

CHINA'S HOUSING REFORM AND OUTCOMES

Edited by
Joyce Yanyun Man



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 LINCOLN INSTITUTE
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Foreword

Many observers and analysts are familiar with the remarkable growth of China's economy, its market-oriented reforms, and the large investments from both domestic and foreign sources that have taken place in the past 30 years. Less known, however, is how these economic changes have profoundly affected China's housing market. For example, China now represents the world's largest construction market in terms of built space, adding over 2 billion square meters of floor area annually—nearly half the global total. About half of China's annual constructed space is residential, which is divided about evenly between urban and rural housing.

This volume provides background and explanations about the causes and consequences of China's boom in residential construction, and it reviews how some well-established and ongoing trends are likely to impact China's housing sector in coming years. The expected demographic shifts and growth in urban populations suggest that the high rate of change in the housing sector will continue.

Since China's population has increased by about a third in the last three decades—from 1.0 billion in 1982 to an estimated 1.33 billion today—some of the growth in housing construction obviously results from this population growth. However, the more significant factor driving residential construction has been the dramatic rise in housing standards in terms of residential space per capita. From 1978 to 2007, residential space per capita quadrupled in urban areas (from 6.7 square meters to 28.3 square meters), and tripled in rural areas (from 9.4 square meters to about 29 square meters). China's per capita floor area now exceeds the averages in Japan and Europe, but this is unlikely to expand much beyond current levels.

Two major housing reforms in the past three decades have transformed China's housing market. The 1988 reforms fostered the privatization of housing, and much of the stock of rental housing was sold to employees of public enterprises at low prices. The 1998 reforms ended enterprise-supplied housing and moved to comprehensive market-based housing provision.

In recent years housing prices have risen much faster than incomes, making housing unaffordable for many. The government has taken steps to moderate housing prices by raising mortgage interest rates, increasing down payment requirements, taxing short-term capital gains from real estate, and constraining household purchases of multiple dwellings. The rapid rise in housing prices indicates that some recent housing demand has been speculative, resulting in urban vacancy rates that may be well above those required for a healthy housing market. However, documenting this is difficult because little data on urban vacancy rates are available.

Looking ahead, at least two major challenges face China's housing market. The first is the continuing high rates of migration from rural to urban areas; it is projected that 15 million migrants annually will move from the countryside to the cities. This flow will maintain demand for urban housing in the next decade or two and will moderate demand for rural housing. The second challenge is the aging of the population; the share of China's population over 65—7.7 percent in 2009—is projected to rise to 11.8 percent in 2020 and 24 percent in 2050. Currently, 70 percent of the elderly live in rural areas, but that share will decline as urbanization increases. The impact of aging on housing markets is complex, leading to both a rise in the demand for specialized housing for the elderly, and a likely decrease in household size as the surviving elderly add to the number of single person households.

These challenges and others are explored in this volume, which contains essays by scholars who specialize in China's housing market. Many of the chapters are empirical, drawing on household surveys and public data related to housing. The volume makes clear that the dynamism of the housing sector in China will continue in coming decades, while posing many policy challenges to public authorities at all levels of government.

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Housing Policy Reform in China

Housing Policy and Housing Markets: Trends, Patterns, and Affordability

JOYCE YANYUN MAN, SIQI ZHENG, AND RONGRONG REN

1



Since 1978, when the economic reform took place, China's housing policy has experienced dramatic changes. The privatization of public housing and reliance on the market for housing supply in the late 1990s, as opposed to the socialistic housing allocation system, have led to profound changes in housing distribution and consumption in urban China. This has greatly affected social and economic life. The housing reform in 1998 totally abandoned the old system of linking housing distribution with employment units. The housing sector has become a significant segment of economic activity and has provided a sizable tax base for the Chinese government. The housing conditions of urban residents, whose floor area per capita increased from 6.7 square meters in 1978 to 28.3 square meters in 2007, have greatly improved (Zheng, Man, and Ren 2009). Despite the success of the housing reform, the increase in prices and the consequent affordability problem in many cities have posed enormous challenges for the Chinese government, at both the central and local levels. In order to address issues related to housing markets and housing policies in China, this chapter provides an overview of the evolution of China's urban housing system and land market developments.

Evolution of the Urban Housing System

China's urban housing policies have experienced drastic changes since 1949. Prior to 1978, the Chinese government carried out a policy of nationalizing private housing and allocating public housing through work units under the central planning system. Most urban land was state owned, and governments monopolized all land transactions. Chinese government directly controlled the production, financing, allocation, operation, and pricing of urban housing through the work units of employees. Housing was allocated largely based on seniority, merits, and needs, and employees were required to pay heavily subsidized rent that was so low in most cases

that it was not adequate to cover maintenance costs, let alone the construction of the housing (Wang and Murie 1996; Zhou and Logan 1996; Wu 1996). Home ownership and private property rights had virtually vanished prior to the economic reform that began in 1978. The consequences of such socialist housing policies were low investment in the housing sector, a chronic shortage of urban housing, substandard quality of housing, and poor living conditions for most urban residents.

Since 1978, when the transition from the centrally planned economy to a market-based system began, the housing reform has been at the top of the Chinese central government's agenda. Initially, the government restored private property rights by returning confiscated or nationalized private housing to the previous owners. Then it started to encourage urban residents to share housing costs by gradually increasing the rent they paid for public housing.

Since the 1980s the housing reform has gone through three stages. Prior to 1993, the initial stage of the reform was on a trial basis, with many experiments and pilot projects in different areas and regions. In 1988, the Chinese government introduced a nationwide reform starting the commercialization and privatization of urban public housing to encourage home ownership. A large amount of public rental housing was sold to employees in work units or *danwei* at very low prices.

The second stage of housing reform between 1993 and 1997 focused on the restructuring of housing construction, and on finance, management, and distribution systems. The work unit or *danwei* was still allowed to participate in housing construction and distribution to their employees. At the same time, the Chinese government encouraged the development of housing markets for high income groups, and subsidized the supply of the commercial housing for the middle- and low-income families. The Chinese government also allowed the private sector to participate in housing construction and development. As a result, the nature of housing was transformed from public goods and services, as a part of the social welfare package enjoyed by employed urban residents, to commodities that were privately owned and largely provided by the private sector, with rights to be traded in the market.

Starting in 1998, the third stage of the housing reform terminated welfare-based housing allocation and established a market-based system of housing provision. The State Council Document No. 23, issued in 1998, finally terminated direct public housing distribution to workers, the commonly known *danwei* housing system, and introduced cash subsidies for housing to newcomers entering the urban workforce. Since then, the direct distribution of housing through the work-unit system was abandoned, and urban residents relied upon the market for housing (Wang 2000; Wang and Murie 2000). The government also provided subsidized housing or public rental housing to selected low- and middle-income families and relied on the market-oriented commercial housing to meet the needs of higher income groups with access to mortgage financing. As a result, a vigorous urban housing market developed. Employers were allowed to offer housing subsidies to their new employees but could not involve themselves directly in housing construction, distribution, or management.

Since 2005, with urban housing prices skyrocketing, housing affordability has become an issue. Chinese governments have been called upon to increase the provision of affordable housing to middle- and low-income households. They have also attempted to stabilize urban housing prices, discourage speculative behavior of

home buyers, and reduce the excessive and bad lending practices of state-owned banks and the possible financial risks associated with the housing sectors.

Housing Market Development Trends

The development of China's housing markets was accompanied by rapid economic growth during the period between 1999 and 2010, when both the gross domestic product (GDP) and urban household disposable income experienced an annual growth rate of about 10 percent on average. The rapid urbanization, from about 20 percent of the total population living in urban areas in the early 1980s to nearly 45 percent in 2007, was also a driving force behind the fast growth of housing markets in urban areas. In this section, the trends of housing market development with respect to housing supply, housing transactions, and housing prices are discussed; due to data limitations, the discussion focuses on new residential housing markets instead of housing stock.

Land Markets and Land Supply

Development of the housing market in China in the past decade has been fueled by the drastic increase in land supply by central and subnational governments. The central government is determined to stimulate economic growth by developing the real estate market and construction sectors. More land has been provided for the construction of residential and commercial property; home ownership is encouraged as a national strategy for economic growth; and the Chinese government has begun to welcome and facilitate the development of a middle class under Deng Xiaoping's slogan "Getting rich is glorious."

In addition, the big fiscal gap between the expenditure assignment and revenue assignment of most local governments after the 1994 tax reform has forced local governments to seek other revenue sources. In the late 1990s local governments started to collect fees from land leasing, commonly known as land transfer fees, to finance public goods and services, as mandated by the central government.

In anticipation of great profits in the housing sector, a growing number of companies, both state and privately owned, have been entering the real estate market. The reorientation of China's land policy and subsequently booming land markets have contributed to the breathtaking growth of the real estate market. According to the *China Land and Resources Almanac* (2008), the quantity of land transferred for urban use increased at an average annual rate of 22.8 percent during the period from 1999 to 2007. Not surprisingly, the fees collected from land leasing by local governments also grew, at an annual rate of 31.29 percent on average during this period (Man 2010). Investment in land development experienced double-digit growth every year except 2004 between 2000 and 2007. The increased supply of land led to the rapid growth of the housing supply.

Housing Supply

During the period from 1999 to 2007, investment in real estate development increased by 21.5 percent annually, on average, while investment in residential housing

development increased by 22.9 percent annually. The floor area of new construction has also increased significantly. For example, in 1999, there was only 188 million square meters of newly built floor area. Since then the number has increased every year, amounting to 788 million square meters in 2007, an increase of 320 percent (*China Statistical Yearbook 2008*).

Housing Sales and Prices

The boom in land supply and real estate investment and the consequent increase in the floor area of new construction demonstrate supply-side forces and policies. But the demand for housing is reflected in the housing transactions and the quantity of housing consumption. The total square meters of sold housing space increased from 130 million in 1999 to 701 million in 2007, an increase of 439 percent, indicating a strong demand for housing and the rapid development of a real estate market.

Although the total value of housing transactions increased significantly during the period between 1999 and 2007, the housing price per square meter did not experience a similar increase between 1999 and 2004. Starting in 2004, however, it enjoyed a double-digit increase, with a growth rate of 18.7 percent.

Patterns of Urban Housing Consumption

The National Bureau of Statistics of China (NBS) conducted the Large-Sample Urban Household Surveys in 2007 and 2010, each of which covered more than 600 cities. The data set from the survey is unique because it reveals the condition of all housing stocks in China instead of only new construction. For 2010, we studied 265 prefecture-level cities, and analyzed various housing consumption characteristics, including dwelling size, property type and tenure structure, owner-occupancy rate, and housing value. However, the survey covered only formal housing in urban areas; informal housing, such as temporary dwellings, villages in cities, and construction site shelters that are often occupied by migrant workers and low-income people, were not included. Interpretation of the findings based on the survey needs to be put within this context.

Home Ownership Rate

Home ownership rate is an important measure of the condition of the housing market. We follow the international standard by defining the home ownership rate as the ratio of owner-occupied housing units to total housing units. Based on the Large-Sample Urban Household Survey data, we found that the owner-occupied home ownership rate reached 82.3 percent in 2007 and rose to 84.3 percent in 2010. As table 1.1 shows, this figure varied widely across cities. Among the 265 prefecture-level cities in our sample, the owner-occupied home ownership rates ranged from 34.8 percent to 97.8 percent. But a majority of the sample cities (about 69.1 percent) had an owner-occupied home ownership rate exceeding the national level of 84.3 percent.

Table 1.1 reveals that the average rate of owner-occupied housing for the four largest municipalities in China was 77.1 percent, lower than the provincial capital cities (79.9 percent) and the prefecture-level cities (86.4 percent). The rate of

TABLE 1.1

Owner-Occupied Home Ownership Rate by City Type and Region, 2010

Regions	Owner-Occupied Rate (%)	Region	Owner-Occupied Rate (%)
Municipalities	77.1	East	81.6
Capital cities	79.9	West	80.5
Prefecture-level cities	86.4	Central	85.0
		Northeast	85.7
National average	84.3		

Source: Calculated by authors based upon National Bureau of Statistics of China, Large-Sample Urban Household Survey, 2010.

TABLE 1.2

Owner-Occupied Home Ownership Rate by Income Group in 2007 and 2010

Income Group	Owner-Occupied Home Ownership Rate (%)		Average Floor Area (square meters)
	2007	2010	2007
Lowest 10%	72.9	79.3	67.8
2nd 10%	77.6	80.3	72.2
3rd 20%	80.5	81.2	77.5
4th 20%	83.5	83.7	83.6
5th 20%	86.0	83.6	89.6
6th 10%	86.2	85.5	96.3
Highest 10%	87.4	88.5	107.3
National average	82.3	84.3	84.5

Source: Calculated by authors based upon National Bureau of Statistics of China, Large-Sample Urban Household Survey, 2007 and 2010.

owner-occupied home ownership was lower in the east and northeast regions than in the west and central regions. It may be that housing costs in the big cities and along the east coast affect the owner-occupied ownership rate in the respective areas.

It is not surprising that, as in many other countries, owner-occupied home ownership in China is highly correlated with household income. Table 1.2 reveals that among the seven income groups defined by China's National Bureau of Statistics, the rate of owner-occupied home ownership for the lowest-income group was 79.3 percent, while the highest-income group had an 88.5 percent rate, about 9.2 percentage points higher. The middle-income group had an 84.5 percent rate, about 0.2 percentage points higher than the national average. (By comparison, the American home ownership rate, according to the U.S. Census Bureau in 2000, was 66.2 percent.) This suggests that the Chinese housing reform that started in 1980 has resulted in a higher owner-occupied home ownership rate.

Quantity of Housing Consumption

In addition to the home ownership rate, the quality and quantity of housing consumption can reflect the condition of the housing market. According to the 2007 and the 2010 surveys, the average floor area of a dwelling is 84.5 square meters per household in 2007 and 91.9 square meters per household in 2010, equivalent to 63.4 and 68.9 square meters of usable living floor area per household respectively. Based on an average family size of 2.98 people per household in 2007, it can be calculated that the average floor area and the usable floor area per capita is 28.3 square meters and 21.3 square meters, respectively. This is consistent with the report of the *China Statistical Yearbook* that the per capita residential floor area was 26.1 and 27.1 square meters in 2005 and 2006, respectively. But by 2010, the per capita average floor area of a dwelling had reached 31.7 square meters, up by 3.4 square meters within three years, suggesting a rapid increase in housing consumption by city dwellers in China.

Table 1.2 shows that in 2007 the lowest-income group occupied 67.8 square meters of floor area per household unit, on average, but the highest-income group of households consumed about 107.3 square meters per unit, on average, indicating a strong correlation between household income and the quantity of housing consumption.

The housing consumption of the lowest-income group, which had 67.8 square meters of floor area, or 50.9 square meters of usable living floor area, exceeds the consumption of the low- and middle-income groups in some countries such as Singapore. This indicates that the housing reform of the past 30 years has successfully eased the chronic problem of overcrowding in the formal housing market in Chinese urban areas. It demonstrates the effectiveness of the market-based approach, as compared with the central planning system, in increasing housing production and housing services to urban residents in China. But due to the data limitations, it does not reflect housing consumption and conditions in the informal markets for migrant workers and the mobile low-income population.

Housing Tenure Structure

Table 1.3 reports the property type and tenure structure of the housing stock, according to the 2010 Large-Sample Urban Household Survey. Market-oriented commercially provided commodity houses and rental houses account for 38.1 percent of total housing stock. Privatized state-owned houses account for about 28.8 percent of the total housing stock. Affordable housing subsidized by the government and state-owned public rental housing account for 3.4 percent and 5.8 percent, respectively, indicating inadequate government support for low-income households in the area of housing consumption.

Housing Market Value

The 2007 and the 2010 household surveys report the self-estimated housing value of each household. Based on those data, we calculated the estimated mean market value of all types of residential housing to be 445,000 yuan (US\$65,000; see table 1.4). Calculated by mean floor area, the estimated value is 4,844 yuan per square meter. The housing market value varies by region and jurisdiction. Not surprisingly, the

TABLE 1.3
Property Type and Tenure Structure in 2010

Marketization	Market-Oriented Housing		Subsidized Housing				Other
	Own	Rent	Own			Rent	
Tenure Structure	Commercial House	Rental of Private House	Original Private House	Private House Obtained from Housing Reform	Economical and Comfortable Housing	Rental of Publicly Funded House	
Share of total housing stock (%)	31.7	6.5	20.5	28.8	3.4	5.8	3.4
Total (%)	38.1		58.4			3.4	

Source: Calculated by authors based upon National Bureau of Statistics of China, Large-Sample Urban Household Survey, 2010.

TABLE 1.4
Housing Value by City Type and Region in 2010

Regions	Housing Value (10,000 yuan)	Region	Housing Value (10,000 yuan)
Municipalities	85.90	East	69.20
Capital cities	43.70	West	25.50
Prefecture-level cities	28.00	Central	26.70
		Northeast	21.80
National average	44.5		

Source: Calculated by authors based upon National Bureau of Statistics of China, Large-Sample Urban Household Survey, 2010.

four largest municipalities have an average of 859,000 yuan (US\$126,324) estimated market value, followed by capital cities of 437,000 yuan (US\$64,265) and prefecture-level cities of 280,000 yuan (US\$41,176). But the estimated housing market value for the east region is more than twice that for the western, central and northeast regions, posing political challenges for assisting the poor in the big urban areas and east regions with their basic housing consumption.

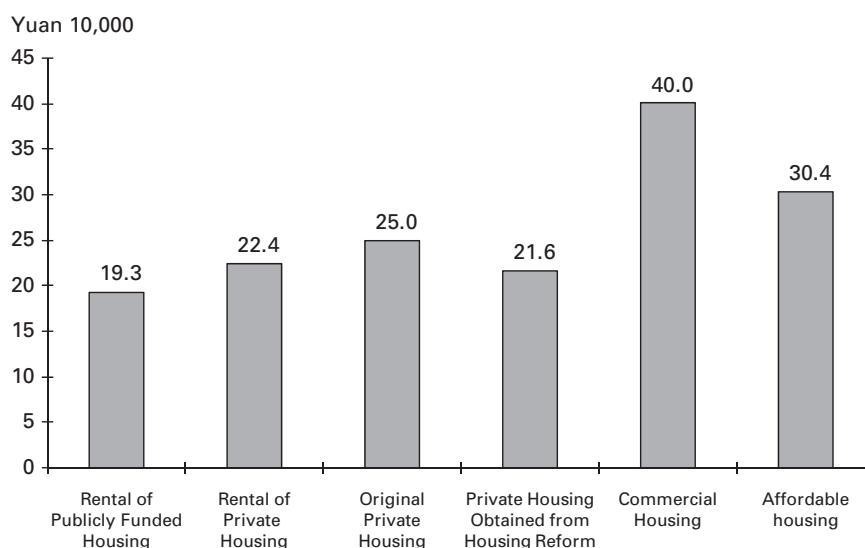
In addition to the regional disparities in housing value, there also exist large variations in the market values of residential housing among different income groups. Table 1.5 reveals that the higher-income group, the higher estimated housing value, demonstrating a strong positive correlation between income and housing consumption in urban China. The highest 10 percent income group has a market value of 644,000 yuan (US\$95,000) on average, about 130 percent higher than the national average of

TABLE 1.5
Housing Value by Income Group in 2007

Income Group	Market Value of Residential Housing (10,000 yuan)
Lowest 10%	13.0
2nd 10%	15.0
3rd 20%	18.6
4th 20%	22.7
5th 20%	32.1
6th 10%	41.4
Highest 10%	64.4
National average	28.1

Source: Calculated by authors based upon National Bureau of Statistics of China, Large-Sample Urban Household Survey, 2007.

FIGURE 1.1
Housing Values by Housing Type



Source: National Bureau of Statistics of China, Large-Sample Urban Household Survey, 2007 and 2010.

281,000 yuan (US\$41,000). There is about a 400 percent difference in the market value of the housing of the richest and poorest 10 percent of urban households. This finding suggests that the wealth disparity among Chinese urban residents is alarmingly noticeable and problematic, and it may well be a side effect of the otherwise successful urban housing reform and the consequent rapid increase in housing prices in the past 10 years.

Housing value also varies by property type and housing tenure. The most expensive housing is commercial housing, which has an average price of 584,000

yuan (US \$85,882), followed by affordable housing (466,000 yuan or US \$68,529) and publicly funded rental housing (396,000 yuan or US\$58,236). The price differences may well reflect the variations in housing characteristics such as building age, floor size, quality, and other attributes, as well as neighborhood characteristics (e.g., whether a community is gated and what services are available) and market demand (see figure 1.1).

Housing Affordability Among Chinese Cities

In the past few years, most Chinese cities have experienced a rise of housing prices to various degrees, which raises the problem of housing affordability as a major policy concern. Based on the Large-Sample Urban Household Survey in 2010, we employed the indicators of the housing price-to-income ratio (PIR) and the Housing Affordability Index (HAI) to evaluate housing affordability in 265 prefecture-level cities.

Housing Price-to-Income Ratio

The housing price-to-income ratio is the basic affordability measure for housing in a given area. It is generally the ratio of the median house price to the median family income. In the Global Urban Observatory Databases of UN-HABITAT (Flood 2001), PIR is one of the urban indicators. UN-HABITAT regards ratios of 3 to 5 as normal or satisfactory.

Demographia (2009) conducts an annual housing affordability survey that covers more than 200 markets in Australia, Canada, Ireland, New Zealand, the United Kingdom, and the United States. PIR is an important indicator that is commonly used to evaluate housing affordability across cities or countries. Housing affordability is rated in four categories based on the value of PIR: If PIR is equal to or greater than 5.1, the rating is “Severely Unaffordable”; if PIR ranges from 4.1 to 5.0, the rating is “Seriously Unaffordable”; if PIR ranges from 3.1 to 4.0, the rating is “Moderately Unaffordable”; and if PIR is equal to or below 3.0, the rating is “Affordable.”

Table 1.6 shows Demographia’s survey results for the third quarter of 2008. Among 265 cities surveyed, the highest value of PIR is 9.6, while the lowest is 1.8. Housing was rated as Severely Unaffordable in 64 cities. The PIR for the United States, from a sample of 175 cities surveyed, is 3.2, falling in the category of Affordable; only 22 percent of the surveyed cities are rated Seriously Unaffordable or Severely Unaffordable.

Based on the 2010 Large-Sample Urban Household Survey, we calculated PIR for China as a whole and for each of 265 prefecture-level cities in China. The results indicate that the median price-to-income ratio (PIR) nationwide in 2010 was 7.07, and the mean PIR for all the cities in China was 8.79. Both figures go beyond the normal or satisfactory level defined by UN-HABITAT. They fall in the category of Severely Unaffordable.

By studying the price-to-income ratio for 265 prefecture cities, we find that in 2007 the median PIR is 5.21, and the average PIR for the sample cities is 5.54. Among 265 prefecture-level cities, only 10 percent are affordable, with PIR below 3.0. Nearly 52 percent of all the prefecture-level cities in China are suffering from a Severely Unaffordable problem, and about 21 percent are Seriously Unaffordable. As table 1.6 shows, the situation in 2010 worsened. The number of cities that have

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