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China's affordable housing dilemma

When outsiders and many urban Chinese look at China's housing performance since economic reforms began in the early 1980s, they see mixed results.

China's cities lack conventional slums and informal squatter areas associated with most developing cities, a substantial achievement.¹

Although considerable substandard housing does exist (typically decaying walk-up apartment blocks), urban homelessness is rare. Yet housing affordability, particularly for the young, in major cities is a pressing and potentially destabilizing societal issue.

For example housing prices in 2007 rose between 40 and 50 per cent in Shanghai and in 2009 urban housing prices rose 9.5 per cent, albeit much faster in the largest cities.

Two groups have been most adversely affected by dramatic housing price rises.



¹ UN-Habitat estimated that 31% of Chinese urban housing was substandard in 2007. Such sub-standard housing in China can be divided into two main classes: (i) Aging walk-up state constructed housing from the cultural revolution (1966-1976) period, and older, and (ii) "farmer housing" (rural collective) which is primarily peri-urban in location, but also includes rural collective enclaves that have been enveloped, but maintained their rural collective status in many large cities.

1. Younger people, including high-consumer-expectation post-secondary graduates who find it difficult to access housing and so-called “ant tribe”,² low-income educated young people who have come to large cities to pursue their dreams but are temporarily forced to live in small spaces often on the periphery or even in unconventional settings such as parking garages, and

2. Lower-income migrants, who cannot obtain municipality-delivered conventional housing because of hukou (local registration) status, despite liberalization in most cities. These migrants are usually unable to use rural land for collateral (with exceptions, such as ongoing reforms in Chongqing) and have limited access to mortgage finance.

Lag impacts of housing reform and market transition

China’s current urban housing environment essentially results from lag-impacts from the early 1990s urban land and housing markets reforms that were implemented over a relatively short-period (1990-1994). (see Figure 1)

Older demographic groups (currently 40 plus) received windfalls from the new policies. They could purchase state-owned housing (e.g., work unit housing) at prices far below market or newly constructed housing at subsidized prices.³

At the same time, the social housing apparatus was essentially eliminated, leaving a leaner social housing delivery infrastructure than is typically found in market economies.

At the beginning of the millennium, rapid urban population growth, local government (municipalities, urban districts) dependence on land sales (lease) income,⁴ rising labor and construction material prices drove urban housing prices higher at alarming rates, especially in the largest metropolitan areas.

Latecomers, such as young households, and migrants faced major affordability problems, with wide social implications. For instance, in Beijing it is said that an apartment is a prerequisite to marriage.

However, housing prices drop considerably as one moves outwards,⁵ In northwest Beijing along the Changping subway line, many young households find themselves facing long commutes by car, bus, or (in lucky cases) rapid transit and living in peripheral communities underserved in terms of both private and public services such as supermarkets and middle schools.

² Reuters “China’s Ant Tribe Poses Policy Challenges for Beijing, February 18, 2011. The “ant” population is estimated at one million, 100,000 live in Beijing, mainly educated young people.

³ Between 1979 and 1981, housing was sold at construction price.

⁴ Estimates vary widely, but Lincoln Institute of Land Policy indicates that 51% of locally derived Municipal government fiscal income in China is from land lease sales (generally 70 years for residential, 40 for commercial).

⁵ A situation similar to that in the United States before the housing market collapse of 2008 whereby buyers would “drive until they qualified”, i.e., drive out from the center of the city until they found a property at a price low enough for them to qualify for a mortgage.

Figure I : Trajectory of housing policies: reform period

1970s	1980s	1990s
1979 - Housing Reforms Begin	1982 - 85 - Experiments with the Subsidized Sale of New Housing	1990 - Resolution Housing Reform
1979 - 81 - Experiments with the Sale of New Housing to Urban Residents at Construction Cost	1986 - 88 - Experiments with Comprehensive Housing	1991 - Housing Provident Fund in Guangzhou
	1988 - National Housing Reform Plan	1994 - Anju Projects
	1988 - Ten - Year Reform Strategy Implemented	1994 - State Council's Reform Decision
		1995 - Housing Provident Fund Nationwide
		1998 - Jingji Shiyong Fang Projects
		1998 - Monetization of Housing Subsidies

Source: The Authors

Current dilemma's roots

Prior to 1979, “work units” provided housing to China’s urban workers. Each person was allocated space usually near the workplace according to seniority and connections. These units, however were usually very small, of low quality construction and poorly managed.

The most intense period of housing reform was from 1988-1994, culminating in State Council Housing Reform. The overall objective was to rationalize housing delivery utilizing market mechanisms. Public housing rents were raised and government and state-enterprise owned housing sold to occupants.

The 1994 State Council (equivalent to the Chinese Cabinet) reform dramatically changed the housing-delivery framework.

Urban property rights were established with 70 year leases. Land could be leased directly from local governments (usually by developers) and individual purchasers could resell units in secondary markets.

Commercial banks were encouraged to grant housing mortgages – a system that now performs as efficiently as in Western countries, although higher down payments of about 25 per cent are required. In addition, unsold public housing could be sold to tenants at 50% of market value.

Most importantly, this new framework propelled the rapid rise of a domestic and foreign private property developer industry, including Hong Kong developers.

In retrospect, perhaps an over-reaction to the need for reform, the Central government's public housing delivery function was essentially dismantled.

The private sector (including state owned property developers, who remain a major force in city building in China) responded by building massive amounts of high-rise residential housing.



Typical Post 1994 High-Rise Housing in China (Chongqing)
Source: The Authors

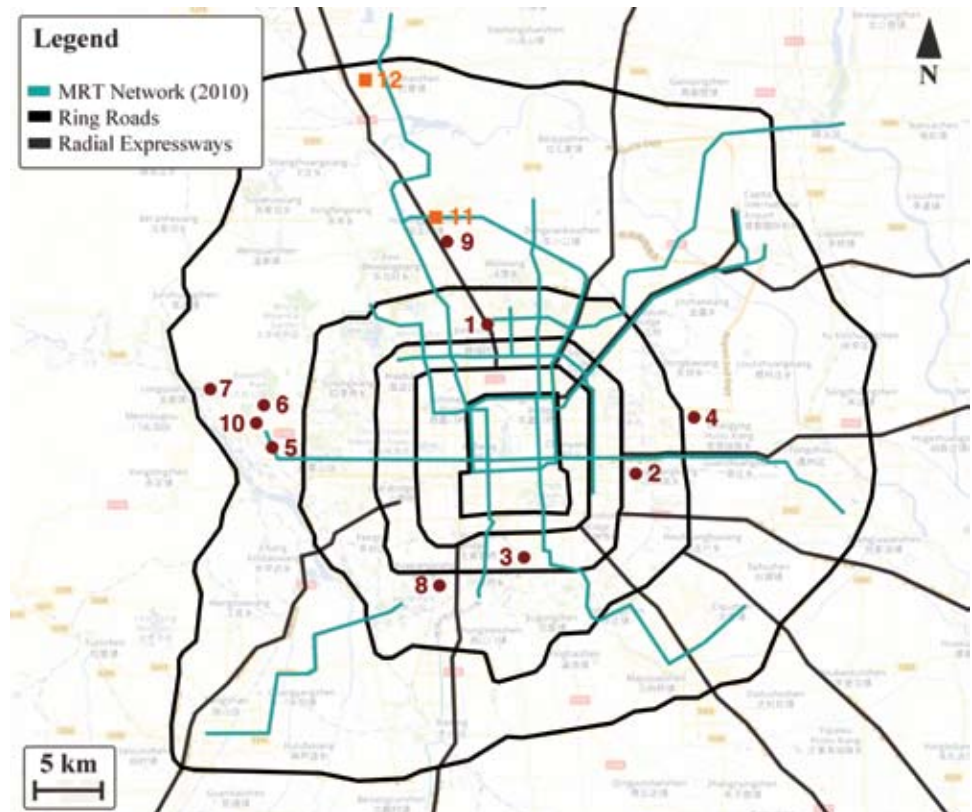
Affordable housing - 1994 reforms

The 1994 reforms required each municipality to ensure that 20% of new housing stock was affordable. To meet this requirement, local governments provided free or highly subsidized land to developers who, in turn, promised to pass savings on to buyers. Other regulations restricted unit sizes to a maximum of 70 sqm for homes constructed on free or subsidized land.

However, the 20% affordable housing requirement didn't really mitigate the problem because many buyers were usually well-connected. In addition, "affordable" housing units could be resold after five years, and lost to the affordable housing pool.

By law, local governments have first rights of refusal, but they normally ignore it. In addition, non-hukou migrants, who constitute about 70% of new housing demand in urban China had no right to purchase the subsidized housing.

Map I: Location of limited-price housing sites & peripheral change case study areas in Beijing



Inconvenient peri-urban and suburban locations

Most of Beijing’s limited price housing is located in suburban and peri-urban areas because local governments depend on land sales (leasing) for a substantial portion of their fiscal income. See Map 1.

Most lower-income residents face costly long daily commutes. Although some limited-priced housing is near subway lines, most local governments are often reluctant to

reserve these area for affordable housing because they wish to generate higher land-sale’s revenues.

Central government now more active in affordable housing

China’s national government is becoming more active in affordable housing provision. The Ministry of Construction has been renamed the Ministry of Housing, Urban – Rural Development.

The government is attempting to establish new policy frameworks, that would require and empower local governments to deliver more affordable housing. It's enhanced affordable housing role will inevitably include increased regulation, monitoring, and research and development.

Lessons from the Chinese reform experience

Lessons from the Chinese housing reform experience to date include the following:

1. Conventional slum formation is not a given in developing countries. China has largely avoided/prevented the emergence of conventional slums and squatter communities.
2. Distribution of affordable housing by officials where demand (need) exceeds supply results in inequitable allocation and possible corruption.
3. Decentralization of affordable housing policies to the local level requires strong central co-ordination, policies, monitoring, research and development, and regulatory functions.

Current national five year development plan (2011 to 2015)

The current five year national development plan (12th Plan) targets 35 million new affordable housing units.

Some local governments are substantially scaling-up affordable housing initiatives. Chongqing Municipality said that it will support an \$US18.5 billion project for 800,000 subsidized apartment units between 2010 and 2013.⁶

Consumers can attempt to purchase affordable housing with the following processes:

1. Purchasing subsidized ("limited price") housing through official processes,
2. Purchasing market housing in far-flung peri-urban areas when first offered on the market (usually at much lower prices).
3. Renting "farm" housing on the periphery and being prepared to move further when the property is redesignated "urban" and redeveloped,
4. Renting rooms or small spaces in established housing units, or other spaces such as underground storage areas.

Case studies: Huilongguan and Shahe: north-west peripheral Beijing

The authors recently studied Huilongguan and Shahe communities (see Map 2) in north-west Beijing to better understand the above processes.

These cases are instructive because they are in a fast-growing municipality (Beijing); on the urban periphery, where affordable

⁶ Economist, Special Report: China, June 25, 2011. Page 4

housing dynamics are most profound, and are served by mass transit (subway), making them specially desirable locations.

Huilongguan

Introduction

Towards the end of the 1990s, the Beijing Municipal government began promoting affordable housing development in Huilongguan town, utilizing supply-based land-subsidy mechanisms. Two major affordable housing developments were constructed in the northeast quadrant, Longhuayuan Phase 2 and Longzeyuan West.

Combined with the existing Beijiao Farm residential area, the total population in the northeast quadrant was 8,400 in 2003. After Longhuayuan Phase 2 was completed in 2006, urban residential population in the northeast quadrant reached 10,800.

Housing and rental prices in the Huilongguan area are lower than in central Beijing, but have been increasing rapidly, with average property prices jumping from just 2,800 RMB/sqm in 2002 to 15,000 RMB/sqm in 2010, an increase of more than 500%.

This inner suburban community is no longer particularly affordable because rapid price-appreciation attracted many investment-oriented property purchasers. Older existing properties, such as Longhuayuan Phase 2 and Longzeyuan West, have (owner) occupancy rates of approximately 70%, about 20% of the units are rented and the remaining 10% vacant.

However, Xinlongcheng which was completed in 2007, and includes much of the southeast quadrant, the current (owner) occupancy rate is only 60% (20% of properties are for rent), and 20% vacant. Such high vacancy rates are normal in urban China and contribute to high housing prices.

Significance of Huilongguan village (a rural collective)

Huilongguan Village in the Huilongguan study areas has a more than 500 year history. In 2003, Huilongguan Village, located in the southwest quadrant had about 700 households with a total hukou population of about 3,000.

The study area's high accessibility attracted many new "migrant" (non-hukou) residents, including new college graduates, salespeople in the nearby retail electronics shopping complexes, and traditional white-collar employees. They lived in Huilongguan Village because of its affordability when compared with market-supplied housing.

The village migrant resident population increased from 14,000 in 2003 to nearly 30,000 in 2008. Local farmers were renting housing and earning stable incomes.

The rural collective community's rapid transformation shows its high adaptive capacity and the speed which investments can be amortized. Image 3 illustrates an illegal addition to an existing building to create additional affordable housing.



Illegal additions to existing buildings

Source: The Authors

At the end of 2008, the Huilongguan village's population reached 31,000, and the ratio between hukou and migrant residents soared to nearly 1:10. Table 2 provides a description of the demographic changes in Huilongguan Village between 2003 and 2010.

In 2009, Huilongguan Village was brought into Beijing's "100 billion yuan land reserve" program and Huilongguan Village was demolished in June 2011.⁷

Nearly 3,000 farmers were moved to temporary housing and received monthly compensation from the Municipal and District government. The 31,000 migrant residents had to move further north to "Beiwu Village" without any compensation, .

Table II : Demographic changes in Huilongguan village, 2003-2010

Year	Total households	Hukou population	Average size of rural houses	Average # of tenants per house	Migrant population	Total population	Occupation
2003	700	3,000	150m ²	10	14,000	17,000	Low end services, manufacturing and retail
2006	700	3,000	150m ²	15	21,000	24,000	
2008	700	3,000	150m ²	20	28,000	31,000	
2010	0	0	0	0	0	0	

Source: Authors

⁷ Beijing's "100 billion yuan land reserve" program was launched in 2009 and continues to be implemented by the Beijing Municipal government. Each year the Government budgets 100 billion RMB to invest in the development of reserved land held in the program.



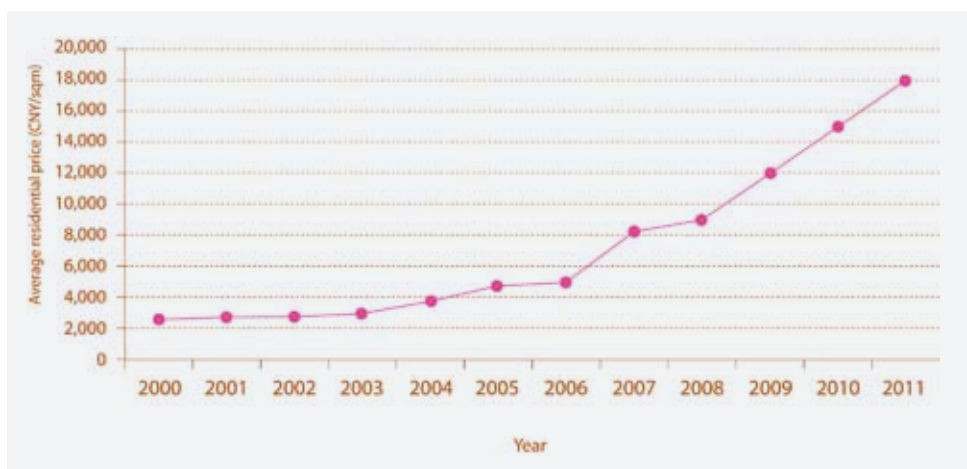
Huilongguan village undergoing demolition (left), post-demolition (right)
Source: The Authors

Huilongguan: assessment

The Huilongguan residential area was planned to be a large affordable low floor-area-ratio (FAR) community. The first completed projects, such as Longzeyuan, were six-floor walk-ups (FARs less than two).

Green space is well integrated into these developments. Housing prices in Huilongguan area, despite its status as an official affordable community, have increased at a compound annual growth rate of nearly 18% per year since 2000.

Figure II : Land prices in the Huilongguan study area, 2000-2011



Source: The Authors

- As noted, rural collective villages play a key role in providing affordable housing, expanding supply very rapidly, even though such accommodation may only be temporary.
- As indicated, vacancy rates of market housing are high – in the range of 13% across urban China. Housing units are held as a form of savings, and since “used” units are less valuable (to a much greater extent than in western economies), a large percentage of unused market housing drives up prices and contributes to inefficient land use.

Shahe

Shahe is much further out on Beijing’s periphery (see Map 1).

However, it is served by a subway line (the Changping line) that is in the middle of a green field area, a relatively exceptional situation.

The Shahe area’s recent development can be traced to a high-level Beijing government decision in 2002 to create a university community in peri-urban Beijing.

Map II : Shahe university park site context



Source: Google Maps

As Map 2 shows, the point to point distance between the center of Shahe University Park and the Shahe University Park MRT station is less than one kilometer.

With large amounts of vacant and under-utilized land within an 800-meter radius of the MRT station, the Shahe area has strong potential for a master-planned transit-oriented development (TOD). The current development pattern however wastes the MRT station’s high accessibility.

Until 2005, the area had no large-scale construction projects and prior land use changes were rural driven. Beginning in 2005, certain Central University of Finance and Economics departments and other universities moved into Shahe University Park, creating new demand for residential units and supportive services.

By 2007, urban residential land in the area had increased to 0.55km², more than 25% in just four years.

Shahe’s initial attraction was its distance from the city center. People valued the quiet environment and distinct lower-density housing. Initially, expensive villas (Beijing Rose Garden) were constructed. However, parts of the community became a magnet for affordable housing that developers were able to build with low land and labor costs.

The total population (rural and urban housing classifications) in Shahe increased from 2,700 in 2003 to 4,800 in 2010 (see Table 3 below). Before 2005, local farmers and migrants dominated the population.

From 2005 more urban residents moved with the completion of residential units. However, long-term migrants peaked in 2007, and then decreased sharply when Xiaozhai rural collective village was demolished.

Table III : Total population: Shahe study area: 2003 - 2010

Type	Population			
	2003	2005	2007	2010
Rural	2,600	2,600	3,400	1,000
Urban	100	100	1,300	3,800
Total	2,700	2,700	4,700	4,800

Source: Assessment

Although Shahe represents an excellent high-density affordable housing opportunity around a MRT station, this opportunity has not been realized, because the station is two kilometers (by road) from the core of the community, despite being one kilometer point-to-point.

Because no public and private transportation services are available, residents need automobile to get to work. FARs should be increased significantly close to the station (within a 500 meter radius) to incentivize transit-oriented housing developments.

With the MRT Changping line's completion in late 2010, accessibility to the Shahe area has increased tremendously. This community asset should be well advertised to potential home buyers that may be willing to accept higher densities, despite the peri-urban location.

Higher density development would provide a market for a wider range of commercial and public services, reducing out-of-community, non-work trips, thereby reducing the negative externalities associated with increased trip generation.

Affordable housing in China: the future

■ 35 million new affordable houses – 2011 to 2015

If China hopes to build 35 million new affordable housing units during the current 12th plan period (2011 – 2015), non-subsidized market mechanisms must still play a significant role.

China is expected to add about 21 million people per year to its cities until 2025 (the rural – urban transition will be essentially over by 2037), requiring approximately eight million new housing units per year (not including replacement and pent-up demand).⁸

About 69% of housing demand will be from migrants, while much of the remainder will be from new household formations that bring into play inter-generational issues.

The following policy issues and questions will invariably be considered:

1. Can all Chinese aspire to live in super cities, especially Beijing and Shanghai? Housing in global super cities such as London, New York, Tokyo, San Francisco are very expensive.

⁸ Assuming 2.7 persons per household

It may not be realistic to assume that vast amounts of affordable housing can be provided in these cities. In mature market economies such as the United States, numerous studies, (including the work of Richard Florida), have clearly shown that national populations have sorted themselves out with the most creative (and highly paid people) tending to live in cities such as New York, while vast numbers of the urban population, who cannot command the creative elite's high salaries, live in highly affordable cities such as Houston, Phoenix, Las Vegas, Omaha, etc.

The Chinese population may need to compromise their migration behavior, with more people moving to second and third-tier cities with much more affordable housing.

2. China's supply-based policy programs delivers land free or at low-cost on a city's periphery that is often not connected to mass transit.

To address this problem, more land adjacent to rapid transit (although still on the periphery) can be given for high FARs affordable housing projects - transit-oriented affordable communities can then be built.

The actual number of affordable housing units delivered would be as high, or higher, than inaccessible communities built at much lower FARs.

A win-win situation could also probably be engineered wherein the developer would pay local governments for such highly accessible land in return for agreeing to construct low-cost housing on significant portions. The land would be also be valuable for commercial and mixed used developments given its access to many more people.

3. Affordable housing must be better targeted toward its intended users. Lotteries, after strong pre-screening may produce more equitable outcomes and long-term migrants must also be officially eligible for such housing.
4. China is entering a new economic phase in which manufacturing will become relatively less important. In 2009 services accounted for 75 per cent of Beijing's output.

If present trends continue, strong jobs concentrations will accumulate in city centers. Planners should consider creating service economy edge cities in Chinese metropolitan areas, as in North America and parts of Europe, to disperse employment nodes, thereby increasing the employment accessibility and ultimately creating more potential affordable housing sites.

5. The current policy of incentivizing private developers to build affordable housing and enabling home ownership should be continued.

It is not reasonable to expect that all urban residents can, or will want to, purchase housing, even though China has one of the highest home ownership rates in the world (about 74%). Thus affordable housing policies should incorporate significant amounts of rental housing.

In the United States, there is a significant trend away from home ownership, toward renting, especially among households below the median household income.

However, demand-side subsidies, e.g., vouchers, should also be considered which would increase the power of low-income consumers vis-à-vis developers, giving them more choice. (The risk is capture of the subsidy by developers.)

6. Rural collective housing in large Chinese metropolitan centers plays an important role in providing affordable housing to

migrants including the “ant tribes”. These housing units should not be demolished until absolutely necessary, especially during the next five years while additional official affordable housing is constructed.

7. China’s housing affordability situation should not be under-estimated, especially since its young and ambitious high-expectation citizens are the most affected - a potentially destabilizing situation.
8. Current leap-frogging development behavior on the periphery of China’s cities to obtain inexpensive land is not conducive to land use efficiency. If reasonably priced land can be made available by local governments in a more orderly way, especially along mass transit corridors, large scale benefits will be realized.

