such a changing pattern reflects the great value placed by rural people on home ownership since the economic reforms, the ability of wealthier households to invest more in housing than less wealthy ones, and the increasing (and increasingly differentiated) prices of land and houses in rural areas.

Fourth, income from property and remittance income sent back by members working outside the household both were distributed much more unequally in 2002 than in 1995. However, their contributions to overall inequality changed differently during the period: the contribution of income from property increased while that of remittance income decreased. Both remained a very small portion of final income and thus did not have a major impact on overall inequality.

Social Benefits and Taxes

Table 7 presents the levels and composition of social benefits in rural China over time. The most significant characteristic is the lack of both cash and in-kind benefits to rural residents. There were minimal cash transfers (making up one percent of total household per capita income or less) in all three years—although their value increased over time from only ¥9 in 1988 to ¥14 in 1995 and ¥17 in 2002—and almost none of the

important in-kind forms of support, including health, housing, and food. The value of public assistance, a benefit targeting the very poor, increased slightly from a minimal ¥3 in 1988 to ¥8 in 1995, but dropped again to ¥2 in 2002.¹¹

[TABLE 7 ABOUT HERE.]

The middle and bottom panels of Table 6 show the effects of social benefits and taxes on overall income inequality. As pointed out earlier, social benefits contributed less than one percent of total income in all three years, with more cash benefits (including social insurance and public assistance) than in-kind (including health, food, and other in-kind benefits). The gap between cash and in-kind benefits converged between 1988 and 1995 and then diverged from 1995 to 2002. By 2002, in-kind benefits were negligible, making up only 0.09 percent of total income as compared to 0.55 percent for cash benefits.

As for the impact of various social benefits on overall inequality, rural total social benefits were disequalizing in all three years (i.e., concentration ratios higher than overall Gini) and very disequalizing in 2002 (with a very high concentration ratio of 0.71). The reasons for this are unclear. The benefits with the highest concentration ratios are those available largely to government employees. Civil service worker wages have more than doubled since 1999, as the government has strived to maintain social stability (Wong 2004). It is possible that benefits have risen hand in hand with wages of this small, favored component of the rural population. More specifically, total cash transfers, driven by social insurance income including pension and elder living subsidies, changed from quite equalizing in 1995 to very disequalizing in 2002. Thus, their contribution to overall inequality also increased from 1995 to 2002, but they still contributed only about one percent of overall inequality in 2002 because of their very small share of income. Other benefits, as we discussed, were minimal and contributed little to overall inequality.

Rural taxes were distributed very regressively (i.e., much less unequally than total income), although the tax structure moved in a slightly more progressive direction in 2002. Table 8 shows just how regressive the rural tax structure has been. In 1995 the richest decile paid only 1.3 percent of its income in taxes/fees, whereas the poorest paid almost 17 percent of its income. All deciles but the richest had lower tax bills (as a share of income) in 2002 than in 1995 but the biggest drop occurred for the poorest decile. Even so, that decile still paid over four times as high a share of its income in taxes as did the richest decile.

Income and Social Benefits among Migrants

Since the early 1980s an increasing number of rural migrants who hold rural household registration status actually live in the towns and cities. The number of migrants increased from 11 million in 1982 to 18 million by 1989 (Liang 2001). Official estimates indicate that there were about 70 million rural migrants in 1993, and that number had doubled by 2003 (Zhu and Zhou 2005). If this is accurate, the 140 million migrants in 2003 made up about 11 percent of the national population and more than 20 percent of the actual urban residents.

The CHIP 2002 survey for the first time included a sub-survey of migrants (see Appendix Table 1 for details about the sample design). Table 9 presents the levels, composition and distribution of income among migrants in 2002 (Khan and Riskin 2005). The average per capita total household income of migrants was ¥6,365, which almost doubled that of people residing in the rural areas (¥3,205), but remained only two-thirds of that among full-status urban residents (¥10,333). This income is more unequally distributed (Gini = 0.38) than that of either full-status urban residents (0.35) or rural residents (0.37).¹²

The leading component of migrant income was income from individual enterprises or self employment, making up about 60 percent of total income.¹³ Wage income was the next biggest component, making up one-third of total income. The share of rental value of owner-occupied housing in total income was about 5 percent, much lower than those of both rural (14 percent) and urban (17 percent). “Other income (including pensions)” made up 2 percent of total income, but it is unclear what portion of that is from pensions, which presumably very few migrants receive.

[Table 9 about here]

Among these income components, rental value of owner-occupied housing was the most disequalizing item; its concentration ratio was 0.658, much higher than the Gini (0.38). This reflects the fact that only a very small advantaged group of migrants owns their own homes in the cities where they currently reside. Rental value contributes about 9 percent of overall migrant income inequality. The other two disequalizing income sources were income from individual enterprises and “other income” whose concentration ratios were somewhat higher than the Gini (0.43 for income from individual enterprises and 0.41 for “other income”). Income from individual enterprises, the main income source for migrants, contributed two-thirds of overall inequality, while “other income” accounted for only 3 percent of it. Wages were the main equalizing item, contributing only 23 percent of overall inequality despite their 34 percent share of total income.

The “net subsidies” received by migrant families (equal to subsidies received less taxes/fees paid) were negative ¥60 on average (one percent of total income), indicating that taxes and fees paid by migrants exceeded any sums they received from government. This net tax was distributed regressively, with a concentration ratio of 0.21, much lower than the overall Gini (0.38).

Our calculations from the CHIP migrant data show that migrants received minimal social benefits in 2002. Less than 5 percent of the migrant sample received pension benefits, or health or unemployment insurance. The CHIP survey did not ask about the exact values of most kinds of benefits, perhaps on the general assumption that they did not exist for migrants. Fewer than 8 percent of migrants enjoyed housing benefits from their employers. Note that even if housing is provided to migrants, as in the case of construction sites or rooms for live-in nannies, the quality of such housing is likely to be lower than that of full-status urban residents and attaching a value to it would be very difficult. Migrants were also ineligible for the MLSA assistance due to residency requirements (Gao 2006). Therefore, the redistributive role of social benefits among the migrants is negligible.

Conclusion and Discussion

This chapter has examined the contributions of market income and social benefits to the overall inequality of income in urban and rural areas of China as well as among migrants. In doing so, we hope to throw some light on the sources of/reasons for China's changing income inequality trends since the economic reforms began.

Urban income inequality increased significantly from 1988 to 1995, and rose again very slightly to 2002. Such a general trend was dominated by the great rise in market income inequality from 1988 to 1995. The difference between these results and those of Khan/Riskin (2005), who find urban inequality declining somewhat between 1995 and 2002, is due entirely to the inclusion of health benefits in the present definition of income, which keeps the overall Gini from declining in 2002. Ironically, the distribution of this social benefit became highly unequal in 2002.

In China, urban social benefits as a group have been distributed more unequally than market income and, a fortiori, more unequally than total income. Their contribution to overall inequality dropped from 1988 to 1995 because of the fall in their share of income. This contribution increased again slightly in 2002, as the continuing fall in income share of social benefits was more than compensated for by the increase in their concentration ratio. Among social benefits, the contribution of cash transfers to overall income inequality dropped during 1988 to 1995, and then increased from 1995 to 2002 due to their greatly increased share of urban income. Health benefits became increasingly regressively distributed, its contribution to overall inequality rising to almost 16 percent in 2002. Housing subsidy, on the other hand, was distributed regressively in 1988 and more so in 1995, but its distribution was somewhat more progressively targeted in 2002, even as this benefit faded out of the picture with the housing reform.

Market income—mainly wages—has been the driving factor in shaping income inequality since the economic reforms in urban China. Wage income both rose relative to total income and became increasingly unequal. But its effect was offset in 2002 by the decline in inequality of rental value of owner-occupied housing. Social benefits, on the other hand, have played an ambiguous role. Some social benefits significantly redistributed resources and contributed to shaping the changing inequality levels. In-kind benefits, especially health but also food, were distributed more and more regressively over time and contributed to the rise in overall inequality. Cash transfers, however, turned from largely regressive at the early stages of the reform to slightly progressive more recently. The only individual social benefits that unambiguously reduced inequality over time were public assistance, with its negative concentration ratios (indicating that more went to the poor than to the rich), and in-kind housing subsidy, whose concentration ratio in 2002 was slightly below the overall Gini. Otherwise, credit for the slowing of the

rise in urban inequality goes to a “market income” component, viz., rental value of owner-occupied housing. Yet this particular credit is really due to the change in implementation of housing reform after 1995, which greatly reduced the inequality of distribution of this income component, showing once again how difficult it is to separate market from policy effects in contemporary China.

In rural China, overall income inequality decreased from 1995 to 2002, after a sharp increase from 1988 to 1995. Different from the dynamics in urban China, this was mostly driven by the impact of less unequally distributed wages and even more equally distributed income from family farm production. Other income sources, including income from non-farm production, property, remittances, and rental value of owner-occupied housing, were disequalizing from 1995 to 2002. Rural social benefits remained minimal since the economic reforms and did not play any significant role in changing income inequality. If anything, the level of cash transfers increased slightly over time but became more disequalizing (i.e., more regressive) in 2002 as compared to the earlier years. Taxes were reduced after 1995 and were distributed less regressively, contributing to the fall in rural inequality.

Income of migrants was distributed more unequally than that of urban and rural families in 2002. Their main income source was individual enterprise or self employment, followed by wages. Income from individual enterprises was disequalizing and contributed about two-thirds of overall inequality. Rental value of owner-occupied housing was the most disequalizing item, reflecting the fact that only a very small and privileged group among the migrants enjoys home ownership in the cities. On the other hand, wages were an equalizing item. Migrant families received only minimal social benefits, at most, which were thus unable to have a significant effect on overall income inequality.

Perhaps not unexpectedly, it would seem that what we here call “market forces” have been in control of major trends in income inequality in China. It is true that the distributional outcomes of these forces have been influenced by public policies, broadly conceived. Thus, growing inequality from the mid-1980s was aided and abetted by policies that deliberately privileged coastal areas. And public policies may well have reduced some kinds of inequality between 1995 and 2002 through public investment programs that created jobs in poor areas, reductions in rural taxes, and slight improvements in the distribution of taxes in both cities and countryside. As for social benefits programs specifically, however, their overall distribution has been highly and increasingly regressive. Some individual programs (e.g., cash transfers, especially public assistance) are exceptions to this pattern; they have begun to weave a rudimentary safety net in urban areas, and have thus had an equalizing effect on urban income distribution. But social benefits as a whole have yet to play a significant progressive role.

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Table 1: Urban and Rural Gini Ratios for Household Per Capita Income, 1988, 1995 and 2002

	1988	1995	2002
Urban			
Market income	0.269	0.383	0.374
Total income	0.227	0.336	0.345
Rural			
Market Income	0.351	0.407	0.365
Total Income	0.357	0.419	0.374

N.B. Urban “market income” includes wages, income from private enterprises, property income and rental value of owner-occupied housing. “Total income” also includes social benefits (cash and in-kind), private transfers, and taxes and fees (a negative item). See Table 3 below for details. Rural “market income” includes wage and dividend of workunit shares, incomes from farming and non-farming activities, property income, rental value of owner-occupied housing, and remittance from members working outside. Similarly, “total income” also includes social benefits (cash and in-kind), private transfers, and taxes and fees (a negative item). See Table 7 below for details.

Table 2: Changes in Household Per Capita Income in Urban China

	Levels (¥)			Composition (%)		
	1988	1995	2002	1988	1995	2002
Market Income	2,480	4,744	8,054	54	73	78
Social Benefits	1,997	1,738	2,559	44	27	25
Private Transfers	108	120	170	2	2	2
Taxes & Fees	-9	-80	-450	0	-1	-4
Total Income	4,576	6,521	10,333	100	100	100

Table 3: Urban Income Inequality and Its Sources

<u>Source</u>	(1)			(2)			(3)		
	Share of Total Income (%)			Gini/Concentration Ratio			Contribution of Income Source to Overall		
							Inequality (%) (Col. 1) x (Col. 2)/G		
	1988	1995	2002	1988	1995	2002	1988	1995	2002
<u>Market Income</u>									
Total market income	54.18	72.74	77.94	0.20	0.31	0.31	48.01	66.17	69.64
Wages	48.99	59.98	58.31	0.18	0.24	0.30	39.59	43.68	50.77
Income from private enterprises	0.79	0.51	2.59	0.39	0.01	0.04	1.34	0.01	0.29
Property income	0.50	1.23	0.52	0.43	0.47	0.45	0.94	1.72	0.68
Rental value of owner-occupied housing	3.90	11.03	16.68	0.36	0.63	0.37	6.13	20.75	17.75
<u>Social Benefits</u>									
Total social benefits	43.65	26.65	24.76	0.25	0.41	0.46	48.10	32.75	33.03
Total cash transfers	9.47	11.05	15.20	0.33	0.32	0.33	13.62	10.66	14.36
- Social Insurance	6.12	10.49	13.97	0.42	0.33	0.34	11.48	10.32	13.61
- Supplementary income	3.33	0.52	0.78	0.15	0.19	0.40	2.14	0.29	0.91
- Public assistance	0.01	0.04	0.45	-0.04	0.43	-0.12	0.00	0.05	-0.16
Total in-kind transfers	34.18	15.61	9.57	0.23	0.48	0.67	34.48	22.09	18.67
- Health	4.07	4.99	6.62	0.19	0.45	0.83	3.43	6.73	15.89
- Housing	18.83	9.65	2.38	0.30	0.51	0.31	25.08	14.54	2.12
- Food	11.14	0.67	0.45	0.12	0.27	0.40	5.73	0.53	0.53
- Other in-kind	0.14	0.30	0.12	0.41	0.32	0.39	0.25	0.29	0.13
<u>Private Transfers</u>	2.36	1.84	1.65	0.40	0.38	0.37	4.14	2.06	1.77
<u>Taxes and Fees</u>	-0.19	-1.23	-4.36	0.29	0.27	0.35	-0.24	-0.98	-4.43
Total Income	100	100	100	0.23	0.34	0.35	100	100	100

Table 4: Changes in Household Per Capita Social Benefits in Urban China

	Levels (¥)			Composition (%)		
	1988	1995	2002	1988	1995	2002
Cash Transfers	433	721	1,570	9	11	15
Social Insurance	280	684	1,443	6	10	14
Supplementary Income	153	34	81	3	1	1
Public Assistance	1	2	46	0	0	0
Health	186	325	684	4	5	7
Housing	862	629	246	19	10	2
Food Assistance	510	43	47	11	1	0
Other In-kind	6	19	12	0	0	0
Total Social Benefits	1,997	1,738	2,559	44	27	25
Total Household Income	4,576	6,521	10,333	100	100	100

Table 5: Changes in Household Per Capita Income in Rural China

	Levels (¥)			Composition (%)		
	1988	1995	2002	1988	1995	2002
Market Income	1,874	2,500	3,187	100	102	99
Social Benefits	11	21	20	1	1	1
Private Transfers	34	22	83	2	1	3
Taxes & Fees	-39	-99	-85	-2	-4	-3
Total Income	1,881	2,444	3,205	100	100	100

Table 6: Rural Income Inequality and Its Sources

Source	(1)			(2)			(3)		
	Share of Total Income (%)			Gini/Concentration Ratio			Contribution of Income Source To Overall Inequality (%)		
	1988	1995	2002	1988	1995	2002	1988	1995	2002
<u>Market Income</u>									
Total market income	99.64	102.29	99.43	0.35	0.40	0.36	97.12	98.63	95.99
Wages	12.53	21.93	29.22	0.75	0.75	0.45	26.48	39.21	35.51
Farm activities*	70.77	47.47	38.98	0.28	0.24	0.21	54.84	26.87	21.84
Non-farm activities*		9.92	11.94		0.49	0.55		11.49	17.61
Income from property	0.17	0.44	0.60	0.52	0.54	0.77	0.24	0.57	1.24
Rental value of owned housing	9.34	11.86	14.03	0.29	0.32	0.37	7.51	8.93	13.91
Remittance income	0.87	2.68	1.03	0.40	0.36	0.49	0.97	2.30	1.34
Other income	5.97	7.99	3.63	0.42	0.49	0.47	7.07	9.25	4.54
<u>Social Benefits</u>									
Total social benefits	0.60	0.86	0.63	0.37	0.44	0.71	0.63	0.90	1.20
Total cash transfers	0.47	0.56	0.55	0.35	0.26	0.72	0.47	0.35	1.05
Social insurance	0.33	0.24	0.50	0.36	0.30	0.75	0.33	0.17	0.99
Public assistance	0.14	0.32	0.05	0.33	0.22	0.42	0.13	0.17	0.05
Total in-kind transfers	0.13	0.30	0.09	0.44	0.78	0.67	0.16	0.55	0.15
Health	0.01	0.06	0.03	0.70	0.65	0.72	0.03	0.09	0.05
Food	0.04	0.00	0.00	0.56	NA	NA	0.06	0.00	0.00
Other in-kind	0.08	0.24	0.06	0.34	0.81	0.64	0.07	0.47	0.10
<u>Private Transfers</u>	1.80	0.90	2.59	0.47	0.46	0.54	2.37	0.98	3.74
<u>Taxes and Fees</u>	-2.06	-4.05	-2.65	0.02	0.05	0.13	-0.12	-0.50	-0.93
Total Income	100	100	100	0.36	0.42	0.37	100	100	100

* NOTE: Incomes from farm and non-farm activities in 1988 cannot be differentiated, because the survey question lumped their production inputs.

Table 7: Changes in Per Capita Social Benefits in Rural China

	Levels (¥)			Composition (%)		
	1988	1995	2002	1988	1995	2002
Cash Transfers	9	14	17	0	1	1
Social Insurance	6	6	16	0	0	0
Supplementary Income	0	0	0	0	0	0
Public Assistance	3	8	2	0	0	0
Health	0	1	1	0	0	0
Housing	0	0	0	0	0	0
Food Assistance	1	0	0	0	0	0
Other In-kind	1	6	2	0	0	0
Total Social Benefits	11	21	20	1	1	1
Total Income	1,881	2,444	3,205	100	100	100

Table 8: Share of Tax Payments in Total Household Income by Decile in Rural China (%)

Decile	1988	1995	2002
1	15.69	16.85	6.78
2	3.25	7.95	4.80
3	3.13	7.74	4.07
4	2.54	6.74	3.99
5	2.40	6.40	3.58
6	2.21	5.68	3.31
7	2.03	4.80	2.94
8	1.73	3.84	2.41
9	1.44	2.89	2.06
10	0.95	1.34	1.37
Total	2.07	4.05	2.65

Table 9: Composition and Distribution of Income of Rural Migrants in 2002

	Level (¥)	Composition (%)	Gini/Concentration Ratio	Contribution to Overall Inequality (%)
Wages	2,189	34.40	0.250	22.63
Individual enterprise	3,758	59.04	0.429	66.65
Property	8	0.29	0.189	0.14
Net subsidies	-60	-0.95	0.208	-0.52
Rental value of housing	311	4.88	0.658	8.45
Other (including pensions)	149	2.34	0.408	2.51
Total income	6,365	100.0	0.380	100

Source: Khan and Riskin (2005, p. 373). Column 4 calculated by authors based on figures in Columns 2 and 3.

Appendix Table 1: The China Household Income Project (CHIP) Sample Designs

	1988	1995	2002
Urban			
Households	9,009	6,931	6,835
Individuals	31,827	21,694	20,632
Provinces	10	11	12
Rural			
Households	10,258	7,998	9,200
Individuals	51,352	34,739	37,968
Provinces	28	19	21
Rural Migrants			
Households			2,000
Individuals			5,318
Provinces			12

Source: (Riskin et al., 2001), p. 5, and “Sample Distribution of CHIP 2002 Surveys” by the CHIP Study Principal Investigators, unpublished memo.

Endnotes

¹ For a graphic illustration of China’s increasing inequality see Mitra and Yemtsov (2006), figure 3.

² See Riskin (2006) and Reddy and Minoiu (2006), both of which discuss the impact of poverty trends in China on world poverty trends. Wolf and Wade (2002) debate the issue of global inequality and China’s impact.

³ The 2002 dataset has not yet been put in the public domain, although this should happen in the near future.

⁴ More details on the design and sampling methods of the CHIP surveys can be found in Eichen and Zhang (1993) and Gao (2005).

⁵ We do not in this paper attempt to sort out fully the inequality results that flow from this broader definition.

⁶ According to the official CPI, in urban areas, 100 yuan in 2002 is equivalent to 39.7 yuan in 1988 and 90.4 yuan in 1995, whereas in rural areas, 100 yuan in 2002 is equivalent to 42.0 yuan in 1988 and 92.4 yuan in 1995 (source: China Statistical Abstract 2004, p.88).

⁷ Harvard University Gazette (2005) reports that some 56 percent of costs are now paid directly by patients.

⁸ These percentages add up to more than 100 because taxes, a negative item, are included in income.

⁹ This phenomenon has been analyzed in Riskin (2006).

¹⁰ Incomes from farm and non-farm activities in 1988 cannot be differentiated, because the 1988 survey question lumped together the production inputs for the two types of activities.

¹¹ It should be kept in mind that all the figures in this paragraph are per capita averages over the entire rural sample, not average amounts received by beneficiaries, which would of course be larger.

¹² However, this finding could be a result of sample bias. The omission from the sample of migrants living in factory or construction site dormitories eliminated a wage component of income that is likely to be relatively equally distributed compared to individual income.

¹³ Khan and Riskin (2005) point out that this “matches the very high proportion of migrants (58 percent) and very low proportion of full-status residents (less than 6 percent) engaged in self-employment, 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” (p. 373).