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Understanding the role of homeownership in wealth inequality: Evidence from urban China (1995–2018)

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ABSTRACT

Many scholars have evaluated the wealth creation effects of homeownership over different time periods and have agreed on the positive role of homeownership. However, there are no consistent mechanisms to measure the impact of homeownership on wealth inequality. Based on data from 1995 to 2018, this paper finds that the expansion of the homeownership rate in urban China was an equalizing force in the distribution of wealth from 1995 to 2008, driven by the increased homeownership and housing acquisition of low- and moderate-income households (LMIs) during the era of housing reform in the 1990s. The forces were exogenous and dominated by a redistributive logic. In the post-reform era after 2008, the decline in the homeownership rate led to a concentration of wealth distribution that was driven by the widening wealth gap between owners and non-owners, which represented an endogenous market force. The results indicate that there was an apparent discontinuity of the trends of homeownership and wealth inequality because new immigrants could not afford the price of housing in the cities. The wealth position of the middle and lower classes (mainly new immigrant non-owners) was crippled, not only by the inaccessibility of homeownership, but also by the reinforcing effect of the increase in housing prices. This study reveals the different mechanisms of homeownership on wealth inequality and the policy implications for the redistributive effects of the allocation of housing resources.

1. Introduction

China has generated enormous private wealth alongside rapid economic growth since 1978. By Piketty's measurement, private wealth in China was relatively limited in 1978, accounting for about 100% of national income, but it has grown rapidly in 2015, accounting for over 450% of national income (Piketty, Yang, & Zucman, 2019). However, to date scholars have not agreed on a unanimous explanation for China's wealth growth (Li, Li, & Ouyang, 2016; Zucman, 2019). As we all know, the distribution of private wealth in urban China went through complex dynamics, far from a simple increase. Especially the reform of the urban housing system implemented in the 1990s and the increase in private property may have played an important role. Therefore, this paper aims to

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explore the relationship between homeownership and private wealth.

An interesting phenomenon can be seen in Fig. 1, ¹ as the level of wealth inequality decreased during the period before 2008 when income inequality increased rapidly; the level of wealth inequality declined between 1995 and 2008, and then increased after 2008. In other words, the increase in income inequality did not lead to similar trends in wealth inequality. At the same time, the homeownership rate, another indicator of the distribution of socioeconomic acquisition, grew rapidly during this period. This significant increase in homeownership was due to the urban housing privatization reform since the 1990s, which aimed to establish a diversified system of multilevel urban housing provision, with the coexistence of a market supply and government provision. During the implementation of urban housing reform, households acquired homeownership at very low prices, acquiring properties which were once occupied by public enterprises or institutions. As a result, private wealth in urban China increased on a large scale owing to the increase in self-occupied homeownership. (See Table 7.)

In addition, we also find that the process of accumulating wealth contributed to the equalization of wealth distribution before 2008, but wealth inequality decreased before the dramatic increase since 2008. Income inequality has continued to increase albeit at different rates, but the homeownership rate had been growing rapidly, before a subsequent downtrend. The turning points of these three trends all occurred somewhere around the middle of the first decade of the 21st century. What has been the driving force behind these dynamics? Have there been any potential causal relationships between these three dynamics? By viewing the housing windfalls as a public-to-private wealth transfer in the 1990s, was homeownership an equalizing force in the distribution of household wealth during China's transition period when both redistributive policies and market factors played a role? Will different income groups among Chinese LMIs benefit from the reform? Did Chinese LMIs suffer as a result of an increasingly market-oriented housing regime due to housing price bubbles? In this paper, we attempt to answer these questions to understand the evolution of wealth inequality during China's economic transition and urbanization process.

Specifically, the main findings and supplementary contributions of this article are the following.

First, compared to the attention the existing literature gives to the issue of income inequality in China, we focus on China's wealth accumulation process and wealth inequality. We find that, since 1990, the trend of wealth inequality in China has not been consistent with income inequality, while income distribution still exerts a positive impact on wealth distribution.

Second, this paper contributes to existing studies on household wealth inequality in urban China by constructing a longitudinally comparable data series using two major survey datasets, and discusses the relationship between homeownership and wealth inequality in urban China. This paper tests the impact of homeownership on wealth inequality and explains the underlying mechanisms in specific periods. We find that endogenous wealth accumulation was not a major source of wealth distribution during the period when urban China transitioned from a redistributive economy to a market economy, while in the post-reform period, the level of income inequality has had an increasing impact on wealth distribution.

Finally, our third contribution is to explain the reasons for wealth disparities between homeowners and non-owners, and we find that wealth disparities increased under the effect of capital gains, but this problem was alleviated by a higher homeownership rate.

The rest of the article is arranged as follows. The second part constitutes the literature review, the third part presents the theoretical framework, the fourth part discusses the data and methods, the fifth part presents the empirical analysis, and the conclusions and discussion form the sixth part.

2. Literature review

A great deal of research has been conducted on the relationship between homeownership and private wealth. The general literature includes the wealth creation effects of homeownership among different groups and its potential mechanisms (Herbert, McCue, & Sanchez-Moyano, 2014; Killewald & Bryan, 2016; Turner & Luea, 2009), the aggregate impact of homeownership on wealth distribution in different institutional contexts, such as the United States and European countries (Holloway, 1991), and the relationship between homeownership and wealth inequality in China (Knight, 2014; Li & Sicular, 2014; Walder & He, 2014; Xie & Jin, 2015; Zhou & Song, 2016). However, these papers only discuss the relationships and do not explain the underlying mechanisms, especially the dynamic effect of homeownership on the accumulation of private wealth and the difference between urban and rural areas.

2.1. The wealth creation effect of homeownership among different groups

Many scholars have evaluated the wealth creation effects of homeownership among low- and moderate-income groups over different time periods and have concurred on the positive role of homeownership. Turner and Luea (2009) observed US households of different income levels during the mid- and late 1990s in terms of homeownership and wealth accumulation. Their study confirmed the wealth creation effects of homeownership. In the full sample, each additional year of homeownership increased, on average, total net wealth by \$13,700. The figure was \$6000–10,000 for the LMI group and \$15,000 for the high-income group. Addressing the temporal scope, Killewald and Bryan (2016) also confirmed the substantial wealth benefits that homeownership brings. Their results indicated that each year spent in ownership between 1986 and 2008 was correlated with about \$4400 more in midlife wealth. This provided strong support for the wealth-enhancing role of homeownership, since it indicated the positive impact of ownership, even during the

¹ In order to observe more intuitively, we drew the evolution curve of the wealth Gini coefficient, the income Gini coefficient, and the change in homeownership rate of urban China from 1995 to 2018 (see Fig. 1), using the survey datasets of CHIP (China Household Income Project) and CFPS (China Family Panel Studies).

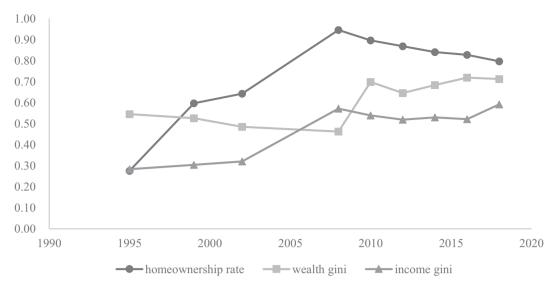


Fig. 1. Homeownership rate, wealth Gini, and income Gini in urban China.

Table 7Changes in wealth inequality and homeownership inequality over different periods.

	1995–1998	1999–2008	2009–2018
Wealth inequality	Decrease	Decrease	Increase
Homeownership rate	Increase	Increase	Decrease
Explanation	Housing acquisition regardless of income constraints due to housing reform	Housing prices were still relatively affordable and homeownership continued to increase	The price-income ratio reached such a high level that most immigrants could not afford homeownership

housing crisis. Similarly, to support the claim that housing could yield higher shorter-term economic returns than renting and reliance on other investment options, Grinstein-Weiss, Key, Guo, Yeo, and Holub (2013) produced results demonstrating a higher short-term change in total net worth, total liquid assets and total non-housing net worth among homeowners as compared to renters.

Herbert et al. (2014) summarized the two primary mechanisms by which homeownership can accumulate wealth for low-income and minority households: one is the substantial wealth that homeowners can accrue from housing price appreciation, and the other is the forced savings under the clear goal of entering homeownership. This latter mechanism also echoes the Canadian evidence. In a study based on nine cities in Canada between 1976 and 2006, Somerville et al. (2007) verified the assumption that renters were left behind owners, based on the calculated prediction that renters must save between 60% and 80% of the difference between annual owner and renter costs. This required strict discipline in terms of saving and wise investment to achieve high yields and low fees, which probably would not be possible for most people. Herbert et al. (2014) also acknowledged that owning a home is accompanied by both benefits and risks, the most important of which is a failure to sustain homeownership. However, the evidence indicates that a large share of homeowners succeeds in maintaining their ownership, even during a time of excessive risk in the mortgage market and volatility in house prices. Those who cannot sustain homeownership, essentially fall back to their initial wealth levels rather than bearing net losses.

2.2. The impact of homeownership on wealth distribution

Empirical conclusions about the aggregate impact of homeownership on wealth distribution vary in different institutional contexts. Holloway (1991) reviewed trends in household assets, liabilities, and net worth in the United States during the period 1960 to 1989, and found that homeownership made the distribution of wealth more equitable compared to other assets. The importance of homeownership was primarily attributed to capital gains. The conclusion also predicted a continuing important role for housing assets in the 1990s, due to a likely rise in homeownership and the aging of the baby boomers. However, recent studies on the US as a deregulated-housing-market economy similar to Australia and Canada have concluded that homeownership plays an exacerbating role in wealth inequality, due to a lesser *net housing benefit* for LMI households, that is, housing gains offset by higher housing costs. A study of the post-deregulation housing market in Australia's two largest cities, Melbourne and Sydney, indicated that the distribution of net housing benefits was substantially class biased (Burbidge & Andrew, 2000).

LMI homebuyers suffered more because of high-interest rates rather than benefiting from capital gains on housing assets in the housing boom years. However, if interest rates, inflation, and capital gains in the housing boom were substituted by current levels, few homeowner families would be net losers. The situation in the United States was similar. Described as an *overserved market*, the transformation of US governments into more neoliberal governance in the housing market resulted in the greater pervasiveness of capital gains through ownership, but also in the more unequal distribution of net gains (Glick, 2008). Based on cross-sectional data from Canadian cities, Walks (2016) also evaluated the neoliberal asset-based welfare approach, which promotes homeownership through the deregulation of financial markets and shifts from state programs towards private housing solutions by households themselves. Increasing housing affordability for low-income neighborhoods through mortgage credit deregulation has attracted high levels of debt that offset the wealth effects of rising homeownership and housing values, contributing to less socio-spatial equity. These reflections on neoliberal approaches have suggested that ownership promotion approaches by easing restraints on access to mortgages bear the risk of creating a housing bubble, thus leading to a worsening of wealth inequality.

European studies on the correlation between homeownership and wealth distribution have featured cross-country comparisons. Evidence from the nine largest European countries has indicated a strong correlation between the homeownership rate and wealth inequality, indicating that housing assets are an important part of the wealth structure. By decomposing the Gini coefficient into variations between owners and renters and among owners, Kaas, Kocharkov, and Preugschat (2019) found that the between-groups variation, which contributed 42% of overall wealth inequality, was the main contributor. Furthermore, they particularly studied wealth inequality among the bottom half. They found that the level of inequality was higher in the bottom half than in the upper half, regardless of whether it was being compared within a country or across countries. In other words, the overall cross-country differences in wealth inequality were largely channeled through homeownership.

Similarly, Mathä, Porpiglia, and Ziegelmeyer (2017) have suggested that homeownership and property price dynamics were the two most important factors driving wealth differences across European countries. They found that these two factors were especially relevant in the middle part of wealth distribution, explaining 56% of the differences in total net wealth at the median level across countries. Wind, Lersch, and Dewilde (2017) summarized three broad kinds of housing wealth accumulation regimes based on the homeownership rate and housing financing indicators (loan-to-value ratio and debt-to-income ratio), and compared the effect of increased homeownership on housing wealth inequality. Among the three regimes, only the expansion of homeownership in a market-based housing regime was associated with a more unequal distribution of housing wealth among various occupational classes. The decoupling of labor income and housing consumption in the other two less market-based regimes led to a more equal distribution of housing wealth.

In summary, based on existing findings drawn from American and European countries, homeownership is a major wealth creation pathway for low- and moderate-income households. Whether a higher homeownership rate will have equalizing impacts on the aggregate wealth distribution depends on the housing market regimes. Specifically, a less market-based housing regime that decouples labor income and housing consumption alleviate the housing affordability in the households themselves, while a deregulated housing regime with looser lending conditions bears the risk of costing LMIs more than they receive from capital gains due to inflation.

2.3. The relationship between homeownership and wealth inequality in China

In comparison with the abundance of studies on advanced economies, to date there has been little research on the relationship between homeownership and wealth inequality in China. Instead, the socioeconomic impact of the urban housing privatization reform has triggered debates about the public-to-private housing wealth transfer. One unique fact in China is that the current occupants of a large stock of housing units in urban China pay very little for their housing units. Urban household incomes were often too low compared to the market value of the housing units the households occupied. Walder and He (2014) have proposed that household wealth was relatively evenly distributed among middle-class families in urban China, because many working-class families have benefited greatly from both welfare housing and housing privatization, serving as a key factor in generating household wealth for most Chinese families. They found that there was a sharp decrease in inequality within Chinese cities between 1995 and 2002, largely due to much broad-based homeownership between 1995 and 2002. However, there is limited literature discussing longer periods and the potential relationship between the homeownership rate and wealth inequality in urban China.

Opposing scholars who have highlighted the role of capital gains have argued that the housing privatization reform has resulted in profound household wealth inequality, owing to variations in capital gains from housing assets. Zhou and Song (2016) have pointed out that the rapid economic growth in China has always relied on a model that paid high returns to various kinds of capital, including financial capital and real estate, while ownership of capital was highly unequal. This indicates that the increasingly widespread ownership (more people owning a house) will lead to a more equitable distribution of wealth.

Li and Sicular (2014) have reported that asset income accounted for 8–10% of national income inequality in 2002 and 13–19% in 2007. They have argued that the benefits of reform policies had not been evenly distributed from the very beginning when the Chinese government paved the way for private ownership of a wider range of assets. On a larger scale, to foster the development of domestic financial markets and allow the emergence of private businesses: early acquisitions of private property during that period constituted a crucial force of asset inequality in China.

Knight (2014) has attributed the main cause of a higher wealth Gini than that of income in both rural and urban areas to differences in the quality and value of housing, which, in the latter case, accounted for two thirds of net wealth inequality. Knight has also argued that urban dwellers enjoyed huge capital gains by acquiring homeownership at a very early stage by means of cheap loans from state-owned banks, and this initial inequality in wealth was further assisted by the fact that the household savings rate increases dramatically with income. Huang and Cui (2013) found that housing investment was a major source of housing inequality in urban China,

accounting for 80.75% of the housing wealth gap, while the contribution of income distribution only grew from 28% to 48% in the distribution of housing wealth after nearly a decade of development. Xie and Jin (2015) concluded that there were two main contradictory mechanisms in shaping China's private wealth. One was the privatization and concentration of capital, which act as a concentrating force in the distribution of wealth, and the other was the conversion of socialist housing benefits.

Therefore, the existing literature holds different points of view on the beneficiary group of this huge housing windfall. Some consider that better-off middle-class public employees benefited most, while others consider the wealth creation effect as most obvious in low- and moderate-income households. The argument held by the former suggests that established employees in the public sector were found to enjoy the greatest benefit, because workers either outside of or laid off from the public sector were inferior to this group, both in terms of accessibility and affordability (Wang, 2000). Zhou and Logan (2010) have pointed out that a disproportionate amount of housing in the reform system remains a redistributive good rather than a commodity. Obviously, given the slow changes in the wage structure at that time, the affordability by workers would be far from enough without subsidies from central and local governments or public enterprises. Under the market reform, the mechanism for allocating housing to workers has hardly changed. Tan, Wang, and Cheng (2016) have attributed the change in both housing space inequality and housing wealth inequality mainly to the change in the classification mechanism formed by the returns to household characteristics rather than to the composition of household characteristics themselves. In brief, they have argued that the redistributive approach has favored public salary earners, who were usually among the middle strata, while neglecting the official and unofficial urban poor, such as rural-to-urban migrants and small private-business-related residents.

As can be seen from the above literature, more empirical work is needed to evaluate the validity of this "hybrid process" theory, because previous studies neither tested their hypotheses based on time series data nor fully explained the two mechanisms within and across the urban-rural divide. This paper will attempt to fill the gap and pay special attention to the role of homeownership in the wealth accumulation process.

3. Analytical framework

To explore the impact of widespread housing acquisition on the distribution of wealth, we constructed three hypotheses for the potential relationship between the widespread housing windfall and wealth distribution in urban China. Rural China was excluded from the discussion, because most rural housings were built by households on their own and there was no standard market pricing on their value.

The first hypothesis corresponds to the basic discussion of the impact of urban housing reform on the distribution of household wealth in urban China. We assumed that the housing windfalls, acquired by large numbers of urban households from the transfer of public wealth, were an equalizing force on the wealth distribution, despite the uneven distribution of accessibility and affordability across occupations. According to the wealth-creation mechanism and the middle-class housing conversion idea, enormous amounts of public wealth were conferred on private households regardless of income constraints. This process served as a strong wealth creator for all urban Chinese households and helped to deconcentrate wealth distribution, and China was at the very beginning of private wealth accumulation. In other words, the wealth Gini coefficient should be decreased and negatively correlated with the homeownership rate in urban China during the transition period (H_a).

After the transition period, based on the predictions of the market transition theory that market factors should gradually replace redistributive factors and China's neoliberal urban policies, we presumed that housing consumption and wealth accumulation would gradually depend more on income levels of households rather than redistributive subsidies. Thus homeownership would become increasingly difficult to obtain due to high housing prices and slower income growth. At the same time, wealth inequality was likely to rise due to an increasing difference between property returns and income growth rates. In this situation, we propose that the following mechanisms had an impact on homeownership and wealth distribution: the major inequality brought about by housing wealth was between groups rather than within groups, when capital gains were a dominant pathway for households to benefit from the housing price rises. In other words, the wealth gap between owners and renters was larger than the wealth gap among homeowners (H_{b1}). Theil's index and Gini coefficients both indicate that, for most years, the wealth inequalities between owners and renters and the gap among nonowners are higher than those among owners. Thus, a group, be it a province, city, or country, with a higher share of renters is more likely to have wealth inequalities between groups, resulting in higher wealth inequality. That is, higher homeownership would lead to a lower level of wealth inequality in urban China during the market period (H_{b2}). Moreover, since capital gains are the driver of disparities between owners and renters, housing prices should play a moderating role in the correlation between homeownership and wealth distribution (H_{h3}) . Thus, we can expect that when homeownership is more accessible with a lower price-income ratio, the wealth inequality can be kept at a low level, with more residents benefiting from the housing price increase. As indicated in Fig. 1, after the housing reform in 1998, wealth inequality maintained its decreasing trend until 2008, partly because housing prices were still affordable at this stage to households with an ordinary income level.

The third hypothesis concerns the relationship between income distribution and wealth distribution. Although the presumed equalizing effect of homeownership during the transition period stemmed from its unintended nature of decoupling labor income and housing consumption, this does not mean that total wealth is unrelated to income. By contrast, wealth inequality was still positively affected by income inequality during the market transition (H_{c1}). This is because the influence of pure income savings on wealth accumulation was undermined by the enormous accumulation of exogenous wealth. Furthermore, we predicted a growing relevance of income on wealth distribution (H_{c2}) based on the market transition theory. In addition, the difference between the level of wealth inequality and the level of income inequality is likely to rise when saving rates and the investment return rate are high. On the one hand, a high savings rate increases the accumulated inequality of earned income. On the other hand, wealthier people could benefit more from

investment returns, since they have more high-return investments compared to less wealthy people.

Therefore, this paper aims to explain the changing role of housing assets in the distribution of wealth in urban China during the different stages of wealth accumulation based on the above theoretical framework. The distribution of household wealth is closely related to the method of wealth acquisition and accumulation. From an evolutionary perspective, the accumulated wealth of households goes through three different stages. In the first stage, the household income only covers current consumption. As the economy and income growth, households increase their savings rate and household wealth begins to grow. The asset carrier for households to accumulate wealth varies, both at the household level and the country level. In the second stage, housing assets, counted as popular wealth in many countries, constitute a major investment in household portfolios in the initial period of wealth accumulation because housing is a necessity for residence. Homeownership is perceived by many as the essential step to gain membership of the expanding middle class. Housing equity is pivotal to a broader lifestyle of credit-based and housing-equity-fueled consumption, but also a major wealth enhancer for low- and moderate-income households. During this period of homeownership expansion, wealth inequality might be reduced, either due to the decoupling of incomes and housing consumption in a less market-based economy or due to a middle-class housing conversion. Finally, with the rise in homeownership and the maturation of the housing market, capital gains from other investments become a major source of wealth inequality. Thus, in the third stage, the major forms of savings are financial assets, including stocks, cash deposits, and equities, rather than non-financial assets such as housing and land.

4. Data and measurements

The investigation into household wealth distribution and homeownership expansion was based on two major longitudinal survey datasets (the CHIP and the CFPS), the census data from 2000 and 2010, and the mini-census of 2005. Among all publicly available micro-level datasets, the CHIP dataset is the only one that covers the years prior to 2000, with the years 1988, 1995, 1999, and collected detailed information on housing and wealth conditions. The CHIP 2008 is not strongly representative of all of urban China, because all the cities covered were either provincial capitals or economically important cities. However, including it in the analysis was better than not, due to the severe inadequacy of the data, and a robust check was performed without the data in 2008. The CFPS data series includes the survey years 2010, 2012, 2014, 2016, and 2018. The data used for the description and regressions in this paper were mainly from the CHIP and the CFPS to maintain consistency. The major difference concerning the sample units between the CHIP datasets and the CFPS datasets is that the CHIP only covered 11 provinces in 1995, six provinces in 1999, and 12 provinces in 2002, compared to the 25 provinces covered by the CFPS survey.²

The homeownership rate was calculated by dividing the number of households that possessed full ownership of their housing by the total number of households. The wealth holding unit is the number of households and the measurement of wealth is consistent with existing studies. The most often used concept in the literature is net wealth, which is the sum of all non-human real and financial assets minus debt. Real (or non-financial) assets consist primarily of housing, land, productive fixed assets, and consumer durable goods. Since the housing value in the data set is a self-reported value, some may worry about its accuracy. Kain and Ouigley (1972) have emphasized that as long as the sample size is large, the owners' estimation error can be fully offset. The summarized statistics also indicate that the data are in line with the actual situation. Financial assets include cash, bank deposits, corporate stocks, bonds, and other claims, and insurance savings, which today also include some parts of funded pension assets. Debts comprise the sum of housing mortgages and loans for consumption, investment, or education. We use the net wealth Gini coefficient as an indicator of wealth inequality, which was calculated at both the city level and the provincial level. We can see, from the distribution of household housing assets related to local housing prices, that the difference between households in the same province is much greater than the difference between households in the same city. For instance, in 1995-2012 the average wealth Gini coefficients were 0.462 at the provincial level and 0.417 at the city level. The Gini coefficients of both wealth and income were calculated based on the Lorenz curve definition and realized using STATA coding. Housing prices for 2010-2018 were obtained from the National Bureau of Statistics and compared to the benchmark level in 2010. However, we only used provincial data, due to the inability to obtain specific city data for the regression analyses.

Household socioeconomic factors were included as control variables, including the public employment rate, the self-operated business rate, years of education, etc. The public employment rate was calculated by dividing the number of households that have at least one adult member who was employed by publicly-owned institutions or government agencies by the number of all households. Similarly, the self-operated business rate represents the share of households that have at least one adult member who operates businesses of their own. Years of schooling were calculated by the average of all households' years of education for adult members. The

² Although the number of provinces of the CHIP was small, it still possessed strong representativeness of the whole urban Chinese households owing to the sampling method — the isometric random sampling method sorted by income level. In terms of province representation, Liaoning, Jiangsu, Zhejiang, Shandong, and Guangdong represent the eastern coastal regions; Hebei, Shanxi, Jilin, Anhui, Jiangxi, Henan, Hubei, and Hunan represent internal regions; Sichuan, Guizhou, Yunnan, Shaanxi, and Gansu represent the western regions. Beijing is the representative of four independent municipalities.

³ When calculating ownership in CFPS data, households who possessed partial ownership were also considered owners due to the inability to determine the proportion of part of the property rights and de facto permanent use rights.

⁴ We calculate the Gini coefficients for all provinces each year and use the mean to measure the inequality at the provincial level. Similar methods were also applied at the city level. The yearly data for wealth and income inequality (Gini) at the provincial and city levels are available upon request.

above data were obtained from the National Bureau of Statistics in China.

5. Household wealth accumulation and homeownership dynamics

5.1. Increased homeownership: The housing reform and wealth creation effect

The housing system in urban China experienced profound transformations before it attempted to transition to a neoliberal market. During the early periods, China transformed its housing system from being dominated by private housing into a housing system dominated by public rentals. Massive public housing was built since housing was considered a welfare benefit at the time. According to a 1994 survey, public rental accounted for more than 60% of housing tenure between 1953 and 1968, and more than 70% since 1968 (Huang, 2004). However, the state provision of housing had many problems, such as provision shortages, poor management, and corruption in distribution. The huge amounts of low-rent subsidies placed significant financial burdens on both the government and working units. After several waves of reforms in the 1990s, China entered an era of housing commodification, and the market gradually began to replace the government as the main channel of housing supply. According to the Census of 2000, the average homeownership rate in China reached 87.6% in 2000, with 30% of all self-occupied housing properties previously having been public housing. The rapid expansion of homeownership occurred primarily at the end of the 20th century.

Massive private ownership of housing is one of the crucial engines behind the emergence of the middle class. No matter which group benefited most, we can believe that the distribution of housing resources in this reform was disconnected from income levels. According to a survey conducted in 1996, the relationship between homeownership and income in China's transition was curvilinear rather than linearly positive. The homeownership rate of the middle class (annual income of 10,000–24,999 yuan) was less than 40%, compared to 45.9% of the high-income group (>25,000 yuan) and 50% of the low-income group (<10,000 yuan). Using the same data, Huang and Clark (2014) found that people working in high-ranking work units were less likely to own housing, because they were more likely to access subsidized rental housing, which coincides with Rosen and Ross's (2000) finding that the motivations for purchasing public housing for sale had more to do with increased rents and subsidized purchase prices than with a demand for quality housing. This is because most leased public apartments are generally cramped and poorly maintained, and often do not have independent kitchens or bathroom units.

Based on the *middle-class housing conversion* proposed by Xie Yu or the wealth-creation effect on LMI households as other scholars have presumed, the homeownership rate should experience greater growth in the middle strata or the low- and moderate-income strata of urban households if it was proved to be the converging force in the decline of wealth inequality. We map the evolution of the housing conditions of different income groups and the whole set. In Table 1, we can see that the group with the highest homeownership rate changed from the poorest 25% in 1995 to the upper-middle 25% by 1999, and then the highest 25% by 2002. This may indicate that wealth creation was already moving forward from the bottom to the top income groups. On the one hand, at the very beginning of the public housing acquisition period, when leased housing was cheap and of poor quality, low- and moderate-income households benefited the most from the public wealth conferment. Furthermore, along with the gradual establishment of the market-supplied housing system, the middle and upper classes gradually purchased better quality housing. On the other hand, we observe that the total share of housing wealth was always the highest among the bottom 25% of income groups. Wealthier households had a greater share of other kinds of assets. In the late 1990s, the average income of public employees was lower than that of private-sector employees. Some public employees belong to the low-income group. When the homeownership acquisition benefited from a large number of groups, including some low-income/wealthy groups, the wealth inequality decreased even though high-income households may have benefited more in the process. Therefore, the redistribution of wealth due to homeownership acquisition actually reduced wealth inequality (also see Fig. 1).

5.2. Decline in homeownership: Housing price upsurge and disparity decompositions

As China's urban housing market gradually turned into a commoditized one and established a significant role in supporting China's economy, it also became the preferred investment market due to its huge capital gains. However, capital gains, as observed in skyrocketing housing prices, were not equally distributed among all urban households, but created wealth gaps, not only between owners and non-owners but also among homeowners.

In addition, housing prices were also relevant to the dynamics of migration and urbanization. Due to the unique *hukou* (household registration) system, the Chinese were classified into urban and rural residents. Rural-to-urban migrants, intra-urban migrants, and newly urbanized migrants constituted the major components of a city's population, in addition to local urban residents. In migration behavior, housing prices were both a benefit and a cost, because people not only calculated the potential benefits that came along with urban residence, but also the financial burden of purchasing or renting a house. Population inflows would also increase the demand for housing and drive up housing prices. Thus, housing prices were constantly interacting with both the urbanization rate and the net intercity population inflows or outflows. On the one hand, cities with more job opportunities and better living environments received net inflows of rural and urban migrants. Their housing prices would rise if the housing supply could not meet the growing demand for accommodation. In metro cities such as Beijing and Shanghai, housing prices were so high that the homeownership rate was lower than

⁵ The survey was conducted by a research team comprising Donald Treiman (University of California, Los Angeles), Andrew Walder (Stanford University), and 10 other academics in the People's University in China. see Treiman (1998): life histories and social change in contemporary China.

Table 1Homeownership rate and housing share of wealth by quantile income groups.

Homeownership rate	1995	1999	2002	Housing share of wealth	1995	1999	2002
p0p25	43.3%	48.3%	49.5%	p0p25	51.0%	65.4%	66.2%
p25p50	41.9%	59.8%	62.5%	p25p50	44.2%	65.0%	63.1%
p50p75	41.8%	66.0%	67.7%	p50p75	39.2%	63.6%	59.8%
p75p100	41.2%	64.6%	69.1%	p75p100	40.0%	57.2%	58.8%
Total	42.1%	59.7%	62.2%	Total	42.2%	61.4%	60.7%

in second-tier cities, because huge numbers of labor migrants could not afford ownership but could marginally afford to rent. On the other hand, cities that fell behind in the economic boom suffered from net labor outflows and weak growth. Therefore, because of the interaction between migration and urbanization, housing prices, and homeownership, the household wealth gap was widening, not only between owners and non-owners, but also between economically advanced cities and less developed cities.

The increases in housing prices and the stagnant wage growth hindered the continued rise in the homeownership rate. Depending on the composition of homeowners, the decline was either due to fewer owners within the newly urbanized population (the increase of rural to urban population), or the exit of the original urban owners, or a combination of the decline in both groups. To test which was the stronger driver, we present the increases in both the total urban population and in non-owners in Fig. 2, setting the year 2010 as the baseline. We find that, on average, from 2010 to 2018 more than 50% of the newly urbanized population did not purchase a house (non-owners). The high growth of non-owners among the newly urbanized population indicates that the major growth of non-owners came from the choice of the new urban population, in other words, for different reasons most of them did not (or were unable to) purchase a house. One of the most important reasons was that skyrocketing housing prices exceeded the ability to pay of many new immigrants, decreasing the homeownership rate in immigrant cities.

With the increase of the price-income ratio, housing prices were a strong inhibitor to prevent potential rural migrants from becoming urban citizens. There is a strong possibility that the homeownership decline was due to the difficulty the newly urbanized population experienced to become homeowners. As illustrated in Fig. 3, the price-income ratio reached a peak in 2010, which can explain why homeownership started to decline from 2008 onwards. The newly urbanized residents could hardly afford house prices, leading to lower homeownership rates and wider wealth gaps between the urban rich (owners) and the urban poor (mostly non-owners).

Using consistent CFPS 2010–2018 data, we examined the trends of wealth growth in terms of total net wealth, net housing wealth, and non-housing wealth between owners and non-owners (see Fig. 4). The obvious gap between the "fast-growing" group of owners' total wealth and owners' housing wealth, and the "slow-growing" group of owners' non-housing wealth and non-owners' total wealth reveals that the ownership benefit caused severe inequality. The median level of wealth accumulation obtained through income savings and other kinds of investment returns slowly climbed below 10,000 RMB, while the pure gains from ownership soared to around seven times the former. The graph also indicates that the non-housing wealth level of non-owners was lower than that of owners, which seems to demonstrate the clustering effect of wealth. Wealthier people were often more likely to afford a profitable home than the less affluent groups.

5.3. Relationship between the homeownership rate and wealth inequality

This part describes the regression estimates we conducted to test our hypotheses. Over the past 30 years, the overall trends in wealth inequality and the homeownership rate indicate opposite evolving directions (see Fig. 1). Table 2 provides a summary of the statistics for the main variables.

We applied the linear regression model to capture the potential correlation. Regression model (a) depicts the potential relationship between wealth inequality and the homeownership rate (H_a), and the relationship between wealth inequality and income inequality (H_{c1}). Regression model (b) corresponds to H_{b3} , that is, housing prices may be a moderator in the correlation between wealth inequality and the homeownership rate. β_1 and β_2 describe the main effects and β_3 describes the interaction effect.

$$wealthgini_{it} = \beta_0 + \beta_1 homerate_{it} + \beta_2 lnhprice_{it} + \beta_3 incgini_{it} + X' \beta + u_i + \varepsilon_{it}$$

$$\tag{1}$$

$$wealthgini_{it} = \beta_0 + \beta_1 homerate_{it} + \beta_2 lnhprice_{it} + \beta_3 homerate_{it} * lnhprice_{it} + \beta_4 incgini_{it} + X'\beta + u_i + \varepsilon_{it}$$
(2)

Regression model (1) was the standard that tested the individual significance of three explanatory factors: the homeownership rate, the income Gini coefficient, and the housing price. To control for possible endogeneity issues caused by regional differences, we applied the fixed-effect model with the standard error clustered at the provincial level.

The fixed-effects regression results in Table 3 demonstrate that the homeownership rate is negatively correlated with the wealth Gini coefficient. This negative impact was significant in different time periods, including the reform era (1995–1999) (a1), the post-reform era (1999–2008) (a3), and the entire period as a whole (a5). This verifies the first hypothesis, namely that homeownership expansion is a converging force in wealth distribution (H_a). We interpret the results of regression (a5) to illustrate the long-term trend. Over time, a 1% increase in the homeownership rate would reduce the wealth Gini coefficient by 0.17%. The homeownership rate coefficient in the post-reform era should be interpreted as the continuing significance of housing assets in urban Chinese households' wealth profile. During this period, the trend towards the concentration of wealth distribution might have been induced by the drop in

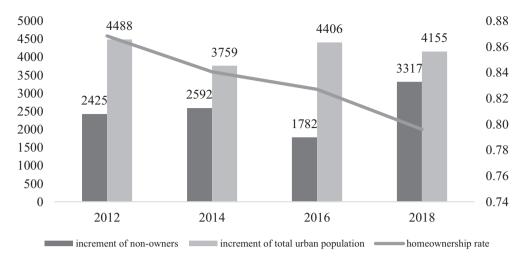


Fig. 2. Comparison between increments of non-owners and total urban population (in 10,000).

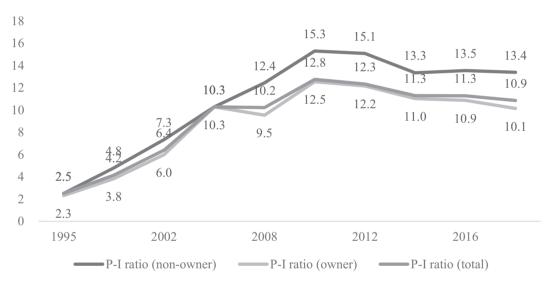


Fig. 3. Housing price-to-income ratio in urban China, 1995–2018. Notes: We also followed the common practice of setting the median housing area at 90 square meters. Data sources: CHIP: 1995, 1999, 2002; CGSS: 2005, 2008; CFPS: 2010, 2012, 2014, 2016, 2018.

the wealth of the bottom and middle groups owing to a drop in the homeownership rate, and the rise of top-class wealth owing to higher returns on housing assets.

In addition, we are able to observe the changing role of income inequality. The positive impact of income distribution was the strongest in the reform period, with a coefficient of 1.55 at 5% significance, while it becomes insignificant in the post-reform period and in the long term. The significance in the reform period rejects the H_0 that wealth inequality was not correlated with income inequality. However, the insignificance in the post-reform period indicates that wealth inequality was mostly dominated by housing assets instead of other assets. This result turned out to be a reinforcement of the concept that endogenous wealth accumulation was not a major source of wealth distribution after urban China transitioned from a redistributive economy to a market economy.

For the presumed effect of asset prices in the post-reform period from 2010 to 2018, we used the 2010 comparable housing prices to represent the housing price level. Housing prices did not demonstrate a significant correlation with wealth inequality alone (a4) until it interacted with the homeownership rate (b). Regression (2) indicated that the negative impact of housing prices on homeownership has an enhanced effect, which supports hypothesis H_{b3} . A 1% increase in housing prices will increase the absolute negative coefficient of homeownership by 0.10. This means that the equalizing force of homeownership will increase with the rise in housing prices. Disparities between owners and non-owners would increase under the effect of capital gains, but this problem would be alleviated by a higher homeownership rate, that is, a smaller wealth gap within the group. Therefore, this result also supports H_{b2} .

During the entire period, socioeconomic factors did not demonstrate a significant impact on wealth distribution. From regression

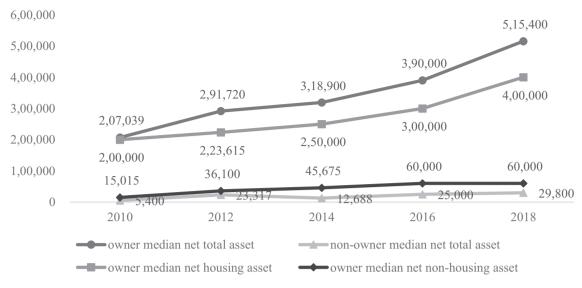


Fig. 4. Trends in wealth levels across owners and non-owners (in RMB Yuan).

Table 2 Summary statistics of variables.

Variable	Indicator	Obs	Mean	Std. Dev	Min	Max
wealthgini	Wealth inequality (Gini)	212	0.52	0.1	0.23	0.77
homeownrate	Homeownership rate	212	0.73	0.24	0	1
hprice	Housing price	125	7322.94	5084.27	3042	34,143
incgini	Income inequality (Gini)	212	0.41	0.13	0.17	0.68
selfbusinessrate	Self-business rate	212	0.15	0.12	0	0.69
publicemployrate	Public employment rate	212	0.18	0.18	0	0.93
avgeduyrs	Education years	212	8.68	1.74	4.46	11.5
avgincpcap	Income per capita	212	28,983.68	70,784.12	2630	664,466
gdpgrow	GDP growth rate	212	0.101	0.029	-0.025	0.174
рор	Population	212	5604.14	2666.80	1251	11,346
sale1percent	Public housing area percent	73	0.12	0.12	0.002	0.513

(a5), we observe a negative influence of the redistributive factor on public-sector employment (-0.16) and a positive influence of the market factor on self-business employment (0.22), both at the 5% significance level. However, no such pattern was observed for any of the partial periods. Therefore, we cannot conclude that market factors have gradually replaced the redistributive factors at the level of individual characteristics. Theoretically, public housing supply to low- and middle-income households can partially offset housing prices' effects on wealth inequality. In the last column of Table 3, the results confirm the theoretical hypothesis and indicate that a higher percentage of public housing supply will significantly reduce wealth inequality. These results provide direct support for policymakers that a public housing policy is not only a policy for housing but also has important redistributive implications. 6

To investigate the potential influence channels of homeownership and housing prices on wealth inequality, we further consistently used the CFPS data (2010–2018) to run regressions with different specifications. Table 4 presents the fixed-effects regression with year controls and indicates that homeownership consistently exerts a negative effect on wealth inequality. However, these impacts mainly exert their influence through the interaction of the effect of housing prices, in other words, after adding housing prices and the interaction with homeownership (*price*home*), homeownership is no longer significant when the interaction term is statistically significant at the 5% or 1% level (columns 2 and 5). We also try to add the square term of homeownership (*homeownership2*) and the interaction with housing prices (*price*home2*) in the regression, and the results echo the conclusion of Kaas et al. (2019) that homeownership and wealth inequality could have a reversed-U-shape relationship and the effects of housing prices could also lead to a conditional U shape in homeownership. These results are interesting and deserve further investigation, especially when compared with countries with diverse homeownership rates. Fig. 5 indicates the changes in wealth inequality for different homeownership groups. During 2010–2018, wealth inequality increased more significantly for the low homeownership group than for the high homeownership group, especially in the years 2014 and 2016 (statistically significant) with fast housing price increases.

⁶ We thank an anonymous reviewer for raising this important point.

Table 3
Results of different regression models (DV: Wealth inequality, Gini).

	(a1)	(a2)	(a3)	(a4)	(b)	(a5)	(a6)
Variables \ Time periods	1995–1999	1999–2008	1995–2008	2010–2018	2010–2018	1995–2018	1999–2010
homeownership	-0.162**	-0.238**	-0.155**	-0.239*	0.549	-0.166**	-0.282***
	(0.0620)	(0.106)	(0.0604)	(0.138)	(0.444)	(0.0741)	(0.0637)
income inequality (gini)	1.552**	-0.0675	0.369	0.0347	0.0511	0.0139	0.391**
	(0.545)	(0.255)	(0.297)	(0.0862)	(0.0961)	(0.0616)	(0.146)
Self-business rate	0.722	0.197	0.291**	0.161	0.147	0.218*	0.0606
	(0.555)	(0.144)	(0.128)	(0.201)	(0.210)	(0.110)	(0.153)
Public employment rate	-0.270**	-0.222	-0.148	-0.0587	-0.0438	-0.161*	-0.0586
	(0.0873)	(0.138)	(0.103)	(0.149)	(0.150)	(0.0872)	(0.111)
Education years	0.0220*	0.00261	0.00423	0.00595	0.00617	0.00654**	-0.0284**
	(0.0116)	(0.0191)	(0.0171)	(0.00781)	(0.00728)	(0.00316)	(0.0102)
Income per capita (log)	-0.0248	0.000388	-0.0200*	0.0180	0.00912	0.0127	0.0325
	(0.0161)	(0.0375)	(0.0107)	(0.0198)	(0.0186)	(0.0140)	(0.0261)
GDP growth rate	0.590	-1.639**	-0.303	0.451	0.443	0.215	-1.041
	(0.566)	(0.756)	(0.520)	(0.330)	(0.325)	(0.260)	(0.693)
Population (log)	-0.0511**	-0.0164	-0.00445	-0.176	-0.245	0.155	-0.0256
	(0.0188)	(0.0150)	(0.0190)	(0.249)	(0.254)	(0.189)	(0.0174)
Housing price (log)				0.0230	0.0979***		
				(0.0137)	(0.0332)		
Homeownership * price					-0.0976**		
					(0.0442)		
Public housing area percent							-0.283**
							(0.120)
Province FE	No	No	No	Yes	Yes	Yes	No
Year FE	Yes	Yes	Yes	Yes	Yes	No	No
Observations	50	50	87	125	125	212	73
R-squared	0.407	0.414	0.243	0.241	0.258	0.219	0.566
Adj. R ²	0.274	0.264	0.166	0.152	0.164	0.188	0.504

Notes: Robust standard errors in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

Table 4
Results of different regression models (DV: Wealth inequality, Gini).

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
homeownership	-0.250*	0.587	-1.305***	-0.338***	0.649	5.913*
	(0.124)	(0.468)	(0.306)	(0.0834)	(0.414)	(3.497)
homeownership2			0.672***			-3.539
			(0.219)			(2.179)
housing price		0.0945**	0.0169		0.0845**	0.294**
		(0.0407)	(0.0148)		(0.0355)	(0.137)
price*home		-0.100*			-0.115***	-0.694**
		(0.0503)			(0.0437)	(0.332)
price*home2						0.397*
						(0.226)
income gini				0.247***	0.225**	0.228***
				(0.0926)	(0.0886)	(0.0873)
Control	No	No	No	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	125	125	125	125	125	125
Number of province	25	25	25	25	25	25
R-squared	0.184	0.215	0.223	0.294	0.323	0.333

Notes: Robust standard errors in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

5.4. Robustness check

To check the robustness of the results, in Table 5, we divided families into different homeownership groups (low and high). It is obvious that housing price growth will increase wealth inequality significantly for the low homeownership group but not for the high homeownership group. Furthermore, a higher homeownership rate will also alleviate the impact on increased wealth inequality, even for the low homeownership group. It may also be argued that the impact on wealth inequality may come from income inequality.

Table 6 indicates that when using income inequality as the dependent variable, most coefficients of the independent variables are not significant or have opposite signs. We can thus confirm that the impact of homeownership on wealth inequality is not because of income but is the result of wealth redistribution.

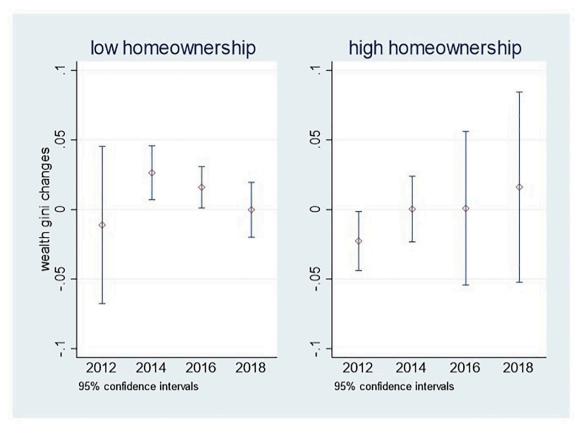


Fig. 5. The changes in wealth inequality for different homeownership groups.

Table 5Robustness check: the impacts for different groups (DV: wealth Gini).

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Low homeownership			High Homeownership		
homeownership	-0.374***	1.229**	4.924**	-0.455	-1.882	-8.308
	(0.126)	(0.544)	(2.357)	(0.315)	(2.942)	(12.87)
homeownership2			-1.452*			3.641
			(0.867)			(7.096)
housing price		0.130***	0.277***		-0.166	-0.146
		(0.0456)	(0.0976)		(0.370)	(0.397)
price*home		-0.174***	-0.359***		0.189	0.165
		(0.0540)	(0.129)		(0.408)	(0.440)
income gini	0.182**	0.209**	0.227**	0.438***	0.455**	0.463**
	(0.0910)	(0.0839)	(0.0919)	(0.147)	(0.178)	(0.184)
Control	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	No	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	62	62	62	63	63	63
Number of province	21	21	21	22	22	22
R-squared	0.410	0.476	0.484	0.264	0.265	0.267

Notes: Robust standard errors in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

6. Conclusions and discussion

Looking at the evolution of aggregate private wealth in urban China, we observed a U-shaped curve for the level of wealth inequality, which was exactly the opposite to the level curve for income inequality. The regression results indicate that income distribution still exerts a positive impact on wealth distribution. The reason for this trend reversal is that, due to the overwhelming impact of the exogenous factor, the expansion of the homeownership rate is accompanied by a huge rise in household wealth. The wealth enhancement among low- and moderate-income households and the equalizing force of the middle-class housing expansion

Table 6
Robustness check: the impacts on income inequality (DV: income Gini).

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
homeownership	-0.0372	-0.780*	2.167	-0.0106	-0.163	-1.048
	(0.0922)	(0.468)	(1.760)	(0.0583)	(0.445)	(5.924)
homeownership2			-1.048*			1.647
			(0.604)			(3.559)
housing price		-0.0766*	0.0442		-0.0235	-0.0499
		(0.0452)	(0.0827)		(0.0377)	(0.239)
price*owner		0.0894	-0.0668		0.0181	0.311
		(0.0555)	(0.105)		(0.0488)	(0.568)
price*owner2						-0.322
						(0.346)
Control	No	No	No	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	125	125	125	125	125	125
Number of province	25	25	25	25	25	25
R-squared	0.265	0.287	0.310	0.337	0.339	0.378

Notes: Robust standard errors in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

undermined the concentrating force of income inequality. By presenting the differences between the entire set of urban households and the different income groups, we confirm that the rise in homeownership was initially driven by the LMI group and later by the middle strata. We also found that the share of housing assets as a percentage of total household wealth increased due to the rise in homeownership during the reform era, and the share remained relatively stable at a very high level due to an increase in housing prices rather than in the homeownership rate. This corresponds to existing findings and supports our hypothesis on the moderating effect of housing prices on the homeownership rate.

From the regression analysis of the provincial-level panel data, we can confirm that the homeownership rate exerted a negative influence on the level of wealth inequality in China. The increase in the homeownership rate was an equalizing force on wealth distribution during the reform era, driven by the housing acquisition of LMI households and the conversion of middle-class housing. During this period, the forces were exogenous and dominated by a redistributive logic. In the post-reform era, the fact that the decline in the homeownership rate led to the concentration of wealth distribution was driven by the widening wealth gap between owners and non-owners, which was an endogenous market-driving force. When homeownership is mainly determined by the ability to pay in the market, the wealth position of the low and middle strata in the post-reform era was crippled not only by the loss of housing ownership, but also by the reinforcing effect of the increase in housing prices. Furthermore, the relationship between homeownership and wealth inequality was identified in the institutional context of China as a transitional economy, and the market transition theory was verified from both exogenous and endogenous perspectives.

Regarding the different periods, the changes in wealth inequality and homeownership inequality exerted different characteristics over three distinct stages. Before 1998, wealth inequality decreased with the increase of homeownership against the background of housing reform with housing acquisition regardless of income constraints. After the housing reform of 1998, housing access became based more on market forces. During the decade from 1999 to 2008, the price-income ratio was not very high, and many ordinary households could still afford to purchase houses. Thus, at the obvious turning point of wealth inequality in 2008, we find that it was due to the mediating effect of the homeownership rate caused by the price-income ratio. That is, from 1995 to 1998, the reduced wealth inequality was because of housing acquisition, regardless of income constraints, and the housing reform. From 1999 to 2008, housing prices were still relatively affordable and homeownership continued to increase, so that the broad population benefited from the process of housing wealth accumulation. However, after 2008, the price-income ratio reached such a high level that most immigrants could not afford homeownership. Therefore, during this period, homeownership started to decrease and wealth inequality increased rapidly.

Our findings have important policy implications. When the government's housing distribution is uncorrelated with income and the LMI group can benefit from this process, homeownership will reduce wealth inequality; after the housing marketization, if the LMI group could not afford to access homeownership, wealth inequality will increase due to the increase in housing prices. Since housing prices often increase rapidly when the economic growth rate remains at a high level, high homeownership in China is quite helpful, where the beneficiaries represent a large and broad population group, including low-income, middle-income, and high-income households. Homeownership should receive more attention and can be used as a policy tool for wealth distribution in transitioning countries.

Although the longitudinal data covering approximately three decades could help us understand wealth accumulation and distribution during the transition of urban China, longer observation periods, more detailed data clustered at the city level, and more measurements of wealth distribution other than self-reported surveys, such as tax data, could facilitate further and more precise research on this topic. Since various cities have adopted different pilot housing reforms at different times, for the next step, we could apply the difference-in-difference (DID) estimation to investigate the impact of housing reform on wealth inequality at the city level. It is suggested that future research should conduct an international comparison of the wealth accumulation stages and their causes to identify the potential differences and similarities between China's transition and advanced economies. This paper could be regarded as

a probing effort to understand the long-term dynamics of the wealth structure and wealth inequality of China against the international context

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