ECONSTOR
Make Your Publications Visible.

A Service of
ZBW
Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Li, Shi; Zhao, Renwei

Working Paper

Changes in the distribution of wealth in China, 1995 - 2002

WIDER Research Paper, No. 2007/03

Provided in Cooperation with:
United Nations University (UNU), World Institute for Development Economics Research (WIDER)

Suggested Citation: Li, Shi; Zhao, Renwei (2007) : Changes in the distribution of wealth in China, 1995 - 2002, WIDER Research Paper, No. 2007/03, ISBN 9291909424=978-92-9190-942-1, The United Nations University World Institute for Development Economics Research (UNU-WIDER), Helsinki

This Version is available at:
https://hdl.handle.net/10419/63456

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

WWW.ECONSTOR.EU

Mitglied der Leibniz-Gemeinschaft

UNITED NATIONS UNIVERSITY

UNU-WIDER

World Institute for Development Economics Research

Research Paper No. 2007/03

Changes in the Distribution of Wealth in China, 1995-2002

Shi Li[1] and Renwei Zhao[2]

January 2007

Abstract

This paper investigates some major changes in the wealth distribution in China using the data from two national household surveys conducted in 1995 and 2002. The surveys collected rich information on household wealth and its components, enabling a detailed analysis of changes in wealth distribution among Chinese households. Our analysis indicates that the wealth distribution in China as a whole became much more unequal in 2002 than it was in 1995. The housing reform, in which public apartments were sold to urban households at extremely low prices, has accelerated the accumulation of wealth among urban households on the one hand, and widened the wealth gap between urban and rural areas on the other.

Keywords: China, wealth, income, distribution, inequality, households
JEL classification: D3, E2

Copyright © UNU-WIDER 2007

[1]Beijing Normal University; [2]Chinese Academy of Social Sciences

This study has been prepared within the UNU-WIDER project on Personal Assets from a Global Perspective, directed by Jim Davies.

UNU-WIDER acknowledges with thanks the financial contributions to its research programme by the governments of Denmark (Royal Ministry of Foreign Affairs), Finland (Ministry for Foreign Affairs), Norway (Royal Ministry of Foreign Affairs), Sweden (Swedish International Development Co-operation Agency—Sida) and the United Kingdom (Department for International Development).

ISSN 1810-2611 ISBN 92-9190-942-4 ISBN 13 978-92-9190-942-1

Acknowledgements

This paper was presented in the UNU-WIDER project meeting Personal Assets from a Global Perspective, in Helsinki on 4-6 May 2006. The authors thank Jim Davies for his constructive and detailed comments. The authors would also like to thank Jesper Roine and other participants for their comments.

The World Institute for Development Economics Research (WIDER) was established by the United Nations University (UNU) as its first research and training centre and started work in Helsinki, Finland in 1985. The Institute undertakes applied research and policy analysis on structural changes affecting the developing and transitional economies, provides a forum for the advocacy of policies leading to robust, equitable and environmentally sustainable growth, and promotes capacity strengthening and training in the field of economic and social policy making. Work is carried out by staff researchers and visiting scholars in Helsinki and through networks of collaborating scholars and institutions around the world.

www.wider.unu.edu *publications@wider.unu.edu*

UNU World Institute for Development Economics Research (UNU-WIDER)
Katajanokanlaituri 6 B, 00160 Helsinki, Finland

Typescript prepared by Lorraine Telfer-Taivainen at UNU-WIDER

The views expressed in this publication are those of the author(s). Publication does not imply endorsement by the Institute or the United Nations University, nor by the programme/project sponsors, of any of the views expressed.

1 Introduction

In the last 25 years, China has moved from a centrally planned to a market-oriented economy, leading to rapid economic growth and substantial improvement in the living standard of Chinese households.[1] Given the fact that like other Asian countries, China has quite a high propensity to save, wealth accumulation and growth have become significantly faster with rapid income growth. Moreover, the land reform in rural areas and the privatization of public housing in urban areas have also speeded up the process of wealth accumulation of Chinese households. Along with the rising income inequality, however, household wealth displays an even more unequal distribution at the beginning of the new millennium. As indicated in this paper, the Gini coefficient of the wealth distribution for the country as a whole was 0.55 in 2002, compared with 0.45 in 1995. That means inequality in the distribution of wealth has experienced a rapid increase in a rather short period. It also means that China is no longer a proletarian and egalitarian society, which was one of the principal goals of economic and social development in Mao's era.

This paper attempts to investigate some major changes in the wealth distribution in rural and urban areas and in China as a whole using the data from two national household surveys conducted in 1995 and 2002. The surveys collected rich information on household wealth and its components, enabling a detailed analysis of changes in wealth distribution among Chinese households. Our analysis indicates that the wealth distribution in China as a whole became much more unequal in 2002 than it was in 1995. The rising inequality is largely due to a striking increase in the wealth gap between urban and rural households. The housing reform, in which public apartments were sold to urban households at extremely low prices, has speeded up the accumulation of wealth among urban households on one hand, and has widened the wealth gap between urban and rural areas on the other hand. Another contributor to the widening wealth gap between urban and rural households is declining land values in rural areas, which lead to a slowdown of wealth growth for rural households.

The paper is organized as follows. The next section discusses some key issues related to the growth and distribution of household wealth in the last two decades, and provides a background for understanding the institutional settings and policies. In the third section, the survey and data used in the paper are described. As China is a rural–urban divide society, the wealth distribution and its changes in urban and rural areas are investigated separately, in Sections 4 and 5 respectively. Then the wealth distribution in China as a whole is examined in the Section 6. The paper is concluded with some policy implications in Section 7.

---

[1] It should be noted that 'China' in this paper means mainland China. Hong Kong, Macau, and Taiwan are not include in our analysis. Given the fact that the three regions are much wealthier than mainland China, their inclusion in the analysis would inevitably lead to a significantly higher wealth level and wider wealth distribution in China as a whole.

2 Settings

In the pre-reform period private property rights were not fully recognized, and with an extremely low income level the accumulation of household wealth was very limited in China. The great majority of urban families lived in public housing. Private and individual business, and even self-employment, were strictly prohibited. As a result, the wealth accumulation of urban households principally took the form of financial assets from savings and durable consumer goods. In 1978, the total amount of time deposit savings in China as a whole was 12.9 billion yuan (NBS 1999: 25), which is equivalent to 13 yuan per capita and less than US$2 at the current exchange rate. From a distributive point of view, financial assets were more concentrated in urban areas than in rural areas, since rural people had a large part of their assets in the form of housing. Although rural people occupied more living space than their urban counterparts,[2] the market value of their housing was extremely low, reflecting the fact of a huge number of rural people living in poverty.[3]

Since the average level of wealth was so low, the distribution of household wealth was not a concern of academia or the government. Even in the early stages of economic reform in the 1980s, wealth distribution did not attract much attention. Consequently, there were few studies specifically focusing on the issues of inequality of wealth distribution in China.

Economic reforms started in rural areas in the late 1970s, with land reform widely and rapidly spreading over the entire rural sector in a short period. Collective land was distributed to rural households within villages mainly according to household size. Households obtained only usage rights rather than land property rights. Generally speaking, even today the land distribution is highly equal within villages and even within townships, although the inequality increases with an administrative region getting larger. The land reform allowed rural households more autonomy in farming their land and gave them a claim to the economic returns from using land, although the land remained collectively owned by law. From an economic point of view, the land can be regarded as a part of the wealth of rural households (Mckinley 1993; Brenner 2001).

While the land reform increased the wealth of rural people, the housing reform undoubtedly has augmented the wealth of urban people. The housing reform started in the early 1990s and speeded up later in the decade. The principle of the reform was to sell the public housing to urban households at extremely low prices. The official selling prices were set by local governments with considerations of income level, living costs and construction costs locally. There were almost no differences in the selling prices within a city. Variation of the official prices was insignificant across cities and provinces, but the regional *market* prices of housing were remarkably different. Even within a city, the market housing prices were different from one location to another location. While the housing reform benefited urban households on average in terms of

---

[2] Housing space averaged 3.6 m^2 per capita for urban residents and 8.1 m^2 for rural residents in 1978 (NBS 1999: 25).

[3] There are different estimates of the number of the poor in rural China in the pre-reform period, depending on the poverty thresholds adopted. If the official line is used, there were 250 million poor people in 1978. The number would increase to 450 million if the US$1 line were adopted (see World Bank 2000).

wealth accumulation, it also had a big impact on the wealth distribution in urban areas. Those households living in apartments with a good location, high quality and large space before the reform benefited more from purchasing their apartments than others. Housing reform had a significant effect in widening the wealth gap between urban and rural areas as the reform took place for urban households, precisely for those lived in public housing. The percentage of the urban households living in public housing fell dramatically, from 84 per cent in 1988 to 16 per cent in 2002, as indicated in the data from 1988 and 2002 household income surveys.[4]

When looking at the changes in wealth distribution, we cannot ignore the changes in income distribution in China. One of most striking features in the income distribution during the period under study is the widening income gap between urban and rural areas. The official statistics, although more or less biased, indicate a rising urban–rural income gap from 1997 to 2003—the ratio of urban to rural household income per capita jumped from 2.5:1 to 3.2:1 (NBS 2004). This is also demonstrated in Khan and Riskin (2006) and Sicular et al. (2007).

3 Data

The data used in this paper come from two household surveys conducted by the research team of the household income project formed by researchers in the Institute of Economics, Chinese Academy of Social Sciences (CASS) and international scholars. The first survey refers to 1995 and was conducted in the spring of 1996; the second survey refers to 2002 and was conducted in early 2003. The samples in the 1995 and 2002 surveys were drawn from the large sample used by the National Bureau of Statistics (NBS) in its annual household survey. The NBS adopts a slightly different sampling procedure for its rural survey from that for urban surveys. The sampling method for the urban survey can be described as follows. The respondent households are selected using a two-stage stratified systematic random sampling scheme. In the first stage cities and county towns are selected; in the second stage households within the selected cities and towns are chosen.

The procedure to select cities and county towns is designed as follows. First, all cities and county towns are classified into five categories on the basis of their population size. The categories are: extremely large cities, large cities, medium-sized cities, small cities and county towns. Second, the cities and towns in each category are grouped into the six geographical regions (northeast, north, east, centre, northwest, and southwest). In each region, the cities and county towns of each category are arranged according to the average wages of their staff and workers with urban *hukou* (registration). Third, the numbers of individuals who are staff and workers in the cities are added up, and the sample cities or counties are selected using an interval of one million staff and workers (NBS 2004).

---

[4] The data from the 2002 household income survey are described in the next section in this paper and the data from the 1988 survey are introduced in Eichen and Zhang (1994). The authors of this paper were deeply involved in the data collection of the two surveys.

At the second stage, the households are selected in each of the sample cities by a multi-phase sampling scheme. In the extra-large and large cities, the procedure is a so-called 'three-phase' sampling method. In the first phase, the sample sub-districts in each city or county town are selected. In the second phase, the sample resident committees are selected from the sample sub-districts. And in the last phase, the sample households are selected from the sample resident committees (*jumin weiyuan hui*). In the medium-sized and small cities and counties, the procedure is a two-stage sampling method. First, the sample resident committees are selected; second, the sample households are selected from the sample resident committees. Unfortunately, the NBS does not document how the sub-districts, resident committees and households are selected. It is believed that a more or less random selection method is adopted.

The NBS rural household surveys follow a slightly different procedure from its urban surveys. The difference exists in the sampling procedure, which consists of two steps. First, the sample villages are selected directly in each province, and second the sample households are drawn from each of the sample villages. Generally, ten households are selected from each village.

The 1995 survey conducted by CASS covers 19 provinces and 102 counties in rural China, and 12 provinces and 69 cities in urban China. The number of provinces in the 2002 rural survey increases to 22 and counties to 120, while the 2002 urban survey contains the same number of provinces and cities as the 1995 survey. The increase in the number of provinces in the 2002 survey has only a small effect on the estimated wealth distribution as the newly included provinces have income and wealth close to the average level of the surveyed provinces.[5] Table 1 presents the sample distribution of cities/counties and households among the provinces surveyed. The sample size increases with the size of the provincial population, but not exactly in proportion.

The surveys collected detailed information on household wealth and its components, including financial assets, market value of private housing, production assets and value of durable consumer goods. For the rural households, the value of land is estimated following the procedure which was adopted in Mckinley (1993) and Brenner (2001).[6] The housing value is estimated by asking households to assess the market value of their owned housing. For a few homeowners housing space is reported, but with no reported housing value, we make imputations following the method used in Gustafsson et al. (2006). The value is calculated as the average value per square meter in the county/city,

---

[5] Chongqing was a part of Sichuan in 1995 and separated from Sichuan as a provincial level administration region in 2002, so actually two provinces, Guangxi and Xinjiang, are added into the 2002 survey as new provinces. An exercise shows that wealth per capita would increase by 2.8 per cent if the two provinces were removed from the survey.

[6] The procedure consists of the following steps. First, land area is adjusted for quality; 1 mu (equivalent to 0.06 hectare) of paddy field is set equal to 2 mu of dry fields. Second, net agricultural income per household is gross income minus production costs. Finally, according to measurements in 1988 and 1995, 25 per cent of net agricultural income came from land, and the rate of return on land was 8 per cent. Based on these definitions and assumptions, we calculate land value. In the 2002 survey gross agricultural income and production costs are not reported. Using reported land area and average net agricultural income in the county which is computed from the survey data, we calculate land value per household. It should be pointed out that the difference in calculation of land value in 2002 may result in an underestimate of inequality of land value in rural areas since disparity of land productivity within counties is not taken into account.

times the reported space. Here housing property is defined as the net value, meaning the total value of housing minus outstanding housing debt. Households were also asked to value their durable consumer goods and most households reported the present market value. For some farmers who failed to report the value of durable goods, but reported the holdings of televisions, bicycles, washing machines, etc., we specify and estimate a linear consumer durable function over the households reporting the values and then apply the coefficients to the households that hold these goods but did not report values. The value of net wealth is used for our analysis, which is then the sum of all wealth items minus non-housing debt. Finally, we derived the household wealth per capita in rural and urban areas and China as a whole for 1995 and 2002 respectively.

Table 1: Distribution of households in the 1995 rural and urban surveys, by province

	Rural				Urban			
	number of counties		number of households		number of cities		number of households	
	1995	**2002**	**1995**	**2002**	**1995**	**2002**	**1995**	**2002**
Total	102	120	7,998	9,200	69	70	6934	6,835
Province:								
Beijing	1	2	100	160	1	1	500	484
Hebei	5	5	498	370				
Shanxi	6	6	300	400	7	7	650	640
Liaoning	5	6	300	450	5	5	700	697
Jilin	5	5	300	480				
Jiangsu	5	5	500	440	9	9	800	729
Zhejiang	5	6	400	520				
Anhui	5	5	450	440	6	6	500	493
Jiangxi	5	6	350	430				
Shandong	7	7	700	630				
Henan	6	6	700	530	8	8	600	680
Hubei	6	6	402	520	7	7	742	673
Hunan	4	5	500	450				
Guangdong	7	7	500	530	8	8	546	544
Guangxi		5		400				
Chongqing		2		200		2		279
Sichuan	8	6	798	500	7	6	848	585
Guizhou	5	6	300	400				
Yunnan	5	5	300	260	9	8	648	636
Shaanxi	6	6	300	370				
Gansu	6	5	300	320	3	3	400	395
Xinjiang		8		400				

Source: See text.

4 The distribution of wealth in rural China

As China has a striking urban–rural divide, it is best to begin by looking at descriptive statistics of wealth size and composition in rural and urban areas separately. According to the information collected in the surveys, the wealth of rural households can be divided into six items: land, housing property, financial assets, fixed production assets, durable consumption goods, and non-housing liability (Table 2).

Table 2: Net values of household wealth per capita and its composition in rural China, 1995 and 2002

	1995		2002		
Net wealth and its components	Mean value (yuan)	Share (%)	Mean value (yuan)	Share (%)	Growth, 1995-2002
Total wealth (net value)	11,427	100	12,938	100	13.2
of which:					
land value	5,350	46.82	3,974	30.72	-25.7
net value of housing	3,599	31.50	5,565	43.01	54.6
financial assets	1,131	9.90	1,593	12.31	40.8
fixed production assets	664	5.81	1,182	9.14	78.0
durable consumer goods	750	6.56	793	6.13	5.7
non-housing liabilities	-67	-0.59	-169	-1.31	152.2

Sources: Household income survey in 1995 and 2002.

Notes: Mean value of wealth and its components are measured in 2002 prices.

There are many remarkable changes taking place in the level and structure of household wealth in rural areas between 1995 and 2002. The household wealth per capita is 11,427 yuan in 1995 (in 2002 yuan) and then rises to 12,938 yuan in 2002, increasing by 13 per cent during seven years. Of the net wealth, land and housing are the two largest assets, accounting for 78 per cent in 1995 and 74 per cent in 2002 respectively. All the wealth components except for land value have some increase. However, the land value decreases dramatically by 26 per cent during the period under study. As a result, the share of land in net wealth falls from 47 per cent in 1995 to 31 per cent in 2002. Why does the land value of rural households decline? We believe there are several explanations. First, industrialization, urbanization and construction of the transportation system use more farmland and cause a reduction in the land size per capita in rural China. The surveys indicate that the land size per capita declines from 1.73 mu per capita in 1995 to 1.47 mu in 2002. Second, the returns to farming land have been falling since the mid 1990s, with the decline in the prices of agricultural products and stagnation of farming productivity.

Unlike land value, the shares of housing and production assets increase rapidly, as shown in Table 2. The former increased by 55 per cent and the latter by 78 per cent between 1995 and 2002. As a result, the share of housing value rose from 32 per cent to 43 per cent and that of production assets from 5.8 per cent to 9.1 per cent. Meanwhile, the share of financial assets went up modestly, from 10 per cent to 12 per cent, although the absolute growth of financial assets was fairly high.

Table 3: Share and cumulative share of wealth in decile groups in rural China, 1995 and 2002

	Share		Cumulative share	
Decile	1995	2002	1995	2002
1 bottom	3.1	2.0	3.1	2
2	4.7	3.7	7.8	5.7
3	5.8	4.9	13.6	10.6
4	6.7	6.0	20.3	16.6
5	7.7	7.1	28	23.7
6	8.8	8.4	36.8	32.1
7	10.2	9.9	47	42
8	12.0	12.0	59	54
9	14.9	15.6	73.9	69.6
10 top	26.2	30.5	100	100
Gini			0.33	0.40

Sources: Household income survey in 1995 and 2002.

Figure 1: Lorenz curve of wealth distribution in rural China, 1995-2002

The distribution of wealth among Chinese rural households can be examined by making a comparison of the shares of net wealth in the decile groups and then computing the Gini coefficient—the results appear in Table 3. It is clear that distribution of wealth was becoming more unequal from 1995 to 2002; the Gini coefficient increased from 0.33 to 0.40. Looking at the shares of net wealth obtained by the decile groups, we see that the share for the top decile is 26.2 per cent in 1995 and then rises to 30.5 per cent in 2002. At the same time the wealth shared by the bottom decile falls from 3.1 per cent in 1995 to 2 per cent in 2002. Furthermore, the ratio between the highest two deciles and lowest two deciles rises from 5.3:1 in 1995, to 8.1:1 in 2002. Widening inequality of the wealth distribution can also be observed in Figure 1, which shows the Lorenz curve of the

wealth distribution of rural households in the two years. Clearly, the 2002 curve lies completely outside the 1995 curve.

To find out how the wealth components and their distribution contribute to the distribution of net wealth, we decomposed the Gini coefficient of net wealth by using the formula:[7]

$$G_t = \sum_{j=1}^{J} \theta_j C_j \qquad (1)$$

where G_t is the Gini coefficient of net wealth, and θ_j and Cj are the share and concentration ratio of the jth wealth component.

Table 4: The distribution of wealth and its decomposition by factor in rural china, 1995 and 2002

	Share (%)	Gini	Concentration ratio	Contribution to total inequality (%)
1995				
Total wealth (net value)	100.0	0.33	0.33	100.00
of which:				
land value	46.8	0.37	0.29	40.44
net value of housing	31.5	0.47	0.38	36.46
financial assets	9.9	0.62	0.44	13.19
fixed production assets	5.8	0.63	0.32	5.60
Durable consumer goods	6.6	0.40	0.22	4.45
non-housing liabilities	-0.6	0.95	0.06	-0.11
2002				
Total wealth (net value)	100	0.40	0.40	100
of which:				
land value	30.7	0.45	0.26	20.02
net value of housing	43.0	0.54	0.46	49.15
financial assets	12.3	0.68	0.49	15.18
fixed production assets	9.1	0.67	0.39	9.02
Durable consumer goods	6.1	0.66	0.38	5.79
non-housing liabilities	-1.3	0.95	-0.25	0.81

Sources: Household income survey in 1995 and 2002.

The change in wealth distribution in rural China can also be examined decomposing the Gini coefficient (G_t) of net wealth into two items as indicated by the formula above, the concentration ratio (Cj) and the share (θj) of the j components. That means the contribution of each of the components to the inequality of net wealth depends on its share and concentration ratio. Comparing the Gini of net wealth with the concentration ratio of the jth component, one can consider that the component has an equalizing effect

[7] This formula is examined in more detail by Pyatt et al. (1980).

if its concentration ratio is smaller than the Gini of net wealth; otherwise it has disequalizing effect. Table 4 presents the results from our decomposition analysis. It is apparent that the contribution of land value to the inequality of net wealth in rural areas decreases from 40 per cent in 1995 to 20 per cent in 2002. This dramatic drop resulted mainly from a significant fall in the share of land value in net wealth. The concentration ratio of land value decreases slightly, but remains at a relatively lower level compared to the Gini of the net wealth even in 2002. The land value, therefore, had an obvious equalizing effect, which became weaker as its share decreased over time. On the contrary, the housing assets have the biggest increase in their contribution to the inequality of net wealth in rural China, and became the largest contributor in 2002. It is worth noting that the housing value shows not only a rise in its share but also a remarkable increase in its concentration ratio, implying more unequal distribution of housing assets among rural households. As shown in Table 4, the third largest contributor to the inequality of net wealth is financial assets. Moreover, the contribution of financial assets increases from 13 per cent in 1995 to 15 per cent in 2002.

5 The wealth distribution in urban China

As shown in Table 5, the net wealth of urban households consists of six items: housing assets, financial assets, fixed production assets, durable consumption goods, other assets, and non-housing debt. As above, the housing assets are expressed as the net value of housing, being equal to the total value of housing minus housing debts. Net wealth is then the sum of all assets minus non-housing liabilities.

Table 5: Net wealth per capita and its composition in urban China, 1995 and 2002

	1995		2002		
Net wealth and its components	Mean value (yuan)	Share (%)	Mean value (yuan)	Share (%)	Growth, 1995-2002
Total wealth (net value)	13,698	100	46,134	100	236.79
of which:					
financial assets	3,841	28.04	11,958	25.92	211.33
net value of housing	5,985	43.69	29,703	64.38	396.29
fixed production assets	165	1.20	815	1.77	393.94
durable consumer goods	3,156	23.04	3,338	7.24	5.77
other assets	612	4.47	620	1.34	1.31
non-housing liabilities	-61	-0.45	-301	0.65	593.44

Sources: Household income survey in 1995 and 2002.

Notes: Mean value of wealth and its components are measured in 2002 prices.

Unlike rural households, urban households had substantial growth in their wealth from 1995 to 2002. Household wealth per capita increased from 13,700 yuan to 46,000 yuan in constant prices, with an annual growth rate of 19 per cent. Among the six wealth components, housing assets play the most important role in the rise in net wealth of urban households. The market value of housing assets increases by 396 per cent during the seven years and its share in net wealth on average augments from 44 per cent in 1995 to 64 per cent in 2002. Meanwhile, production assets grow at the same speed as

housing assets, but their share remains at quite a low level, no higher than 2 per cent. Largely due to faster growth in housing assets, the share of financial assets drops by two percentage points, even though the amount of financial assets increases by 211 per cent.

We also examine the distribution of wealth in urban China by looking at the shares of decile groups (Table 6, Figure 2). Since for some urban residents their debts exceed their assets, the lowest decile group owns less than one percent of total urban wealth in both years. The wealth share of the highest decile group is 39 per cent in 1995 and then decreases to 34 per cent in 2002. At the same time, the Gini coefficient of wealth distribution in urban China decreases from 0.52 to 0.48.

Table 6: Share and cumulative share of decile group in urban China, 1995 and 2002

	Share		Cumulative share	
Decile	1995	2002	1995	2002
1 bottom	0.7	0.2	0.7	0.2
2	2.2	2.6	2.9	2.8
3	3.2	4	6.1	6.8
4	4.3	5.3	10.4	12.1
5	5.6	6.5	16	18.6
6	7.3	8	23.3	26.6
7	9.3	9.9	32.6	36.5
8	12.1	12.6	44.7	49.1
9	16.9	17.2	61.6	66.3
10 top	38.5	33.9	100	100
Gini			0.52	0.48

Sources: Household income survey in 1995 and 2002.

Figure 2: Lorenz curve of wealth distribution in urban China, 1995 and 2002

When net wealth is broken down into its six components, we find that housing assets are the most unequally distributed in both years (Table 7). The concentration ratio of housing assets was 0.73 in 1995, which was 21 percentage points higher than the Gini of net wealth. Although this ratio became smaller in 2002, it remained at the highest level for any of the six wealth components. It is apparent that housing assets are the greatest contributor to the inequality of wealth distribution in urban China. They explain 62 per cent and 68 per cent of the total inequality in 1995 and 2002 respectively.

Why is housing the most unequally distributed asset in urban areas, and much more unequally distributed than in rural areas? The underlying causes can be traced back to the housing system under the traditionally planned economy. As is well known, prior to the reforms basic necessities such as food, cotton, edible oil, etc., were rationed on a per head basis. Housing was distributed according to one's official rank or political power. As a result, housing was unequally distributed based on political considerations.

Table 7: The distribution of wealth and its decomposition by factor in urban China, 1995 and 2002

	Share (%)	Gini	Concentration ratio	Contribution to total inequality (%)
1995				
Total wealth (net value)	100.0	0.52	0.52	100
of which:				
financial assets	28.0	0.60	0.42	22.8
net value of housing	43.7	0.82	0.73	61.7
fixed production assets	1.2	0.99	0.74	1.7
durable consumer goods	23.0	0.41	0.23	10.2
other assets	4.5	0.82	0.40	3.5
non-housing liabilities	-0.4	0.98	-0.12	0.1
2002				
Total wealth (net value)	100	0.48	0.48	100
of which:				
financial assets	25.9	0.60	0.44	24.22
net value of housing	64.4	0.54	0.50	67.62
fixed production assets	1.8	0.50	0.48	1.8
durable consumer goods	7.2	0.98	0.32	4.92
other assets	1.3	0.91	0.38	1.08
non-housing liabilities	-0.7	0.98	-0.26	0.36

Sources: Household income survey in 1995 and 2002.

During the mid 1990s, the market-oriented housing reform not only inherited the pre-existing inequality of housing distribution, but further increased that inequality (Zhao and Li 1997). When public housing was sold to urban households, the price was set with a consideration only of housing space. The other factors, such as locations and housing quality were not reflected in the selling prices. Consequently, those living in apartments with high quality and in good locations obtained much higher capital gains after purchasing public housing. In addition, some cities and work units linked the housing

distribution with one's official position, which created opportunities for some officials to obtain housing with higher potential market values. The selling prices were set artificially, much lower than the market prices. According to a study of cities in eleven provinces by Wang and Wei (1999) in 1995 this price differential was 8:1 (Table 8). Due to such institutional arrangements, housing is much more unequally distributed than the other assets (the ratio between the top two deciles and the bottom two deciles is 19:1 for net wealth and 35:1 for housing assets in 2002). Moreover, the inequality in housing assets is larger in urban areas than in rural areas. The ratio of housing assets between the top two deciles and the bottom two deciles in rural areas is only 11:1 (Zhao and Ding 2006). However, the distribution of housing assets was more equal in 2002 than in 1995 due to more households having purchased the public apartments which they lived in. As our data show, 57 per cent of urban households were in public housing in 1995, but the percentage had fallen to 16 per cent in 2002. Table 4 also indicates a rapid growth of housing assets of urban households due to a larger scale of housing privatization.

Table 8: Market housing prices and subsidized prices in urban China (unit: yuan/m^2)

Province	Market housing price	Public housing sales price	The ratio between market price and public housing sale price
Beijing	3226.52	403.68	7.99:1
Shanxi	919.06	238.56	3.85:1
Liaoning	1491.45	272.85	5.47:1
Jiangsu	1247.26	191.28	6.52:1
Anhui	897.80	105.83	8.48:1
Henan	780.02	166.80	4.68:1
Hubei	2187.50	98.53	22.20:1
Sichuan	1050.20	87.04	12.50:1
Guangdong	3100.00	247.59	12.07:1
Yunnan	1276.34	201.01	6.35:1
Gansu	1169.87	241.53	4.84:1
Mean price	1576.91	204.97	7.69:1

Source: Wang and Wei (1999).

It should be noted that the value of usage rights of the households living in public housing is not taken into account as a part of their housing assets. As shown in Gustafsson et al. (2003), including the value of usage rights of public housing would significantly reduce inequality of wealth distribution in urban China in 1995, its Gini coefficient decreasing nearly by 10 percentage points.[8] Therefore, inclusion of the value of the usage rights of public housing would lead to a reversed change in wealth inequality in urban China. The distribution of wealth would be more unequal in urban China in 2002 than in 1995.

[8] One of our exercises indicates that if the percentage of urban households living in public housing in 1995 were the same as in 2002, the inequality of wealth distribution in 1995 would go down by 7 percentage points.

Compared to housing assets, the distribution of financial assets is quite equal among urban households in both years. They have a concentration ratio of 0.42 in 1995 and 0.44 in 2002. As mentioned earlier, financial assets are more evenly distributed in urban areas than in rural areas. More equal distribution of financial assets implies that less wealthy households have a fairly high saving rate compared to their net wealth or income. This can be explained by many uncertainties arising during the period of economic transition. Ongoing reforms of social security related to pension, healthcare and education cause urban people to save more for precautionary reasons. In addition, traditional Chinese culture places high value on saving.

6 The distribution of wealth in China as a whole

We now turn to the distribution of wealth in China as a whole. Table 9 contains the basic results for household net wealth per capita and its various components nationwide. The net wealth per capita is 12,102 yuan and then increases to 25897 yuan in 2002, with a growth rate of 114 per cent. The fast growth of net wealth is mainly driven by rapid growth of housing assets, which rise by 249 per cent during the period of 1995-2002. At the same time, housing assets increase their share of net wealth from 34 per cent to 58 per cent, becoming the largest component in 2002. Financial assets also had very fast growth, becoming the second largest component in 2002; their share in net wealth went up from 16 per cent to 22 per cent. Therefore, housing and financial assets together account for 89 per cent of the net wealth in 2002, compared with only 51 per cent in 1995. Since urban households have no land, average land value is only 2,421 yuan in 2002, declining by more than one third; its share in net wealth decreases from 32 per cent to 9 per cent.

Table 9: Net wealth per capita and its composition in China as a whole, 1995 and 2002

	1995		2002		
Net wealth and its components	Mean value (yuan)	Percentage of total (%)	Mean value (yuan)	Percentage of total (%)	Growth, 1995-2002
Total wealth (net value)	12,102	100.00	25,897	100.00	113.99
of which:					
land value	3,828	31.63	2,421	9.35	-36.76
financial assets	1,908	15.77	5,643	21.79	195.75
net value of housing	4,289	35.44	14,989	57.88	249.48
fixed production assets	525	4.34	1,037	4.00	97.52
durable consumer goods	1,441	11.91	1,784	6.89	23.80
other assets	175	1.45	242	0.93	38.29
non-housing liabilities	-65	-0.54	-219	-0.85	236.92

Sources: Household income survey in 1995 and 2002.

Notes: Mean value of wealth and its components are measured in 2002 prices.

As for the distribution of net wealth, Table 10 presents the estimated wealth share and cumulative share for each decile group and the national Gini coefficients as well. It is clear that the inequality of wealth distribution in China as a whole rose fairly

substantially between 1995 and 2002. The top decile possesses 31 per cent of all the net wealth in 1995 and then 41 per cent in 2002, increasing by 10 percentage points in just these seven years. Meanwhile, the share of the two bottom deciles decreases from 5.8 per cent to 2.8 per cent. Moreover, the ratio of the share of the top decile to the bottom decile goes up from 15:1 in 1995 to 59:1 in 2002, and the ratio of the top two deciles to the bottom two deciles from 8:1 to 21:1. The Gini coefficients of net wealth in the two years provide further evidence for widening inequality of wealth distribution in China as a whole. As shown in Table 10, the Gini coefficient mounts from 0.40 to 0.55, a substantial rise indeed. The Lorenz curves of the national wealth distribution also indicate a significantly wider inequality in 2002 than in 1995, as illustrated in Figure 3.

Table 10: Share and cumulative share of decile group in China as a whole, 1995 and 2002

	Share		Cumulative share	
Decile	1995	2002	1995	2002
1 bottom	2	0.7	2	0.7
2	3.8	2.1	5.8	2.8
3	5	3	10.8	5.8
4	6.1	3.8	16.9	9.6
5	7.2	4.8	24.1	14.4
6	8.4	6.2	32.5	20.6
7	9.8	8.3	42.3	28.9
8	11.8	11.8	54.1	40.7
9	15.2	17.9	69.3	58.6
10 top	30.8	41.4	100.1	100
Gini			0.40	0.55

Sources: Household income survey in 1995 and 2002.

The decomposition analysis for the Gini coefficient can be also applied to the national distribution of household wealth. The results from our decomposition analysis are presented in Table 10. Clearly, there are three wealth components, i.e., housing asset, financial assets and other assets, which have concentration ratios higher than the Gini coefficient of net wealth, so they have disequalizing effects. Among the three components, housing assets play the most important role in widening inequality of the wealth distribution. They have a share of 35 per cent in net wealth and a concentration ratio of 0.54 in 1995. The corresponding numbers go to 58 per cent and 0.66 in 2002. Thus, the contribution of housing assets to the inequality of net wealth increases from 48 per cent to 66 per cent. It seems that the housing privatization has little impact on the share of financial assets of households. Conversion of financial assets by some urban households to housing assets by purchasing public apartments might seem to account for financial assets declining as a percentage of net wealth. Actually, it is not the case. As shown in Table 11, the share of financial assets increased from 16 per cent in 1995 to 22 per cent in 2002. Meanwhile, the distribution of financial assets became more unequal in 2002 than it is in 1995, because both the Gini coefficient and concentration ratio of financial assets rise considerably. As a result, the contribution of financial assets to total inequality of net wealth in China as a whole went up from 17 per cent to 25 per

cent. Nevertheless, there is a remarkable change in the role of land value in the wealth distribution. It accounts for 32 per cent of the net wealth in 1995 and the percentage falls to 9 per cent in 2002. The concentration ratio of land value is 0.29 and then falls to -0.045. Moreover, it explains -0.8 per cent of the total inequality of net wealth in 2002. That implies that land is more important for the less wealthy households whereas housing and financial assets are relatively more important for wealthy households.

Figure 3: Lorenz curve of wealth distribution in China as a whole, 1995 and 2002

The national Gini coefficient of wealth is considerably higher than that in either urban or rural China in 2002, which implies there is a big gap of wealth between urban and rural households. As our results in the previous tables showed, the wealth gap between urban and rural areas is almost absent (1.20:1) in 1995, but it goes up to a high level (3.57:1) in 2002. The widening urban–rural gap of wealth results from two factors. The first is housing privatization in urban areas, starting in the early 1990s and spreading out in the late 1990s. There is no doubt that the housing reform enables urban households to gain substantially in measured wealth. As a result, the housing reform widens the estimated urban–rural wealth gap. The second factor is the declining value of rural land, which is a large part of the net wealth of rural households in 1995 but no longer plays such an important role in 2002.

Table 11: The distribution of wealth and its decomposition by factor in China as a whole, 1995 and 2002

	Share (%)	Gini	Concentration ratio	Contribution to total inequality (%)
1995				
Total wealth (net value)	100.0	0.40	0.40	100.00
of which:				
land value	31.6	0.55	0.29	22.92
financial assets	15.8	0.67	0.43	17.08
net value of housing	35.4	0.64	0.54	48.15
fixed production assets	4.3	0.75	0.36	3.97
durable consumer goods	11.9	0.54	0.21	6.41
other assets	1.4	0.95	0.40	1.46
non-housing liabilities	-0.5	0.96	0.01	-0.02
2002				
Total wealth (net value)	100	0.55	0.55	100
of which:				
land value	9.4	0.67	-0.05	-0.77
financial assets	21.8	0.74	0.63	24.92
net value of housing	57.9	0.67	0.63	66.32
fixed production assets	4.0	0.84	0.30	2.16
durable consumer goods	6.9	0.64	0.48	6.01
other assets	0.9	0.97	0.69	1.16
non-housing liabilities	-0.8	0.97	-0.17	0.27

Sources: Household income survey in 1995 and 2002.

To investigate how large the impact of the urban–rural gap in household wealth is on the inequality of wealth in China as a whole, we conducted decomposition using the following formula for the popular Mean Logarithmic Deviation (MLD) measure:[9]

$$I(y) = \sum_{g}^{k} \frac{n_g}{n} I_g + I(u_1, u_2, \ldots, u_k) \qquad (2)$$

Using equation (2) total inequality, as measured by the MLD, can be decomposed into between-group and within-group inequality. The results from our decomposition analysis are presented in Table 12. It is apparent that between urban–rural inequality is very small in 1995, accounting for only 1 per cent of the national inequality of wealth distribution. However, the between inequality as a percentage of the national inequality increases significantly to 37 per cent in 2002. These results indicate that when China enters into the New Millennium, her wealth distribution becomes increasingly unequal and the wealth gap between urban and rural households displays a comparable pattern to the urban–rural income gap (Li and Yue 2004).

[9] For an analysis of the decomposition properties of the MLD index see Shorrocks (1984).

Table 12: Decomposition of national wealth inequality into urban and rural

	National inequality	Between urban and rural areas	Within urban and rural areas	Within urban areas	Within rural areas
1995					
MLD	0.276	0.003	0.273	0.141	0.132
Contribution %	100	1.1	98.9	51.1	47.8
2002					
MLD	0.538	0.200	0.338	0.172	0.166
Contribution %	100	37.2	62.8	32.0	30.8

Sources: Household income survey in 1995 and 2002.

How should China's distribution of wealth be assessed in the context of international comparison? By international standards (Davies and Shorrocks 1999; Schneider 2004), the Gini coefficient of wealth distribution in China is not very high. However, the speed at which inequality is rising is very fast although it is not comparable to Russia. Household wealth in developed countries has been accumulated over several hundred years, while wealth accumulation in China has only taken place in around twenty years. This suggests that wealth accumulation and the increase in wealth inequality in China is unusually speedy and could lead China to become one of the most unequal countries in the world in the near future if the speed of change continues.

It should be realized that the inequality of wealth distribution presented here may be underestimated due to the very wealthiest households being missing from the data. Under representation of such households appears to be a universal phenomenon in household survey data. As suggested in Davies et al. (2006), one way to estimate the effect of adding the upper tail is to look at the number of people reported in the Forbes list of billionaires. The 2002 list indicates that there is only one Chinese on the list while there are five Indians. Thus, the degree of underestimation for China is not larger than for other countries at the same level of economic development.

7 Conclusion

Since the economic reform, both rural and urban households have been transformed from a proletariat to property owners. Especially since 1990, the Chinese people have experienced rapid accumulation of wealth. Housing and financial assets have become the largest components of net wealth for both urban and rural households.

At the same time the distribution of wealth became more unequal in China as a whole during the period under study. The rising inequality is largely due to the widening household wealth gap between urban and rural areas. From the mid 1990s, the housing reform in urban areas has speeded up, through which most public apartments have been privatized. In this process urban households have purchased their apartments at extremely low prices, so the majority of urban households have gained from the reform and have their housing assets increased substantially. As a result, the gap of household wealth between urban and rural areas was significantly wider in 2002 than in 1995.

The housing reform does narrow the inequality of housing wealth within urban areas as more and more households purchase their apartments, but housing assets increase their share in household net wealth and become the largest contributor to the inequality of household wealth in urban China. Even in 2002, housing assets have substantial disequalizing effects on the distribution of wealth in urban areas and in China as a whole. It should be pointed out that if the value of the usage rights of public housing was imputed, then the inequality of wealth distribution would be wider in 2002 than in 1995.

Another major contributor to the widening wealth gap between urban and rural households is declining land value for rural households. Land value is the largest part of net wealth of rural households in 1995, but it becomes the second largest part in 2002. Although land value still plays a significant role in narrowing the wealth inequality within rural areas, the importance of this role decreases considerably over time.

The inequality of wealth distribution in China is larger than that of income distribution. Twenty years ago, Chinese residents had little property income except interest (World Bank 1981). The present and future situations, however, are completely different. Due to the differences in the methods of calculating land values in 1995 and 2002, the inequality of wealth distribution is more or less underestimated in rural areas and in China as a whole as well. In the long run wealth will serve as an important determinant of individual income. For instance, in cities more and more households will have property income such as housing rent. As a result, the inequality of wealth will exacerbate income inequality. If China wishes to prevent this from happening, redistributive measures may be required.

Taxation and transfers may play a direct role to reduce inequality of wealth, but the fundamental measures are those enabling the less wealthy people to accumulate their wealth more speedily. One of these measures is improvement of education in quantity and quality for the less wealthy people. To a large extent, improving the ability of labour force depends on education. Improving the education status of less wealthy groups is an important way to reduce the inequality of wealth. In other words, improving education so as to reduce the inequality of human capital can create equal opportunities for people to gain income and wealth.

A second relevant measure is to have a more flexible policy for rural–urban migration, which will greatly help to narrow the wealth gap between urban and rural households. Reduction in the barriers to labour migration allows people more equal opportunity to take part in the process of income and wealth generation. It has been demonstrated that labour migration, especially between rural and urban areas, can play an important role in reducing the inequality of income and wealth. Although some of the systemic barriers to migration such as the hukou system, welfare system, housing system, and employment system have been reduced, China is still far away from a competitive labour market. To make the labour market more competitive, especially in labour mobility between rural and urban areas, is thus an important and relevant policy thrust to be considered in the future.

References

Brenner, M. (2001). 'Re-examining the Distribution of Wealth in Rural China', in C. Riskin, R. Zhao, and S. Li (eds), *China's Retreat from Equality*, M.E. Sharpe: New York.

Davies, J.B., S. Sandström, A.F. Shorrocks, and E.N. Wolff (2006). 'Estimating the World Distribution of Household Wealth**',** paper presented in WIDER project meeting on Personal Assets from a Global Perspective, 4-6 May, Helsinki.

Davies, J.B., and A.F. Shorrocks (1999). 'The Distribution of Wealth', in A.B. Atkinson and F. Bourguignon (eds), *Handbook of Income Distribution,* Elsevier Science: Amsterdam.

Eichen, M., and M. Zhang (1993). 'The 1988 Household Sample Survey: Data Description and Availability', in E.K. Griffin and R. Zhao (eds), *The Distribution of Income in China*, Macmillan Press: London.

Gustafsson, B., S. Li, and W. Zhong (2003). 'The Distribution of Wealth in Urban China and in China as a Whole 1995', unpublished manuscript.

Gustafsson, B., S. Li, and W. Zhong (2006). 'The Distribution of Wealth in Urban China and in China as a Whole 1995', *Review of Income and Wealth* 52(2): 173-88.

Khan, A.R., and C. Riskin (2006). 'Growth and Distribution of Household Income in China Between 1995 and 2002', in B. Gustafsson, S. Li and T. Sicular (eds), *Inequality and Public Policy in China*, Cambridge University Press: Cambridge.

Li, S., and X. Yue (2004). 'An Investigation on Income Distribution in China', *Finance and Economics (Cai Jing)* 3/4: 1-12.

Mckinley, T. (1993). 'The Distribution of Wealth in Rural China', in K. Griffin and R. Zhao (eds), *The Distribution of Income in China*, Macmillan: London.

NBS (National Bureau of Statistics) (1999). *Comprehensive Statistical Data and Materials on 50 Years of New China*, China Statistical Press: Beijing.

NBS (National Bureau of Statistics) (2004). *China Statistical Yearbook,* China Statistical Press: Beijing.

Pyatt, G., C.N. Chen, and J. Fei (1980). 'The Distribution of Income by Factor Components', *Quarterly Journal of Economics* 95: 451-73.

Schneider, M. (2004). *The Distribution of Wealth*, Edward Elgar: Northampton MA.

Shorrocks, A.F. (1984). 'Inequality Decomposition by Population Sub-Groups', *Econometrica* 52: 1369-85.

Sicular, T., X. Yue, B. Gustafsson, and S. Li (2007). 'The Urban–Rural Income Gap and Inequality in China', *Review of Income and Wealth* 53(1): forthcoming.

Wang, L., and W. Zhong (1999). 'Housing Welfare and Income Distribution in China's Cities', in R. Zhao, S. Li, and C. Riskin (eds), *Re-study on China is Income Distribution,* China Finance and Economics Press: Beijing.

World Bank (2000). 'China: Overcoming Rural Poverty', Report No.21105-CHA, World Bank: Washington DC.

World Bank (1981). ‘China: Socialist Economic Development’, World Bank Economic Research Group Report on a Study of China’s Economy, China Finance and Economics Press: Beijing.

Zhao, R., and S. Ding (2006). ‘The Distribution of Wealth in China’, in B. Gustafsson, S. Li, and T. Sicular, *Inequality and Public Policy in China*, Cambridge University Press: Cambridge.

Zhao, R., and S. Li (1997). ‘Increasing Income Inequality and Its Causes in China’, *Journal of Economic Research (Jingji Yanjiu)* 9: 22-32.