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Household Wealth in China

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Abstract: *With new nationwide longitudinal survey data now available from the China Family Panel Studies (CFPS), we study the level, distribution, and composition of household wealth in contemporary China. We found that the wealth Gini coefficient of China was 0.73 in 2012. The richest 1 percent owned more than one-third of the total national household wealth, while the poorest 25 percent owned less than 2 percent. Housing assets, which accounted for over 70 percent, were the largest component of household wealth. Finally, the urban-rural divide and regional disparities played important roles in household wealth distribution, and institutional factors significantly affected household wealth holdings, wealth growth rate, and wealth mobility.*

Introduction

In the very long history of humanity, wealth was a recent phenomenon, at least for the masses. In the early stages of all societies, productivity was low; food, clothing, and shelter were the most important elements of livelihood. Wealth accumulation was possible for only a small minority of elites, as almost all ordinary people's livings verged on subsistence (Clark 2008). The Industrial Revolution brought significant improvements in productivity, which led to savings and then the accumulation of wealth that is typical of capitalistic economies in Western societies (Clark 2008; Piketty 2014). As a result, wealth became available to a small but significant portion of the population known as capitalists—the property-owning class (Piketty

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2014). Today, wealth is one of the most important dimensions of social stratification in the United States, Europe, and other developed nations, affecting such social outcomes as class identification, children's education, and political views (Keister 2000).

China has experienced a historical pattern similar to that in the West, albeit later and more rapidly. For quite a long period in China, wealth was a luxury that was available to only a select few. Before the economic reform that began in 1978, China had a planned economy in which productivity was low, private property of any substantial value was prohibited, and necessities such as housing and food were collectively produced and then administratively distributed on egalitarian terms (Xie, Lai, and Wu 2009). Therefore, wealth was seldom a topic of public discourse before sustained rapid economic development was launched by the economic reform in 1978 (Xie 2011). The large amount of private wealth accumulated during the economic reform era, however, is now unequally distributed across the Chinese population. Thus, wealth inequality, in sharp contrast to the egalitarianism before the economic reform, has drawn a lot of attention from social scientists and laypeople alike. Unfortunately, discussions about wealth inequality in China have therefore been mostly ideologically-laden or opinion-based, as scholarly knowledge about the subject matter is quite limited. Empirical research on this topic is much in need.

Empirical research on wealth in China began in the 1990s. Using data from the China Household Income Project (CHIP) survey, which covered selected provinces, McKinley (1993) examined wealth distribution in the rural areas since 1988 and found that wealth was relatively equally distributed in rural China, with a wealth Gini coefficient of 0.31. Scholarly attention to wealth has increased since the 2000s, the consensus being that wealth inequality has increased over time (Li, Wei, and Ding 2005; Li et al. 2008). Despite increasing interest in wealth distribution in China, however, few empirical studies on wealth using national data, especially compared with studies of income inequality, can be found in the literature because high quality data on wealth are difficult to collect.

In 2010, the China Family Panel Studies (CFPS) began collecting information about household wealth in China, laying the data foundation for this study (Xie and Hu 2014). As a longitudinal nationwide survey, the CFPS not only captures a cross section of wealth holdings but also facilitates research on wealth growth and wealth dynamics over time at the family level. In this paper, we analyze the CFPS data to achieve four research objectives on household wealth in contemporary China: (1) understanding household wealth holdings and their components, (2) assessing the level of inequality in household wealth, (3) estimating major social determinants of household wealth, and (4) investigating household wealth growth and wealth mobility between 2010 and 2012. While this paper overlaps substantially with an earlier report in Chinese (Xie and Jin 2014), the results slightly differ, as we adopted the latest weights in the CFPS data files.

Data and Measures

The CFPS is an ongoing, nationally representative, longitudinal survey conducted by the Institute of Social Science Survey at Peking University. The 2010 CFPS baseline survey interviewed 14,798 households and all their inhabitants using a multistage probability sampling procedure (Xie and Lu forthcoming). Five provinces—Liaoning, Hebei, Shanghai, Guandong, and Gansu—were selected to be oversampled to be representative at the provincial level for regional comparison purposes. The sample size is about 1,500 households in each oversampled province. In the follow-up survey conducted in 2012, about 85 percent of the original households surveyed were successfully interviewed. See Xie and Hu (2014) and Xie, Hu, and Zhang (2014) for introductions to the study. In the first two sections of this paper, which cover household wealth holdings and wealth distributions, we supplement the CFPS data with data from the China Rich List (Hurun Report 2012a), with appropriate weights applied to the CFPS sample data of 2012 so that the combined data are at the population level. For the remaining analyses, detailed adjusted data are not available, therefore we use only CFPS sample data for further analyses. Still, we apply appropriate cross-sectional weights in analyzing wealth composition and socio-economic determinants. However, for the last section, which concerns wealth dynamics between 2010 and 2012, considering the complexity of longitudinal weights, we use resampled data to reverse the regional oversampling and represent the Chinese population without using weights (Xie and Lu forthcoming).

The CFPS dataset contains comprehensive measurements of assets, including housing assets, financial assets (e.g., savings, stock, funds, bonds, financial derivatives, and other financial assets), agricultural machinery, business assets, detailed items of durable goods (valuables included), and liabilities from housing and other sources. Land asset is a very important component of rural household wealth, but its value is difficult to estimate because there is no legal market for it in China. We follow the practice of McKinley and Griffin (1993), who assume that 25 percent of the gross agricultural output value can be attributed to land and that this flow can be converted into a stock value by assuming an 8 percent rate of return in estimating land assets.

We also make imputations for missing values. For missing housing values, we multiply the amount of space in square meters by the average unit value for the same type of housing reported at the community level. For missing values from other sources, such as financial assets and durable goods, we impute missing data with values reported by the household in the same community the family income of which is closest to that of the household with the missing value. See Jin and Xie (2014) for detailed procedures of imputation. We measure total household assets (or total household wealth, or net worth) at the household level as the sum of land, housing, financial, and fixed assets for production and durable goods, minus housing

and nonhousing liabilities. Negative values are kept in all the subsequent analyses.

Household Wealth Holdings

A common challenge confronted by wealth researchers is that random sampling fails to adequately capture the wealth information of the extremely wealthy, who account for a large portion of total wealth holdings (Keister 2014). The distribution of wealth in China is highly skewed, as in most other societies, meaning that a small minority of the population possesses a very large amount of the wealth (Piketty 2014). Unlike general material resources, such as education, income, food, health, and housing space, that are usually more evenly distributed in a population, all the wealth in a society can theoretically be held by a single person or family. The greater skewness in the distribution of wealth relative to that of income can be seen in the 90/10 ratio.[1] In the 2012 CFPS data, the 90/10 ratio for family income is 13.1 (Xie et al. 2013), whereas the 90/10 ratio for wealth is up to 33. The highly skewed distribution of wealth indicates that traditional random sampling may bias the results of wealth research since it has little chance to capture the extremely wealthy outliers. The poor performance of random sampling in wealth research lies in its inability to capture small probability events, as it is designed to reveal expected average statistical characteristics of a population, such as the average family size, average age, and average education level of a certain group. The presence of extreme wealth, however, is a very small probability event, but one that contains a non-negligible part of a nation's total wealth. Thus, a random sampling strategy would not give us an adequate picture of the top wealthiest portion of the population.

Let us assume that the richest single family possesses 5 percent of total private wealth. For a large population, a random sample has almost a zero probability of capturing the wealthiest family. When it does not capture the wealthiest family, the total amount of wealth is underestimated by 5 percent. If, by some luck, the sample does include the wealthiest family, the total amount of wealth is vastly overestimated. The problem, of course, is that there is simply no subpopulation of the wealthiest family in a population, from which we could draw a subsample. By definition, the wealthiest family is a single phenomenon.

Since the absence of extremely wealthy people would bias the results of wealth holdings and distribution, we supplement our random sampling data with data from the China Rich List (Hurun Report 2012a), which includes the 1000 richest Chinese individuals. Previous research on different countries has shown that the income distribution of the richest approximates the Pareto distribution (Lydall 1968; Cowell 1995). A few researchers (Li, Sato, and Shi 2013; Wang and Zhou 2006) used the Pareto distribution to adjust the income of the richest. The most recent *Global Wealth Databook* by the

Table 1

Mean and Quantiles of Net Worth in 2012 for China (units: 10,000 yuan)

		Quantiles				
	Mean	25%	50% (median)	75%	90%	95%
Unadjusted	32.2	6.3	15.8	33.0	68.7	111.5
Adjusted	42.2	6.3	15.8	33.1	69.2	112.8

Credit Suisse Research Institute also used an adjustment for the wealth of the richest with the Pareto distribution. Following these works, we use the China Rich List (Hurun Report 2012a) data to estimate the Pareto distribution for the wealth of the top 0.1 percent richest families in the Chinese population. Then we expand the CFPS data with the sampling weight to represent the remaining 99.9 percent population. Combining the China Rich List for the predicted 0.1 percent richest data and the remaining 99.9 percent population from the CFPS data expanded with the sampling weight, we put together composite nationwide household wealth data, called "adjusted data" for brevity, for our analyses of the total household wealth holdings and distribution.

In Table 1, we report the descriptive statistics of nationwide household wealth holdings, presenting both unadjusted and adjusted values. As shown, the average adjusted household wealth was 422,000 yuan, and the median value was 158,000 yuan in 2012. The poorest quartile was 63,000 yuan, and the third quartile was 331,000 yuan. We show that the adjustment by the China Rich List changes the mean value, but neither the median nor the quartiles. Even the 90th and 95th percentiles are changed little by the adjustment. After the adjustment, the 90th percentile was 692,000 yuan, and the 95th percentile stood at 1,128,000 yuan.

Our estimated household wealth holdings in China differ from those in a previous study in significant ways. Based on the China Household Finance Survey (CHFS) conducted by the Southwestern University of Finance and Economics, an earlier study reported the average net value of household assets at 1,129,838 yuan in 2011, with that in urban areas at 2,365,765 yuan and that in rural areas at 310,400 yuan (Gan at al. 2014). Hence, the results from the CHFS differ greatly from our estimates. Estimates similar to ours were reported by the *Global Wealth Databook 2012* conducted by Credit Suisse Research, showing that the wealth per adult aged 20 and above in China in 2012 was at US $20,452, or 128,848 yuan, and the total nationwide assets amounted to US $20.2 trillion, or 127.3 trillion yuan (Davies, Lluberas, and Shorrocks 2012).

Combining our estimate of the average household net worth, the number of households and the number of adults age 20 and above (National Bureau of Statistics 2013),[2] our estimate of the wealth per adult is 174, 000 yuan,

while the total national wealth is 181.3 trillion yuan. In contrast, the estimated wealth per adult age 20 and above and national household's wealth holdings with CHFS data would be 466,000 yuan and 485 trillion yuan, respectively. Therefore, our estimates are closer than those based on the CHFS to estimates provided by the Credit Suisse Research Institute after the currency adjustment of U.S. dollars to Chinese yuan.

To assess the plausibility of the estimates, we further examine a well-established finding that the wealth/income ratio of a nation tends to stabilize at a fixed number. After studying the wealth/income ratios since 1870 in Europe and the United States, Piketty (2014) found that the wealth/income ratio stabilizes at around 4 to 7 over the long run, meaning that the national wealth in one year is approximately the accumulation of 4 to 7 years of national income. He reported that the wealth/income ratio ranged from 6 to 7 in Europe and around 4 to 5 in the United States.

Based on this stable wealth/income ratio theory, we calculate this ratio for China and use it to evaluate the plausibility of our estimates for China's national households' wealth holdings. According to the CFPS data, the average household net income in 2012 was 45,665 yuan (Xie et al. 2013), and the average household net wealth was 422,000 yuan, generating a wealth/income ratio of 9.2. By comparison, the wealth/income ratio for the CHFS results is 19.[3] Although both estimated ratios are greater than those in Europe and the United States, we believe that 9.2 is more plausible than 19, even after we consider the inflated housing prices and other economic conditions in China.

It should be noted that our results reported in this paper pertain only to private assets, therefore public assets, such as schools, hospitals, and state-owned enterprises are not included in our calculation. In fact, public assets are particularly large in China. For example, one study concluded that the proportion of assets owned by state-owned enterprises is greater than assets owned by private or foreign enterprises: the state-owned enterprise assets accounted for more than half of the nation's enterprise assets (50.1 percent) in 2008, with the remainder split between private (20.1 percent) and foreign (29.8 percent) enterprises (Liu 2013). Also, note that we do not include assets of overseas Chinese and Chinese residents living in Taiwan, Hong Kong, and Macau, but some of these people own large amounts of business assets and employ many workers, that is, generate wealth for them, in China. For these reasons, our estimated wealth/income ratio of 9.2 seems relatively high. Whether this estimate is reasonable and how it should be understood remain to be further studied in future research.

Household Wealth Distribution

As has been repeatedly demonstrated in literature (e.g., Fireside et al. 2009; Keister 2000; Scholz and Levine 2003), wealth inequality is more severe than

income inequality. Beginning in September 2011, the Occupy Wall Street demonstrators succeeded in attracting the attention of the entire world to wealth inequality issues. Taking the United States as an example, wealth inequality by race is much larger than income inequality by race (Menchik and Jianakoplos 1997; Oliver and Shapiro 1997). It may be a surprise to some readers that wealth is only weakly correlated with income. With nationwide survey data from the 1980s, Keister (2000) showed that the correlation coefficient between wealth and income in the United States was only 0.5. This correlation dropped to 0.26 when asset income was removed from total income (Lerman and Mikesell 1988). Given the significant difference between household wealth and income, researchers now pay close attention to household wealth as a different but important indicator of family financial well-being (Keister and Moller 2000).

Though the Chinese are unlikely to ever hold demonstrations like Occupy Wall Street, wealth inequality in China has also drawn intense interest from scholars and social scientists. Scholars agree that the wealth gap has been widening more and more and that wealth distribution has become increasingly polarized in recent years (Li, Wei, and Ding 2005; Li et al. 2008). Despite scholarly awareness of wealth inequality, however, empirical evidence is scarce. With longitudinal data from the CFPS, we attempt to empirically examine wealth inequality in China in this paper. In this section, we report the household wealth distribution with multiple indexes: share in total household wealth by several quantiles, Gini coefficient[4] and the 90/10 ratio. We present the main results for 2012 in Table 2.

As shown in Table 2, most of the household wealth in China is in the hands of a minority, indicating a high magnitude of inequality. To be specific, the bottom 25 percent of households only held 1 percent of total national wealth, and the poorest half held 8 percent. In contrast, households above the upper quartile possessed 79 percent of the total national wealth. And the richest 10 percent owned 62 percent of the total national wealth, while the richest 5 percent owned more than 50 percent. Notably, the top 1 percent in China possessed more than one-third of the national net wealth. The 90/10 ratio tells a similar story about wealth inequality in China.

Table 2

Wealth Distribution in 2012

	0–25%	0–50%	75–100%	90–100%	95–100%	99–100%	Gini coefficient	90/10 ratio
Unadjusted	1.6	9.9	72.3	50.5	37.0	16.1	0.64	32.69
Adjusted	1.2	7.5	78.8	62.1	51.7	35.3	0.73	32.94

Table 3

Comparison of Wealth Distribution Between the United States and China

Country	Year	Gini coefficient	0–40%	0–60%	60–100%	80–100%	90–100%	95–100%	99–100%
United States	1983	0.799	0.9	6.1	93.9	81.3	68.2	56.1	33.8
	1989	0.832	−0.7	4.1	95.9	83.6	70.6	59.0	37.4
	1992	0.823	0.4	4.8	95.3	83.8	71.8	60.0	37.2
	1995	0.828	0.2	4.7	95.3	83.9	71.8	60.3	38.5
	1998	0.822	0.2	4.7	95.3	83.4	70.9	59.4	38.1
	2001	0.826	0.3	4.2	95.7	84.4	71.5	59.2	33.4
China	2012	0.726	4.4	11.9	88.1	74.5	62.1	51.7	35.3

Sources: Data for America comes from "Changes in Household Wealth in the 1980s and 1990s in the US" (Wolff 2004); data for China is calculated from CFPS 2012 and adjusted based on the China Rich List (Hurun Report 2012a).

Specifically, the 90/10 ratio of wealth in 2012 was 32.9, meaning that the wealth owned by a household at the 90th percentile point was about 33 times higher than the wealth owned by a household at the 10th percentile point. In contrast, the 90/10 ratio of income was 13.1 in the same year (Xie et al. 2013). In short, household wealth inequality in China was much greater and more severe than income inequality.

Comparison with the United States helps us to interpret our results. We present comparable U.S. data between 1983 and 2001, along with our Chinese results, in Table 3. We observe that the richest 1 percent of households owned similar proportions of private wealth—more than a third—in China and the United States. However, there are differences in wealth distribution between the two countries. First of all, the Gini coefficient of wealth was smaller in China (0.73) than in the United States (over 0.8), indicating less wealth inequality in China. Another way to look at this is to examine the relative share of wealth after we exclude the richest households. In this perspective, we find more wealth possessed by households in the lower end of the distribution in China than in the United States. For example, the poorest 60 percent of households in the United States owned less than 5 percent of the wealth, while the corresponding percentage in China was 12 percent. The poorest 40 percent of households in the United States owned less than 1 percent of the wealth, whereas the corresponding figure in China was 4 percent.

Thus, the richest segment of the Chinese population accounts for a large share of private wealth, whereas wealth distribution for the rest of the population is not too extremely skewed, at least relative to the United States. This particular pattern of wealth distribution is, to some extent, a product of China's recent history. Benefiting from the economic reform and

marketization, a minority of the population have accumulated a huge amount of wealth via private or joint stock startups and become super-rich. These individuals and families have attained their wealth in a very short period of time, becoming "nouveau riche" and accounting for a large portion of the overall inequality. At the same time, the egalitarian government policies prior to the economic era, especially those concerning housing before China's housing reform that took real effect in 1998, contributed to the relative equality in household wealth distribution. Prior to the economic reform, China had a planned economy, in which housing was publicly owned and distributed among urban citizens for free based on demand, a system also known as the welfare housing policy. The housing reform legalized the privatization of housing: housing ownership was transferred to existing occupants at deeply discounted prices (Song and Xie 2014). The discounted prices allowed ordinary families to own housing units. For instance, 80 percent of urban families owned their own houses by 2000, which was much higher than the housing ownership rate (ranging from 50 percent to 60 percent) in almost all developed countries. After the housing reform, privatization of housing became the most important driving force for the increase of household wealth in China (Walder and He 2014). Moreover, the rapid increases in housing prices in major cities, such as Beijing, Shanghai, and Shenzhen have made housing assets more and more important in terms of household wealth. As a result, housing assets on average now account for more than 70 percent of household wealth, 80 percent in large cities like Beijing and Shanghai. In other words, many working-class families have greatly benefited from both welfare housing and housing privatization, which served as a key factor in generating household wealth for most Chinese families (Walder and He 2014). For this reason, household wealth is distributed relatively equally among middle-class families in urban China. In contrast, the accumulation of household wealth in the United States is realized in a market economic system via income savings and personal investment. Consequently, low-income families and families without inherited wealth cannot accumulate wealth through savings and investment, leading to large household wealth inequality overall. Given the fact that China has now completed its housing reform and abolished its welfare housing system, the main sources of household wealth will be based, as is the case in the United States, on either income savings and personal investment or inheritance. We thus venture to predict that with further marketization, wealth inequality in China will likely rise in the future.

Household Wealth Composition

Wealth is a complicated social phenomenon. To understand wealth, we need to study it in more detail. In the remainder of this paper, we present the results from our further analyses focusing on a few select topics: wealth

composition, factors that shape its distribution pattern, short-term trends, and mobility at the family level. As mentioned before, data from the CFPS as a random sample can hardly capture those extreme rich outliers, so we compensate for this deficiency by adjusting the resulting distribution by augmenting the CFPS data with known cases of the super-rich wealth holders using an extra data source, the China Rich List (Hurun Report 2012a). Unfortunately, we have no detailed information about the richest, such as their wealth composition and demographic characteristics, so we will have to drop this added group in subsequent analyses. This section focuses on the composition of household wealth in China, followed by analysis of social and economic determinants of household wealth and household wealth mobility between 2010 and 2012.

In Table 4, we present the composition of household wealth, for China as a whole and separately for urban and rural China. The largest component of household wealth, housing assets contributed an average share of 74 percent to total household wealth in China. While the dominant role of housing assets in household wealth composition is well known (Gottschalck 2008; Jäntti and Sierminska 2008), the proportion is much larger in China than in other countries. For example, the proportion of housing assets in total household wealth was 54.2 percent in Austria in 2002, 37.7 percent in Italy in 2000 (Jäntti and Sierminska 2008), and 52 percent in the United States in 2002 (Gottschalck 2008). Additionally, due to housing privatization and the rising prices of real estate, the share of housing assets in household wealth has been increasing over the past two decades in China. Previous research has shown that the ratio of housing assets to total household wealth was 35.4 percent in 1995, 57.9 percent in 2002 (Li and Zhao 2008), and reached over 70 percent in 2012 based on our estimation.

Table 4

Composition of Household Wealth Portfolios, Urban, Rural, and China Overall in 2012 (units: %)

Assets	China Overall	Urban China	Rural China
Land assets	7.7	2.7	20.4
Housing Assets	73.9	78.7	60.9
Financial Assets	10.6	11.1	9.5
Fixed assets for production	8.5	7.7	11.0
Durable goods	5.6	5.6	5.6
Housing debts	−2.3	−2.5	−1.7
Nonhousing debts	−3.9	−3.2	−5.7

Financial assets accounted for only 11 percent of the total household wealth in China, which was a relatively small portion compared with an average of 30 percent or more in other countries (Jäntti and Sierminska 2008). The same was true of fixed assets for production and durable goods, accounting for 9 percent and 6 percent, respectively. The share of nonhousing debts was slightly higher than housing debts. In sum, housing assets are the dominant component of household wealth in China. Other types of assets account for only small portions.

Household wealth composition in urban areas differs from that in rural areas. Two notable differences lie in housing assets and land. Housing assets accounted for 79 percent of the total household wealth in urban China but only 61 percent in rural China, an 18 percent difference. Notably, land was a very important component and contributed 20 percent to household wealth in rural China.[5] Meanwhile, financial assets accounted for a larger portion of total household wealth in urban households. However, fixed assets for production took up a larger portion of household wealth in rural China. Debt composition also differed between urban and rural families. On the whole, rural families had higher debts, especially nonhousing debts, than urban families.

Household wealth composition differs not only between urban and rural areas but also across different regions. The CFPS oversampled five provinces—Liaoning, Hebei, Shanghai, Gansu, and Guangzhou—to capture regional variation. We make use of this design to reveal regional variation in household wealth. First, land assets took up 16 percent of the total household wealth in Gansu province, which was the highest among the five provinces. In Liaoning and Henan provinces, land assets took up around 11 percent of total household wealth, while families in Shanghai had minimal land assets. Second, we find a large variation in housing assets across the five provinces, though housing assets remain consistently the largest component of household wealth. For example, housing assets took up 87 percent of the total household wealth in Shanghai province, which partially reflects the very high housing prices in large cities. The lowest proportion is found in Gansu, at 68 percent. Third, the provinces differ in debt structure. We find that less developed areas suffer greater debt burdens. To illustrate, the average was 13 percent in Gansu but less than 2 percent in Shanghai. Further, in less developed areas like Gansu, nonhousing debts were higher, while housing debts were higher in developed areas, such as Shanghai. This regional heterogeneity reflects not only the different levels of urbanization and modernization, but also the increasingly important role of housing prices in household wealth.

To further investigate the role of housing assets in household wealth inequality, we apply the method proposed by Lerman and Yitzhaki (1985) to decompose the wealth Gini coefficient. Results show that housing inequality contributed most to wealth inequality. Specifically, housing assets inequality accounted for 73 percent of the total household wealth inequality

in China, 76 percent in urban China and 59 percent in rural China. There was some regional variation in this, with housing assets inequality accounting for 87 percent of the household wealth inequality in Shanghai, which was the highest among the five oversampled provinces.

In summary, consistent with previous findings (Li and Zhao 2008; Meng 2007; Sato, Sicular, and Yue 2013; Zhao and Ding 2010), housing is the main contributor to household wealth inequality in contemporary China. The disproportional share of housing assets in household wealth may underscore underlying structural problems that may slow down China's further economic development, as little private wealth is invested in production, job creation, and research and development.

Determinants of Household Wealth

In this section, we explore the socio-economic determinants of household wealth holdings. In particular, we focus on four factors: regional and urban/rural differences, work unit (also known as *danwei*) characteristics of household members, education of household members, and household income. Our analyses are based on the CFPS data alone.

Table 5 highlights the large gap in household wealth holdings between urban and rural areas. The average household wealth holdings of rural families were 189,000 yuan, less than half the holdings of urban families, at 444,000 yuan. Meanwhile, the household wealth in rural areas was much more equally distributed compared with that in urban areas, as shown by the shares of wealth owned by the quantile groups. Obviously, the bottom 25 percent and 50 percent families in rural areas owned a higher percentage of the total household wealth compared with that owned by families in the same quantile groups in urban areas. However, the story was reversed for the top 25 percent, 10 percent, and 5 percent groups. For example, the bottom 50 percent of families in rural areas owned 13 percent of the total rural

Table 5

Mean Household Net Worth and Distribution in 2012, by Urban/Rural Area Type

Area Type	Mean household net worth (10,000 yuan)	0–25%	0–50%	75–100%	90–100%	95–100%	90/10 ratio
Urban	44.4	1.5	10.3	71.1	48.3	34.5	43.2
Rural	18.9	2.7	13.1	66.2	44.2	32.3	18.7

household wealth, which was 3 points higher than that owned by the bottom 50 percent of urban families. In contrast, the top 10 percent of urban families owned 48 percent of the total urban household wealth, which was 4 points higher than that owned by the top 10 percent of rural households. With the 90/10 ratios at 43 for urban areas and 19 for rural areas, respectively, we draw the same conclusion—that wealth is more equally distributed in rural than in urban areas.

To understand the importance of urban-rural differences for total wealth inequality, we calculate the Theil Index (Theil 1967). This index measure is particularly useful because it can easily be decomposed into between-group and within-group components. The Theil Index at the national level was 0.815, the within-group component was 0.732, and the between-group coefficient was 0.083, meaning that the within-group and between-group inequality constituted 89.8 percent and 10.2 percent of the total inequality, respectively. Consistent with the findings of a recent study on income that more than 10 percent of income inequality can be attributed to the rural-urban divide (Xie and Zhou 2014), the wealth gap between rural and urban areas also contributes a large part to total inequality.

In addition to the urban-rural divide, regional disparities in household wealth holdings and distribution are also evident in China. Concerning provincial differences across the five oversampled provinces, the household wealth holdings of Shanghai ranked first, while Gansu and Guangdong had the highest levels of household wealth inequality. Similarly, we use the Theil Index to decompose total inequality into within-province and between-province inequality. Results show that 23.4 percent of the total wealth inequality can be explained by between-province wealth inequality, which was even larger than the share of between-province inequality in the total income inequality (around 12 percent, see Xie and Zhou 2014). In conclusion, structural factors, such as the rural-urban divide and regional disparities are important contributors to China's household wealth inequality.

As has been demonstrated in the literature, a family's socio-economic conditions are associated with wealth. In this study, we focus on three factors—work unit type (within-system vs. outside-system) of household members, education of household members, and household income—as indicators of a family's socio-economic characteristics. Following the definition by Xie et al. (2013), within-system occupations are defined as positions in the following organizations or enterprises: (a) party, government offices, mass organizations, or army; (b) state or collectively owned public institutions or research institutions; or (c) state-owned or holding enterprises. If one or more family members worked in any of the above, we consider this family to be within-system. Otherwise, we regard them as outside-system. Given the fact that few families in rural areas worked for within-system organizations, the analysis of institutional segmentation for household wealth is conducted only in urban areas.

Table 6

Work Unit and Household Net Worth for Urban Areas (units: 10,000 yuan)

Work Unit	Mean	25%	50% (median)	75%	90%
Outside-system	39.6	7.8	20.2	41.2	90.3
Within-system	61.4	16.6	34.4	67.0	126.4

Table 6 reports the wealth gap between families with at least one member working for a within-system organization and those with all members working outside the system. Outside-system households owned far fewer wealth holdings than within-system households at each percentile point. On the average, within-system households owned 218,000 yuan more (55 percent higher) net worth than outside-system households owned. Evidently, work unit serves as an important determinant of wealth holdings in contemporary China.

Education is measured by a 6-category variable for the highest level of education attained by members in a household. Household income includes the income from all household members in the past year. Note that we convert self-consumed agricultural produce that was not sold into income according to prevailing market values. Figure 1 presents a positive, monotonic relationship between education and wealth holdings: household net worth increases with education level. For example, households with all illiterate members on average owned 138,000 yuan of net household wealth.

Figure 1. **Average Household Net Worth by Education.**

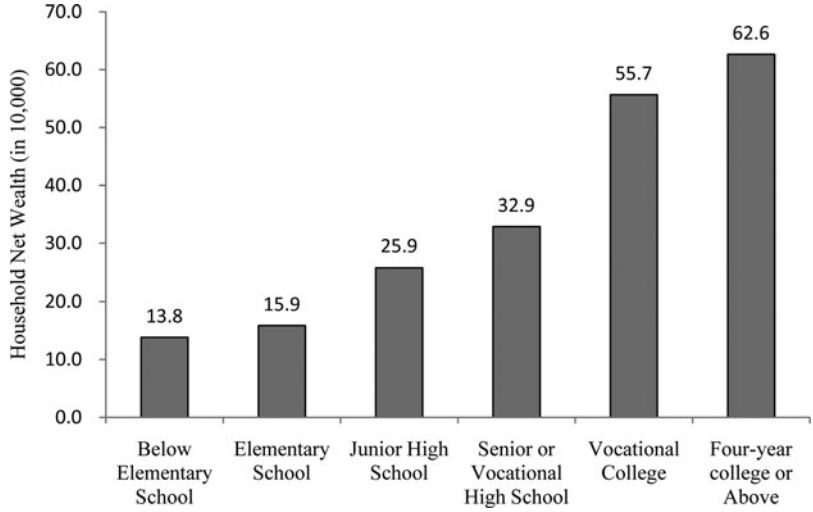


Table 7

The Relationship Between Wealth Distribution and Income Distribution (units: %)

	Wealth Quartiles				
Income Quartile	Q1	Q2	Q3	Q4	Total
Q1	45.8	29.7	16.3	8.3	100.0
Q2	25.3	29.2	27.5	18.0	100.0
Q3	18.7	26.6	30.4	24.3	100.0
Q4	10.3	14.4	25.8	49.6	100.0

Notes: Q1, Q2, Q3, and Q4 denote, respectively, the bottom, middle second, middle third, and top quartiles. The percentages do not sum to 100.0 in each row due to rounding errors.

The average household net wealth was 159,000 yuan if the highest education of a household member was elementary. It reached 626,000 yuan if the highest education of a household member was college and above.

The relationship between income and wealth has been a long-standing topic in household wealth studies. The two are conceptually distinct: income measures the flow of economic resources, and wealth measures the stock. Due to a complicated relationship between the two over time, there is no simple answer as to how income affects household wealth. However, one repeatedly demonstrated finding in the literature is that wealth is weakly correlated with income (Keister 2000), which our data also corroborate. According to our CFPS 2012 data, the correlation coefficient between household wealth and income was 0.35, even lower than the correlation coefficient of 0.5 reported by Keister (2000) for the United States. As shown in Table 7, income was dispersedly distributed at each wealth level. In particular, nearly half of the poorest quartile families (in wealth) earned the lowest quartile income. Similarly, nearly half of the richest quartile (in wealth) earned the highest quartile income. However, incomes were distributed widely for the households from the second to the third quartiles in wealth. In sum, household income and wealth are more closely associated for the poorest and the richest than for those in the middle groups.

Household Wealth Growth and Mobility

In this section, we focus on wealth mobility between 2010 and 2012. We first discuss the change of wealth holdings from a macro perspective and then look at wealth mobility from a micro perspective at the family level. To

make household wealth holdings comparable, we (1) use the Consumer Product Index (CPI) (National Bureau of Statistics 2013) to adjust the wealth in 2010 to 2012 to control for price differences across years[6] and (2) only include asset items surveyed in both 2010 and 2012.[7] Thus, assets considered here are intended to capture dynamic changes in household wealth between the two survey years rather than reflect the true worth of real asset holdings.

To describe the growth of household wealth from 2010 to 2012, we divide households into four wealth quartile groups in ascending order and compute the average net wealth in each group by year and area type (urban, rural, or China overall). On average, household net wealth in 2012 increased by 18 percent from the 2010 level. The growth rate differed in different groups and area types. Specifically, the growth rate was the highest, at 62 percent, for the bottom quartile, followed by the two middle quartiles at 31 percent and 25 percent respectively, and the lowest at 15 percent for the richest quartile, meaning that households with less wealth experienced a higher growth rate. In parallel with the nationwide pattern, household net wealth in both rural and urban areas grew overall. In both areas, households with less wealth had higher growth rates, although the pattern was much more pronounced in urban areas than in rural areas.

To further examine factors that contributed to household wealth growth, we decomposed the total assets into four major categories and calculated their absolute and relative growths. We show the results in Figure 2. Housing assets still contributed more than half to the total growth, acting as a primary contributor. The other three assets—land, financial and fixed assets for production and durable goods—contributed small shares to the wealth growth.

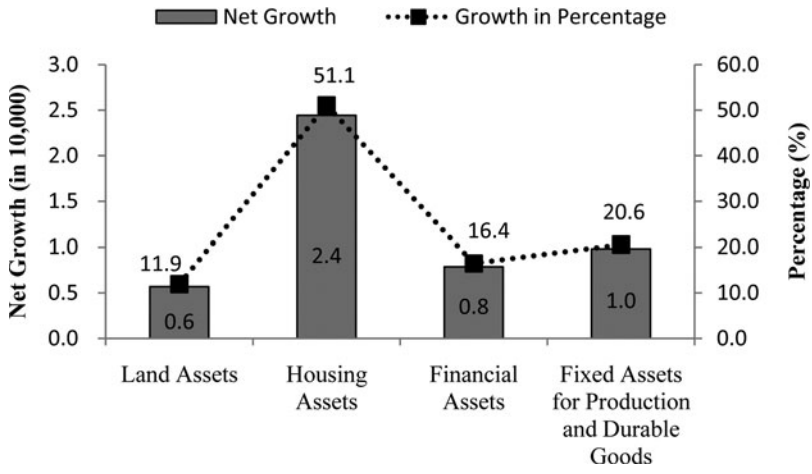
Table 8

Average Household Net Wealth Growth by Years, Urban, Rural and China Overall (units: 10,000 yuan)

	China Overall			Urban			Rural		
Wealth quartiles	2010	2012	Growth rate (%)	2010	2012	Growth rate (%)	2010	2012	Growth rate (%)
Q1	1.3	2.1	62.0	1.6	2.7	68.2	1.2	2.0	58.9
Q2	7.8	10.2	30.7	12.0	15.3	27.8	5.8	7.8	33.3
Q3	17.6	22.0	25.1	27.1	31.9	17.6	11.9	15.6	30.9
Q4	77.2	88.8	14.9	108.4	126.4	16.6	41.6	49.1	18.1
Total	26.0	30.7	18.4	37.3	44.1	18.2	15.1	18.6	22.9

Note: Q1, Q2, Q3, and Q4 denote, respectively, the bottom, middle second, middle third, and top quartiles.

Figure 2. **Household Wealth Growth from 2010 to 2012.**



We now report findings from an analysis of wealth mobility at the family level between 2010 and 2012. For the analysis, we first sorted all households into wealth quartiles in ascending order in respective survey years. We then examined quartile rank changes from 2010 to 2012, as measures of household wealth mobility, by constructing a joint distribution, shown in Table 9. To be specific, percentages located on the diagonal line indicate the share, row-percentage, of households with no change of quartile-order, with percentages above the diagonal line indicating upward mobility and percentages under the diagonal line indicating downward mobility.

We observe that the percentages on the diagonal line are 58 percent, 42 percent, 43 percent and 65 percent, all significantly larger than the off-diagonal cells, indicating low wealth mobility. Moreover, the poorest quartile and the richest quartile have larger diagonal cells than the other quartile groups, implying even more limited mobility among the poorest and richest.

Concerning the rural-urban comparison, the diagonal cells for urban areas are greater than corresponding ones for rural areas, indicating that wealth mobility is less in urban areas than in rural areas. Additionally, the mobility difference between rural and urban areas is particularly large for the bottom and top quartiles. For instance, 55 percent of the rural bottom quartile in 2010 remained in the same quartile in 2012, while 60 percent of the urban bottom quartile in 2010 remained in the same quartile, a 5 percent gap. Correspondingly, this gap between rural and urban areas was 10 percent for the top quartile. In sum, household wealth structure is more rigid (i.e., less mobile) in urban areas than in rural areas. There are two potential explanations for this. First, housing assets, as the main component of household wealth in urban areas, tended to be either relatively stable or appreciate

Table 9

Relative Wealth Mobility Between 2010 and 2012 (units: %)

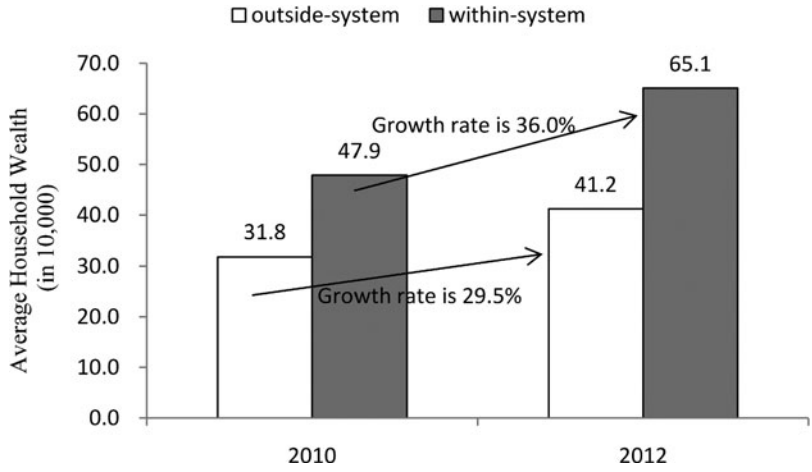
		2012			
	Groups by ranked-order wealth	Q1	Q2	Q3	Q4
		China Overall			
2010	Q1	**57.9**	25.1	11.1	5.9
	Q2	25.9	**41.5**	23.6	9.1
	Q3	10.7	25.9	**43.3**	20.1
	Q4	5.6	7.5	22.0	**65.0**
		Urban			
	Q1	**60.1**	23.8	10.4	5.7
	Q2	25.0	**44.8**	21.8	8.4
	Q3	9.0	24.9	**46.4**	19.7
	Q4	5.9	6.6	21.4	**66.1**
		Rural			
	Q1	**55.4**	25.9	12.8	5.9
	Q2	26.3	**37.7**	24.1	12.0
	Q3	11.4	24.7	**38.1**	25.8
	Q4	6.9	11.7	25.1	**56.3**

Notes: Q1, Q2, Q3, and Q4 denote, respectively, the bottom, middle second, middle third, and top quartiles. The percentages do not sum to 100.0 in each row due to rounding errors.

proportionally in price, thus reinforcing wealth inequality over time. In contrast, the value of housing assets in rural areas did not increase much. Second, the value of land assets in rural areas (an important secondary component of household wealth) is estimated based on agricultural income, which may fluctuate from year to year due to factors, such as weather, input, prices set for agricultural product, and other factors.

Next, we examine how socio-economic characteristics of household members (work unit type, education, and income) influence household wealth growth and mobility. From 2010 to 2012, 65 percent of households in the urban outside-system experienced wealth growth, which means the asset holdings of these households increased during the two years, while wealth holdings for the other 35 percent remained unchanged or even decreased. However, there are differences between within-system and outside-system households. Seventy-one percent of within-system households experienced wealth holdings growth, 6 points higher than the outside-system households experienced. Meanwhile, as shown in Figure 3, the average household wealth holdings grew at 36 percent for within-system households, in comparison with a growth rate of 30 percent for outside-system households.

Figure 3. **Work Unit and Household Wealth Growth in Urban Areas.**



In sum, within-system households have higher levels of both wealth holdings and wealth growth rates, widening the wealth gap between the two types of households.

Education is positively correlated with household wealth growth: the more education household members had, the more likely its wealth had grown. For instance, 59 percent of the illiterate households experienced wealth holdings growth from 2010 to 2012, compared to 71 percent experiencing growth for households with at least one member having a bachelor's degree. As for growth rate, there is no consistent pattern. For example, the growth rates were higher for middle education groups than for other groups. Similarly, the growth rate was higher for middle income groups but lower for the bottom and top groups. We acknowledge that the manner in which education and income affect wealth growth is complex. Future studies need to consider causal mechanisms of this relationship and include more characteristics of households and household members, in order to unpack this black box.

Discussion and Conclusion

This study paints an empirical picture of wealth in contemporary China based on data from two recent waves of a nationally representative, longitudinal survey. We summarize our key findings as follows:

1. The average household wealth was 422,000 yuan in 2012 China, yielding total private wealth nationwide of 181.3 trillion yuan. The

wealth/income ratio was 9.2, much higher than that in European countries and the United States.

2. There is evidence that household wealth inequality in China grew rapidly in recent years. Previous research found that the wealth Gini coefficient was 0.4 in 1995 and 0.55 in 2002. According to our data, it reached 0.73 in 2012. The richest 1 percent of households owned more than one-third of the total household wealth, while the poorest 25 percent owned less than 2 percent of the total household wealth.
3. Although the richest 1 percent of households in China owned a similarly large share of total national household wealth to that owned by the richest 1 percent in United States, wealth was more equally distributed in China for the remaining 99 percent of households.
4. Housing assets accounted for 79 percent of urban and 61 percent of rural household wealth. Over half of the wealth growth from 2010 to 2012 was due to the growth of housing assets, and housing inequality was the main contributing factor to wealth inequality.
5. Structural factors, such as the rural-urban divide and regional disparities, were major contributors to wealth inequality in China. Specifically, the rural-urban divide accounted for more than 10 percent of the total wealth variation, while regional disparities accounted for about 23 percent.
6. For most Chinese households, wealth holdings grew rapidly. The household wealth growth rate from 2010 to 2012 was 18 percent on average.
7. Several socio-economic characteristics were strongly associated with household wealth: within-system households on average owned more wealth holdings and experienced faster wealth growth, and education was positively associated with household wealth holdings, though no consistent effect was found on wealth growth rates.
8. Household wealth was weakly correlated with income and was more unequally distributed than income.

Our next task is to interpret, sociologically, the empirical evidence that we have assembled in this study of wealth and wealth distribution in contemporary China. To do so properly, we believe we need to go beyond the data we analyzed for this study. In particular, we need to incorporate our understanding of the institutional changes that have been happening in China since the beginning of the economic reform. The most pertinent questions are: (1) What is the sociological significance of household wealth in China? and (2) Who has benefited most from the emergence of private wealth in China?

There is no doubt that household wealth has become a significant social phenomenon that increasingly affects social stratification in contemporary China. In this context, we can identify three distinct eras of social inequality

in China's recent history. The first era was before the economic reform that began in 1978. During this period, social inequality in China was most significantly manifested by differential access to goods and services monopolized by the government (Bian 2002; Walder 1986). For this reason, work unit (or *danwei*) affiliation and position in the planned economy was important, but distribution within each work unit was handled, at least nominally, in accordance with egalitarian principles (Walder 1992; Xie, Lai, and Wu 2009). In this first era, political power, or ability to extract governmental resources, was paramount (Bian and Logan 1996; Nee 1989, 1991, 1996). In the second era, ushered in by the economic reform, goods and services were marketized, managers and local officials were given discretion—especially after the reform sped up after 1992–and unprofitable state-owned enterprises were closed down or downsized, pushing many former employees out of the state-owned enterprises and into the private sector (Wu and Xie 2003). During this period, earnings inequality became a prominent feature, as more and more goods and services became increasingly available for purchase on the open market. Commenting on changes from the first era to the second era with the logic of a market economy, Nee (1989, 1991, 1996) predicted that the main determinants of socio-economic status should be factors that contribute to economic productivity, such as human capital, rather than political capital, as in the first era. Although researchers did observe a clear increase in the earnings/income returns to education (Hauser and Xie 2005), however, interpretation of this trend is ambiguous (Wu and Xie 2003), especially in light of overwhelming evidence of the persistence of political power in determining earnings/income (Bian and Logan 1996; Walder 2002; Zhou 2000).

Beginning with the implementation of the housing reform in 1998 (Song and Xie 2014) and continuing to the present, China has arguably entered a third era, in which private wealth has become a significant aspect of social inequality. This is a new period in which a small segment of the Chinese population have rapidly amassed enormous wealth, which would have been unthinkable in the two earlier periods. Some Chinese now are even able to live on their private wealth without having to rely on labor income, as has been the case in Western societies for more than two centuries (Piketty 2014). The emerging importance of private wealth has serious consequences for social inequality, especially social mobility. During the first era, political capital was important. During the second era, human capital became important because labor income was associated with a worker's perceived productivity in the labor market. In the third, current era, wealth has become another important factor, closely related to but independent of both political capital and human capital.

Differences across these three eras have implications for intergenerational social mobility. In the first era, during which political capital dominated, high-status families could pass on their social advantages through political

means, such as political ties or patronage. In the second era, when human capital became important, high-status families could pass on their social advantages by investing in their children's education. In the third era, during which private wealth now matters, high-status families are able to pass on their private wealth directly to their children in the form of inheritance, unmediated by public institutions, such as education. In the future, we may see reduced social mobility, because we are likely to see education playing a smaller role as a mediating mechanism linking parental and children's social status (Blau and Duncan 1967).

While it is easily understandable that private wealth, once accumulated, is likely to be transferred from generation to generation, it is unclear who was likely to accumulate wealth first. After all, almost all of the Chinese population lived on a subsistence level only thirty years ago, when virtually no Chinese had significant private wealth. What social processes led some people, but not others, to accumulate wealth?

Clearly, this is an important question awaiting future research. The data we analyzed for this paper are so limited that we are not in a position to give a credible answer. However, the evidence we have presented suggests that two main, seemingly contradictory mechanisms have been generating private wealth in China. The first wealth-generating mechanism is capital privatization and concentration. As China's market economy has continued to expand, a few individuals have become super-rich by amassing capital, that is, means of production, such as factories, buildings, stocks and financial assets, that was previously public property and then using it to generate more wealth through entrepreneurship and the financial market (CCB Private Bank and the Boston Constitute Group 2011, 2012; China Merchant Bank and Bain & Company 2009, 2011; Hurun Report 2011, 2012b, 2013).

The second mechanism is middle-class housing conversion. Especially for the urban middle class, who are the main subjects of this study, wealth generation has actually been a legacy of the earlier planned economy, with a distinct egalitarian flavor. Recall that most wealth among Chinese families is in the form of housing. Prior to the economic reform, housing in urban areas was distributed administratively as a state-sponsored entitlement benefit (Song and Xie 2014; Walder and He 2014; Xie, Lai, and Wu 2009). Current occupants of a large stock of housing units in urban China today paid very little for their housing units. In fact, their income is often too low relative to the market value of the housing units they occupy (Ren and Hu 2013). Hence, ordinary families in urban areas have benefited significantly from the privatization of public welfare housing and rapid rises of housing prices. Housing assets, the main component of family wealth, help many middle-class families to gain wealth.

In conclusion, we argue that generation of private wealth in today's China has taken two distinct forms: capital concentration and conversion of socialist housing benefits. The former is market-based and favors a

skewed distribution for more inequality. The latter was originally government-based and thus has promoted the equal distribution of wealth. We interpret the current state of wealth distribution in contemporary China as being a product of this hybrid social process that was uniquely shaped by China's recent past. Let us call our interpretation the "hybrid process" theory to highlight the contradictory forces that have affected wealth generation and distribution in today's China. We welcome future research to evaluate the empirical validity of the theory and its usefulness in understanding social inequality and social mobility in contemporary China.

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Notes

1. The 90/10 ratio is defined as the ratio of household assets at the 90th percentile point to household assets at the 10th percentile point. It is often used to measure the gap between richest and poorest.

2. According to the 2012 National 1% Population Sampling Survey, the total number of households in China is 429.54 million, and the total number of adults aged 20 or above is 1.042 billion.

3. The ratio is calculated based on data from Gan et al. (2014).

4. The Gini coefficient is a well-understood measure of inequality. Based on the distribution of an outcome variable by rank-ordered units in a population, the Gini coefficient measures the degree of inequality in the distribution of total resources. A Gini coefficient of 0 expresses perfect equality, with all units receiving an equal share. A Gini coefficient of 1 means maximal inequality, in which one unit has all the resources.

5. The reasons that urban families have land assets are (1) some families in urban areas are originally from rural areas (also known as floating population) having their own land assets and (2) some families in newly urbanized areas are engaged in agricultural activities.

6. In CFPS 2010, assets except housing prices, stocks and funds referred to values in the past year (2009), so adjustment of 2010 used three years of CPIs from 2010 to 2012. For housing prices, stocks and funds, the marked values were asked at the survey time, so only two years of CPIs from 2011 to 2012 were used for adjustment.

7. Asset items not surveyed in 2010 are government bonds, financial derivatives and other financial products, so we do not include these three items in our comparison. Note that assets from the three items only account for a very small portion of household wealth; thus, our comparison is meaningful despite the values not reflecting true levels.

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