Wealth Inequality in China: Evidence from the 2017 and 2019 CHFS

Chenning Xu

1 Introduction

China has experienced remarkable economic growth in recent decades following its reform and opening-up policy initiated in 1978. However, this period has also been marked by a significant rise in income and wealth inequality (Piketty, Li, and Zucman 2019). Some scholars have provided evidence suggesting that China's overall inequality peaked around 2010 and subsequently began to decline (Kanbur, Wang, and Zhang 2021; Zhang 2021). It is also well-documented that China's inequality is strongly intertwined with its urban-rural and coastal-inland divisions (Piketty, Li, and Zucman 2019; Zhang 2021). This paper utilizes data from the 2017 and 2019 China Household Finance Survey (CHFS) to examine the current state of China's wealth inequality. Specifically, it investigates whether the latest publicly available data supports the view that China's inequality has continued to decline since around 2010, as well as how China's wealth inequality relates to urban-rural and regional disparities.

2 Background

This section presents some notable findings on China's income and wealth inequality in the existing literature.

China has experienced a considerable increase in income and wealth inequality since the reform and opening-up policy initiated in 1978. Using diverse sources, including tax records, household surveys, and private wealth rankings, Piketty, Li, and Zucman (2019) provide a detailed analysis of the transformation in China's inequality profile. Their findings show that between 1978 and 2015, the income share of the top 10% increased from 27% to 41%, while the share of the bottom 50% decreased from 27% to 15%. Wealth concentration also intensified significantly: the wealth share held by the top 10% rose from around 40% to nearly 70%, whereas the bottom 50%'s share dropped from over 15% to about 5%. Additionally, they documented an increase in the urban-to-rural per capita income ratio, from less than 200% in 1978 to approximately 350% by 2015. Humorously noting this stark shift, they remarked that China had transitioned from Nordic-level equality to U.S.-level inequality during the reform era.

Knight, Li, and Wan (2022) further document a rapid rise in China's household wealth inequality between 2002 and 2013, reporting that the national Gini coefficient for household wealth per capita increased markedly from 0.50 to 0.62. They identify housing wealth as the primary driver behind this increase, with its share rising from 53% to 73% of total household wealth, and its contribution to overall wealth inequality growing from 64% to 79%. The authors emphasize that differential savings rates across income groups, uneven house price inflation—particularly pronounced in major urban centers—and widening urban-rural disparities significantly intensified wealth inequality during this period.

The income and wealth inequality highly intersects with urban-rural and reginal disparities. Zhang (2021) highlights significant rural-urban and regional disparities underlying China's rising inequality since its economic reforms. The urban-rural income ratio increased sharply, peaking at around 3.3 in 2009 before declining slightly to 2.7 by 2019, still substantially higher than pre-reform levels. Despite a notable decline in overall inequality after 2010—with the national Gini coefficient decreasing from a peak of 0.491 in 2008 to approximately 0.465 in 2019—regional inequality remains pronounced. For instance, per capita GDP in the eastern coastal region was roughly 2.6 times higher than in the western region by 2018. Additionally, rural-to-urban migration grew dramatically from fewer than 20 million in 1990 to approximately 290 million by 2019, reflecting both the economic disparity between regions and the persistent urban-rural divide, exacerbated by restricted access to urban public services under the Hukou household registration system.

Consistent with the finding in Zhang (2021) that China's inequality peaked in 2008 and 2009, Kanbur, Wang, and Zhang (2021) similarly document that China's inequality increased sharply after economic reforms but started to plateau around 2010. They find the national Gini coefficient peaked at about 0.525 in 2010, subsequently declining to approximately 0.476 in 2016 before rising slightly again. Consistent with Zhang (2021), they attribute this recent turnaround primarily to narrowing rural-urban and coastal-inland disparities, driven by demographic changes, tightening rural labor markets, and rising rural wages.

3 Data

Using the relatively new and underexplored 2017 and 2019 China Household Finance Survey (CHFS) datasets, this paper aims to compare its findings with results from earlier literature. CHFS is a national household survey initiated by the Southwestern University of Finance and Economics (SWUFE) in 2009, with the first results published in 2011. It focuses specifically on collecting detailed, micro-level information on household finances (Kanbur, Wang, and Zhang (2021)).

The household wealth variables consistently available in both 2017 and 2019 include total household assets and debts, financial assets and debts, agricultural assets and debts, business assets and debts, land, housing assets and debts, commercial property assets and debts, vehicle assets and debts, education debts, credit debts, medical debts, and other miscellaneous assets and debts. In 2019, an additional variable, garage assets, was reported separately from housing assets; this variable was not present in 2017.

For consistency, this paper calculates equity values by deducting debts from corresponding assets, except for land, which is typically fully owned and non-transferable. Due to its relatively small aggregate value, garage assets in 2019 are recombined with housing assets for analytical consistency.

Given the relatively short period between 2017 and 2019, this study aims to identify stable patterns in China's wealth inequality using data from these two years. Additionally, it compares the findings with earlier studies that utilize the same CHFS dataset to infer recent trends in wealth inequality(Tan, Zeng, and Zhu 2017).

4 Analysis

4.1 Change of Gini from 2011 to 2019

This section presents the Gini index analysis using the 2017 and 2019 CHFS data. The statistics from the 2011 CHFS data is from Tan, Zeng, and Zhu (2017), which is work from CFHS's research team. All the

income and wealth statistics are aggregated at the household level.

Table 1: Mean, Median, and Gini Coefficient for Income and Wealth in China, 2011, 2017, and 2019

Statistic	Income 2011	Income 2017	Income 2019	Wealth 2011	Wealth 2017	Wealth 2019
Mean	69,053	89,634	91,106	790,030	839,008	1,052,108
Median	32,555	54,108	55,276	226,697	322,515	443,487
Gini	0.664	0.605	0.614	0.761	0.701	0.667
Observations	8,438	38,994	33,387	8,438	38,994	33,387

All figures are reported in RMB at constant 2017 prices.

Sources: Tan, Zeng, and Zhu (2017)'s calculation based on the 2011 CHFS data and authors' calculation based on the 2017 and 2019 CHFS data.

Compared to the 2011 data, the Gini coefficient for income has decresed from 0.664 in 2011 to 0.605 in 2017 and remained stable in 2019. The Gini coefficient for wealth has decreased from 0.761 in 2011 to 0.701 in 2017 and continued to decrease to 0.667 in 2019. The results show that China's income and wealth inequality has been decreasing since 2011. The finding is consistent with the findings in Kanbur, Wang, and Zhang (2021) and Zhang (2021), that China's inequality peaked around 2010 and started to decrease since then.

Notably, the growth rate of mean and median income from 2011 to 2017 is clearly higher than that of wealth but from 2017 to 2019, the growth of mean and median wealth surpasses that of income by a great margin.

4.2 Factor decomposition of wealth inequality

This section examines the composition and distribution of household wealth in China by analyzing specific asset and debt categories using data from the 2017 and 2019 China Household Finance Survey (CHFS). This detailed decomposition provides insights into the relative importance of different components contributing to wealth inequality.

Table 2: Summary Statistics of Wealth, 2017 and 2019

Asset/Debt Type	Mean 2017	Mean 2019	Median 2017	Median 2019	Prop_zero 2017	Prop_zero 2019
House Asset	623,074	768,461	230,530	290,748	10%	10%
Land Asset	32,912	62,349	0	0	56%	59%
Financial Equity	103,355	161,199	17,170	39,251	2%	3%
Vehicle Asset	30,391	38,185	1,500	2,423	24%	22%
Commercial Asset	92,854	69,169	0	0	58%	66%
Other Asset	21,034	28,787	10,000	11,436	7%	1%
House Debt	-36,095	-49,494	0	0	82%	82%
Vehicle Debt	-1,962	-1,987	0	0	95%	96%
Commercial Debt	-18,980	-16,176	0	0	87%	90%

Table 2: Summary Statistics of Wealth, 2017 and 2019

Asset/Debt Type	Mean 2017	Mean 2019	Median 2017	Median 2019	Prop_zero 2017	Prop_zero 2019
Other Debt	-3,162	-9,060	0	0	96%	87%

All figures are reported in RMB at constant 2017 prices.

Source: Author's calculation based on the 2017 and 2019 CHFS data.

The above table intuitively shows the state of household wealth allocation in China in 2017 and 2019. Clearly the mean and median value of house dominates other assets. It is also notable that despite the high inequality in housing assets, as it is shown in the next table, the proportion of households that have no houses at all is fairly low at just 10%. It is also surprising that the housing debt is very low compared to the asset value, and 82% of the households have no house debts.

Table 3: Decomposition of Wealth Gini Coefficient by Urban-Rural Division, 2017

2017 Wealth	Gini Correlation	Gini Coefficient	Share	Contribution
House Asset	0.9543	0.7166	74.26%	72.48%
Land Asset	0.4722	0.9204	3.92%	2.43%
Financial Equity	0.8022	0.7964	12.32%	11.23%
Commercial Asset	0.8164	0.9547	11.07%	12.31%
Vehicle Asset	0.6576	0.8860	3.62%	3.01%
Other Asset	0.7060	0.6799	2.51%	1.72%
House Debt	-0.5201	-0.9339	-4.30%	-2.98%
Vehicle Debt	-0.3267	-0.9792	-0.23%	-0.11%
Commercial Debt	-0.1270	-0.9775	-2.26%	-0.40%
Other Debt	0.2694	-0.9888	-0.38%	0.14%

Source: Author's calculation based on the 2017 CHFS data.

Table 4: Decomposition of Wealth Gini Coefficient by Urban-Rural Division, 2019

2019 Wealth	Gini Correlation	Gini Coefficient	Share	Contribution
House Asset	0.9543	0.7166	74.26%	72.48%
Land Asset	0.4722	0.9204	3.92%	2.43%
Financial Equity	0.8022	0.7964	12.32%	11.23%
Commercial Asset	0.8164	0.9547	11.07%	12.31%
Vehicle Asset	0.6576	0.8860	3.62%	3.01%
Other Asset	0.7060	0.6799	2.51%	1.72%
House Debt	-0.5201	-0.9339	-4.30%	-2.98%
Vehicle Debt	-0.3267	-0.9792	-0.23%	-0.11%
Commercial Debt	-0.1270	-0.9775	-2.26%	-0.40%
Other Debt	0.2694	-0.9888	-0.38%	0.14%

Source: Author's calculation based on the 2019 CHFS data.

The factor decompostion of the Gini coefficient for household wealth in two years shows that housing asset dominates the wealth inequality in China. In both 2017 and 2019, the housing asset occupy over 70% of total household wealth and contribute to over 72% of the overall wealth Gini. This high contribution of housing equity to wealth inequality is consistent with other studies. Tan, Zeng, and Zhu (2017) documented with the 2011 CHFS data that the housing asset to total asset ratio was 66.73%, and the 2017 and 2019 74.2% and 73% shows an sharp increase in the housing asset to total asset ratio from 2011 to 2019. Meanwhile, Kanbur, Wang, and Zhang (2021) used the 2002 and 2013 CHIP data and found that housing euqity contribues to 64% of wealth inequality in 2002 and 79% in 2013. Albeit variation in the statistics across sources, the results in Table 4 demonstrates that in 2017 and 2019, the housing market is still the most important driver of wealth inequality in China. However, surprisingly,

4.3 Group decomposition of wealth inequality by rural and urban

Group decomposition of wealth inequality by rural and urban

To analyze the sources of wealth inequality, this paper employs the classic Gini decomposition identity initially developed by Bhattacharya and Mahalanobis (1967)(Bhattacharya and Mahalanobis 1967). The overall Gini coefficient is decomposed as follows:

$$G = G_B + \sum_k a_k G_k + R$$

where G_B is the between-group Gini, which captures inequality arising solely from differences in group means; G_k is the within-group component, a weighted sum of the inequality within each group, with weights a_k representing the products of each group's population share and wealth share; and R is the overlap (residual) component, which captures inequality due to the intersection of group wealth distributions. Lambert and Aronson (1993) provide a geometric interpretation of this overlap term, demonstrating that R corresponds to the Lorenz curve area generated by reranking when subgroup wealth distributions overlap. A positive R thus indicates significant intersections among wealth distributions of different groups(Lambert and Aronson 1993).

Table 5: Summary statistics of urban and rural income and wealth, 2017 & 2019

Group	Population Share	Wealth Share	Mean Wealth	Median Income	Gini
2017 Urban	62.35%	85.21%	1,146,510	513,324	0.6573
2017 Rural	37.65%	14.79%	329,715	147,468	0.6945
2019 Urban	65.00%	87.52%	1,416,595	711,233	0.6165
2019 Rural	35.00%	12.48%	375,190	174,042	0.6629

Source: Author's calculation based on the 2017 and 2019 CHFS data.

The summary statistics highlight significant and persistent disparities between urban and rural China. Urban households consistently exhibit higher mean and median incomes and wealth compared to rural households. Urban mean wealth was 3.48 times greater than rural mean wealth in 2017 and widened slightly to 3.78 times in 2019. Median urban wealth was 2.82 times higher than the rural median in 2017, though this ratio

decreased slightly to 2.52 in 2019. Additionally, the Gini coefficient for wealth is consistently higher in rural areas, though both rural and urban Gini coefficients declined modestly between 2017 and 2019.

Table 6: Decomposition of wealth Gini coefficient by urban–rural division, 2017 & 2019 (%)

Year	Total Gini	Within-group	Between-group	Residual
2017	100.00	55.35	32.61	12.04
2019	100.00	56.79	33.68	9.53

All figures are reported in RMB at constant 2017 prices.

Source: Author's calculation based on the 2017 and 2019 CHFS data.

The decomposition results indicate that about 55–57% of total wealth inequality is attributable to within-group disparities among urban and rural households. The between-group component, reflecting the urban-rural wealth divide, contributes approximately 33–34%. The overlap component, representing inequality due to intersecting distributions of urban and rural wealth, accounts for around 9–12% of total inequality. The consistency of these shares between 2017 and 2019 underscores the continued significance of the urban-rural divide in shaping China's wealth inequality.

Table 7: Summary Statistics by Region, 2017 and 2019

Region	Population Share	Wealth Share	Mean Wealth	Median Wealth	Gini
2017 East	37.54%	62.26%	1,391,421	556,993	0.6747
2017 Middle	26.59%	17.46%	550,976	272,235	0.6648
2017 West	26.28%	15.56%	496,937	252,341	0.6569
2017 Northeast	9.60%	4.72%	412,387	212,512	0.6513
2019 East	39.87%	60.90%	1,607,178	736,696	0.6305
2019 Middle	26.51%	16.55%	656,796	360,948	0.5997
2019 West	24.00%	17.68%	774,876	332,947	0.6947
2019 Northeast	9.62%	4.87%	532,761	282,108	0.6369

All figures are reported in RMB at constant 2017 prices.

Source: Author's calculation based on the 2017 and 2019 CHFS data.

The above summary statistics shows that the mean and median wealth in the East is significantly higher than in the other regions in both 2017 and 2019. Notably, the mean and median wealth of the West-area households surpassed that of the Middle in 2019, but West's Gini coefficient rose to the highest among all regions in 2019 as well.

Table 8: Decomposition of Wealth Gini Coefficient by Region, 2017 and 2019 (%)

Year	Total Gini	Within-group	Between-group	Residual
2017	100.00	31.16	36.88	31.96
2019	100.00	31.69	33.77	34.54

Source: Author's calculation based on the 2017 and 2019 CHFS data.

The group decompsition shows that similar to the urban-rural decomposition, the between-group component contribues over 30% to the overall wealth inequality in both 2017 and 2019. The between group contribution saw a slight decrease from 2017 to 2019 with a similari increase in the residual component. This might signal some modest convergence in household wealth between regions.

References

Bhattacharya, Nath, and Bimalendu Mahalanobis. 1967. "Regional Disparities in Household Consumption in India." *Journal of the American Statistical Association, 62(317), 143-161.*

Kanbur, Ravi, Yue Wang, and Xiaobo Zhang. 2021. "The Great Chinese Inequality Turnaround." *The Great Chinese Inequality Turnaround. Journal of Comparative Economics, 49(2), 467-482.*

Knight, John, Shi Li, and Haiyuan Wan. 2022. "Why Has China's Inequality of Household Wealth Risen Rapidly in the Twenty-first Century?" *Review of Income and Wealth 68.1.*

Lambert, Peter, and Richard Aronson. 1993. "Inequality Decomposition Analysis and the Gini Coefficient Revisited." *The Economic Journal, 103(420), 1221-1227.*

Piketty, Thomas, Yang Li, and Gabriel Zucman. 2019. "Capital Accumulation, Private Property, and Rising Inequality in China." *American Economic Review, 109(7), 2469-2496.*

Tan, Jijun, Ting Zeng, and Sheghao Zhu. 2017. "Earnings, Income, and Wealth Distributions in China: Facts from the 2011 China Household Finance Survey." *Wokring Paper.*

Zhang, Junsen. 2021. "A Survey on Income Inequality in China." *Journal of Economic Literature, 59(4), 1191-1239.*