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## China's Low Income Urban Housing

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### Abstract

In this paper, firstly we briefly outline the historical legacies of inner-city housing that are the focus for redevelopment today, and then summarise the legacy of mass housing built by the work-unit or *danwei* in the Maoist era. The bulk of the paper, however, is then concerned with the switch to privatisation (via 'market socialism with Chinese characteristics') in the Reform Period under Deng Xiaoping and his successors, and the role of land policy that forms an important constraint on housing provision. Demand for low-income housing is in part due to the continuation of the Maoist *hukou* registration system which acts as a major barrier to full participation in the housing market and consequently China's cities now have a huge migrant non-*hukou* 'floating population' (*liudong renkou*) that must be housed via alternative means, preferably as cheaply and effectively as possible. There is also the situation of the 'ant tribe' of young low-paid college graduates to consider. For people like these renting in overcrowded conditions is one option, but because of China's unique development trajectory, (driven by the Chinese Communist Party since the founding of the People's Republic of China in 1949, self-help housing is not a major form of housing provision, therefore there are few examples to consider. Hence, we discuss several examples of China's low income urban housing.

**Keywords:** China, Guangzhou, housing, rural, urbanisation

### 1. Low Income Housing Legacies in Modern China

In modern China, for low income housing, there are a number of legacies from the past. Historically, for example, most of the *Han* village population of North China would live in self-built basic mud-brick houses, with the main bedroom at least having a *kang* bed, of stone or brick, and heated via pipes by a stove. They would also have courtyards to contain the livestock. Within the capital city, Beijing, people would live in the *hutongs* that have become such an issue for development versus conservation debates in recent decades. As one of the present authors has noted:

"If the city of Beijing is comparable to a museum, then the streets and Hutongs are exhibition rooms. Through the show-windows, you can see the changes of the streets and Hutongs, and furthermore, you can find the traces of changes in the past thousand years" (Hu et al., 1995, p. 165).

Strictly speaking, 'hutong' is Beijingers for 'lane', while 'siheyuan' refers to the quadrangle residence found along these, but over time the use of the term has been broadened to encompass the whole area of ancient low-rise housing within the narrow lanes of old Beijing. "Hutongs were first formed 700 years ago in Dadu, the city's name during the Yuan dynasty, when they were 'Hong Tong' in local dialect, meaning 'water well', essential for building (Zhang et al., 1993)... They are reminiscent of the narrow cobbled or terraced streets of Britain's past, but with an even greater depth of history, and vitality. They are evocative, and retain a strong presence and identity" (Cook & Murray, 2001, pp. 171-2).

In other ancient cities, there would be similar housing types, low level dwellings in the main, arranged in congested narrow lanes, such as the *lilong* of Shanghai (He & Wu, 2007, p. 193). These were often of poor quality construction, in marked contrast to the high-quality dwellings of the rich, which were more like palaces rather than houses as most people would understand them. This situation of housing contrasts between rich and

poor was to change with the establishment of the People's Republic of China in 1949, led by the Chinese Communist Party (CCP) Policy, including housing policy, in theory at least, is developed via the CCP which dominates the State apparatus (see, for example, Dreyer, 1996, pp. 88-89 for details of the structures of the CCP and the Chinese State), with the State Council being the key administrative organ to which Ministries report. In practice, the leaders of the CCP play a major role, and the Maoist period (from 1949 when the PRC was founded until his death in 1976, or more correctly until 1978 due to the *interregnum* of the 'Gang of Four' until Deng Xiaoping came to power) was very much one in which Mao Zedong led housing policy towards provision of housing for the masses via the commune and/or the work unit or *danwei*. For example, when the communes were set up in 1958 as part of the famous 'Great Leap Forward' (Cook & Murray, 2001, pp. 13-16), housing, as shelter, became one of the 'Five Guarantees' to commune members (the other four were originally food, clothes, firewood, and burial services according to Wang (2008, p. 5), but healthcare and education would often be substituted for one or more of these). Housing was often of a low quality in mid-rise apartment blocks; many thousands of such blocks were to become the basic housing type across the country. Edgar Snow describes a visit to Ming Hong, a satellite town on the outskirts of Shanghai, in 1960:

"Strolling down a tree-planted street of new apartment houses I chose one to enter. From the outside these buildings looked comparable to American lower-middle-class suburban dwellings, but they were crudely finished inside: unpainted plaster walls, stairs of cement, corridors narrow and poorly lighted. They were somewhat better than East Side or West Side New York tenements and better than much housing I remember in Moscow, as well as a great improvement over old Shanghai slums.

It was afternoon in Ming Hong; most people were at work. No one answered our knocks at the first three flats. At the fourth an elderly gentleman opened the door and invited us in. A living room, two bedrooms, tiny kitchen, toilet and shower; sparsely furnished, no carpets, clean floors, white cotton curtains.

How many? We are eight persons here: my wife, myself, our son and daughter-in-law, and their four children. Comfortable? Yes indeed. Before, we were all in one room, the size of this kitchen" (Snow, 1970, pp. 513-4).

This was at a time when family aspirations in terms of material goods were far lower than today, with the objective of owning a watch, radio and bicycle being typical. In the 1950s, the PRC government had generally dealt with many of the aspects of filth and squalor that were common in the first half of the twentieth century. But life was rather Spartan and austere, and mass housing reflected this. Hot water and central heating were unlikely features, while air conditioning units were unheard of.

Beyond the individual housing unit, Soviet ideas dominated in the 1950s, with over 10,000 Russian advisors assisting modernisation projects of all types in China (Lu, 2006, p. 31), and their 'superblock' concept (as *dajiefang*) of four- to six- storey blocks of flats around a public quadrangle in which was located public facilities, became a dominant housing type for a short period, before their 'microdistrict' concept came into China via an article in 1956 (Lu, 2006, p.37). Lu suggests that this concept entered the rural communes as well as the cities:

"Planners believed that peasants could be rehabilitated fundamentally by revolutionizing small settlements. They proposed a complete reorganization of scattered, small, villages into concentrated, large residential clusters (*jumindian*) according to modern urban and regional planning principles" (Lu, 2006, p. 37).

The microdistrict contained neighbourhood units which in turn contained the individual housing units, and has since become the planning norm in China (Lu, 2006, p. 40). One key feature was the integration of production and residence run by the *danwei*, usually behind walls that restricted through traffic. Lu explains that there was a 'supplementary and overlapping' relationship between the work unit and the neighbourhood, with the former supervising those in its employ, while the latter integrated those who were not employed, such as housewives, students or the retired (Lu, 2006, p. 50). Work units varied tremendously in size, wealth and prestige across the country but were part of an 'iron rice bowl' of housing, health and pension provision that the next leader of China, Deng Xiaoping, sought to smash. The legacies of the past are important however. The old hutongs or lilongs became overcrowded dwelling places that attract the eyes of developers today; but as the opening quote shows they are historically evocative and in the eyes of conservationists at least, well worth preserving. Then there is the legacy from the old, now rather shabby and dilapidated, mid-rise blocks from the Maoist era that still contain significant numbers of low-income people that require rehousing in more sophisticated dwellings, either now or in the near future. But it was the era of home ownership that has had the main impact on urban housing,

and it is to this that we now turn.

## 2. Housing in the Reform Era: The Impact of Home Ownership

The Reform Era, which began under Deng Xiaoping and has been continued by his successors, has brought dramatic changes to the country. The reforms were multi-faceted, and included the abolition of the communes, the 'Four Modernisations' and the 'Open Door' policies that sought to transform China into a socialist market economy, run along capitalistic lines, but still under the watchful control of the Chinese Communist Party. Deng produced many memorable slogans in order to get his message across, including "smash the iron rice bowl" to break up the cycle of dependency on the *danwei* and "crossing the river by groping the stones", which meant that progress would be made in careful steps via experiments with new ideas. Housing provision was not an immediate priority due to the felt need to introduce the "household responsibility system" in rural areas so that people would be responsible for their own production targets on family plots, and to abolish the communes, both of which were done by the mid-1980s. It was not until the late 1980s that "a few cities began raising rents and selling apartments to tenants to finance construction of more housing" (Cook & Murray, 2001, p. 177), but progress was slow at first, as a national conference acknowledged in late 1991 (Cook & Murray, 2001). The speeding up of the reforms from 1992, however, witnessed an immediate expansion in private sector house building, fuelled by Hong Kong investment in the first instance. The housing policy of the Chinese government was shifting from a welfare urban-based housing system to a market-based housing provision system. This change to market-based housing provision, as Shaw (1997, p. 200) notes, was because:

"When urban housing problems broke out, a mass of complaints flooded the party and government bureaucracy in various forms: overcrowding, inconvenience, long waiting lists, injustice, inequality, dilapidated shelters and inadequate accessory facilities. Officials also criticized public housing as a financial burden on the state."

In retrospect it was probably inevitable that in the 1990s the green light for privatised housing led to a number of problems (Wu, 2010). Investors focused on the high end of the market, but overestimated the demand therefore there was an oversupply of luxury apartments and villas which could not be sold. "Prices too high" was cited by 81.3% of potential buyers in a 1998 survey of people not buying, followed by "Location" for 65.6% and "Market demand" 58.4% (Cook & Murray, 2001, p. 183). Suggestions for boosting sales included the top one of "Abolish the unreasonable charges" by 65.6% respondents, followed by "Accelerate the pace of housing reforms" by 58.7% and "Establish Housing Fund on a full scale" (Cook & Murray, 2001, p. 184). Around this period, there were also serious problems with developers rushing too quickly to build, without necessarily having the requisite documentation, problems of corruption in the newly booming housing industry, a lack of provision for the mass of the population, and also, serious deficiencies in the actual quality of new construction. In the capital city, Beijing, there were concerns expressed by workers at:

"so-called poor ministries...that their counterparts in richer ministries would have the chance to buy their state-subsidised homes at a discount. This was set at 1,450 Yuan in Beijing's Dongcheng, Xicheng, Chongwen, Xuanwu, Chaoyang, Haidian, Fengtai and Shijingshan inner city districts, much lower than the market price, which ranges from 4,000 Yuan to more than 10,000 Yuan. Those who had not been living in state-provided houses and had been on a waiting list for years would have to pay market rates under the new system" (Cook & Murray, 2001, p. 195).

In contrast Guangzhou in the South of China, booming as a result of the investment boom from Hong Kong and other overseas sources, was able to offer substantial subsidies to state employees, therefore housing reform was said to be going well there in the late 1990s, and this will be updated via a case study below.

## 3. 21<sup>st</sup> Century Pressure on Housing: Rapid Urbanisation and the Floating Population

In the 21<sup>st</sup> Century, China's industrialisation and urbanisation have proceeded apace (Lin, 2002; Zhang, 2008; Wuttke, 2011). China now has the world's second biggest economy after the United States, overtaking Japan in 2010. It is thought that "China will overtake the USA to become the largest world economy in 2017" according to Euromonitor International (2010), although other estimates range up to 2030 (china-mike-com, 2011). As part of this expansion, mega-cities have become an integral element of China's economic expansion, with cities like Beijing, Shanghai, Guangzhou and Chongqing exhibiting high growth rates (Wu 2006, 2007). China's urban population was only 77.3 million in 1953, but by 2008 it reached 593.8 million, more than the entire population in China in 1953 (Halsall & Cook, 2010). Further, the urban population is undercounted due to the phenomenon of peri-urbanisation on the one hand (urbanisation of rural areas usually, but not necessarily, contiguous to metropolises as part of an Extended Metropolitan Region (EMR), and of the presence of the floating population

(*liudong renkou*) on the other; together these might add 250 million to the urban total (Cook, 2008).

In Beijing, Gu has conducted many studies of the floating population (e.g. Gu, 1998; 1999; 2001; Gu & Kesteloot, 2002; Gu et al., 2006), with key findings summarised in Gu and Cook, 2011. He found, for example, that there were more than 1 million of these in the capital in 1989, then a decline and a resurgence to just under 4 million by 2004. These are the people who do not have full rights of urban citizenship, rights that are provided via the formal *hukou* registration system introduced in the Maoist period (Chen et al., 2007; Chan & Buckingham, 2008), and work as Shen (2002) has described it, in 3D jobs, jobs that are difficult, dangerous and demanding, such as in the construction industry, in market stalls or taxi-driving. For people such as these, housing quality is often low, as they live in overcrowded migrant ‘villages’ with people from their home city, district or province.

Modern housing theory in China, following a western-style housing policy and development mode, uses standardised and regulated real estate development in providing residential units, which causes a huge amount of demolition of former un-standardised, self-built and informal settlements. These actions of ‘relocation’ or ‘slum-clearance’ raise three key issues in the process (Zhang & Jiang, 2011). First, local governments rather than the private sector are obligated to pay compensation to buy out old residents. Second, residents in ‘relocation’ needs to either find a new job or commute daily with a higher cost. Third, most ‘slum-clearance’ actions hardly consider the damage to social connections of local residents, who often lose their support from their old community. China’s rapid urbanisation has brought about new challenges in housing. China’s massive rural to urban migration is universally regarded as an inevitable development process for almost all economies (Newman & Thornley, 2005). One of the challenges resulting from this development is the high demand for affordable housing, and this has become a major category of housing provision, one that is government supported.

Logan et al., (2009, p. 916) note that although self-built housing was found in the socialist period, especially in rural or urban fringe areas where it would be common, within the city it was sometimes constructed in back lots and courtyards, was of low quality and lacking heating and sanitation, hence public housing was ‘typically preferred’. According to Zhang et al., (2003, p. 914) there are two basic policy strategies towards slums and squatter settlements within the context of self-help: (1) Legalizing and upgrading informal communities; and (2) Seeking sites and services in order to relocate residents and create new settlements. In the case of China the pressure of the need for affordable housing is not a recent phenomenon. Gilbert and Gugler (1992, p. 146) have noted that housing pressure in China is a result of political actions by social and economic realities. In the urban parts of China the government, in the largest 192 cities, had the ‘inability or unwillingness to invest heavily in housing construction before 1979 [which] led to serious urban overcrowding.’ Hence by the early 1980s there was a demand from the public and private sector for the government to tackle China’s growing housing problem. By the beginning of the millennium the government undertook housing reforms that focused on the decentralisation of housing provision and the privatisation of public housing (Chan et al., 2008). Coupled with the actions from the Chinese government were the increasing levels of housing inequality and residential segregation in transitional Chinese cities (Wu, 2011; Appleton, *et.al*, 2010; Wang, 2010; Huang, 2005; Meng et al., 2005; Wang, 2004).

This sociospatial differentiation is evident in many ways in China’s cities, with contrasts for instance between high-level developer-driven ‘gated communities’ for China’s growing middle classes, and the ‘urban villages’ that are more spontaneous locations for overcrowded rented accommodation, often driven by the local authority that is seeking, usually illegally, to stimulate local development processes and grab their share of the economic action within the city. Sometimes, this demand for rented housing is from within the floating population, which have recently been estimated at 230 million across the country (National Bureau of Statistics, 2012), although it is the rural migrants within this group that are most disadvantaged in terms of access to public housing (Logan et al., 2009). Or it can also be from the recently identified ‘ant tribe’ (Lian, 2009; 2010a; 2010b) of new graduates who are in low-income jobs due to the expansion in college provision by the authorities in 1999, combined with the economic slowdown of the last few years, but who nonetheless wish to maintain their college networks and student-type lifestyle in the city. This group is qualitatively different from the poorly educated and low-skilled migrant workers from rural areas, being highly educated and a cohort that does not expect to be disadvantaged. “This phenomenon of the “ant tribe” has attracted much attention, and there was a popular TV show named “Ant Tribe’s Struggle”, reflecting the lives of low-income college graduates (Gu, et al., 2012).

From the historical legacies and recent pressures we can identify the demand factors for low-income housing as being concentrated among those groups identified in Table 1.

Table 1. Groups that underpin demand for low-income housing

Group	Characteristics
Floating population	Non-hukou migrants from rural or urban areas; many have poor education or skills and concentrate in peripheral urban villages.
Inner city residents	Concentrated in old central-city low-rise hutongs, lilongs and other ancient housing ripe for redevelopment.
Apartment dwellers, Maoist era	Concentrated in areas outwith the old central areas, in mid-rise low quality apartment blocks built in 1950s-1970s, now requiring serious upgrade or demolition.
Ant tribe	Low-income highly educated college graduates, who concentrate in urban villages, often in 'edge city' developments.

Source: (Author's Table)

In order to meet the demands of such groups, supply has been driven mainly by the State rather than developers. Table 2 summarises provision in different categories. Wang et.al, (2012) provide further details of these reforms that were introduced by the State Council in 1998, and Table 3 gives the requisite date, based on their Table 1, amended and updated appropriately.

Table 2. Housing supply in China, by category

Government subsidised social rental housing (lianzu fang)
Government supported affordable housing (jingji shiyong fang)
Commercial housing (shangpin fang)

Source: (Wang et al., 2012, p. 345)

Table 3. Housing units built 1999-2010

Year	All dwellings Built (000)	Luxury apartment		Government supported affordable housing	
		Units (000)	Percent of all housing	Units (000)	Percent of all housing
1999	1946.4	44.0	2.3	485.0	24.9
2002	2629.6	97.8	3.7	538.5	20.5
2005	3682.5	135.3	3.7	287.3	7.8
2008	4939.2	144.6	2.9	353.8	7.2
2010	6019.8	163.2	2.7	399.2	6.6

Source: (Wang et al., 2012, p. 348)

As Table 3 shows, total dwellings built in 2010 came to over 6 million in all, compared to less than one-third of that number in 1999. The proportion of government supported affordable housing is also different in that period, reducing from nearly a quarter of new units in 1999, down to less than 7 per cent by 2010, which Wang et.al. (2012, p. 348) explain as due to State Council policy changes in 2003 that "shifted emphasis away from government supported affordable housing towards development of *ordinary commercial housing* [their italics]". At the time of writing, this drive towards commercial housing would seem to have had an unfortunate consequence in that high proportions of new dwellings now lie vacant in the light of the global downturn, up to one-third in Beijing for instance (Durden, 2012). A notable and well researched example of low-income housing provision in China is in Guangzhou, and it is to this city that we now turn for a case study.

#### 4. Low-Income Housing in Guangzhou

Guangzhou is located on the Pearl River in southern China. The coastal city is an important national

transportation hub and trading port. With over 2,000 years of history Guangzhou is one of China's key commercial centres and is the third biggest city in the country after Shanghai and Beijing in terms of economic performance. The economic rise of Guangzhou was due to China's economic reforms since 1978. Guangzhou had the capability to exploit the opportunities offered in the reform period. The changing nature of social and economic development in Guangzhou has been summed up by Xu (2001, p. 233):

“Guangzhou was one of the first cities in China to enjoy considerable local economic autonomy. For example, fiscal reforms made the Guangzhou government financially capable of initiating local infrastructure projects, and land reform gave the government the discretionary power to lease land parcels to generate monetary returns, leading to an increased role for local government in urban development. Also significant is the growing number of non-state enterprises in the property market and other areas, this is related to the emergence of private domestic investors as well as the influx of foreign capital.”

Further to this, Yang (2004, p. 188) has noted ‘Comparing to Beijing and Shanghai, per capita disposable income of urban residents in Guangzhou was the highest, suggesting that Guangzhou has greater potential for growth of services.’ This economic growth caused a rapid demand of workers migrating to the city to take up employment opportunities. The housing market in the city was more energetic compared to other Chinese cities (Jim and Chen, 2006). This in turn created a housing demand price out to medium and low income groups. Throughout the 1980s there was a series of housing initiatives to tackle the problem of housing in Guangzhou. Chan et al., (2003) have noted that this type of approach from the city's housing authority was coined as ‘the favourable housing policy.’

Over a period of time Guangzhou saw the growth of different types of urban villages for example, Song et al., (2008, p. 314) have noted that ‘In the city of Guangzhou with a population of over 8 million, there were 277 urbanising villages with approximately 1 million inhabitants in 2000.’ However some of these urban villages were causing problems, as Chan et al., (2003, p. 26) notes:

“The implementation of the law in urban “villages” areas is not as strict as in the normal urban districts. These laws exempt the temporary population from some kinds of administrative procedures like applying for a temporary living certificate, employment certificate, and proof of family planning. And it is for this reason that illegal employment becomes the prevailing problem in Guangzhou, especially at the village-town-owned and private enterprises.”

Guangzhou as a city has experienced high levels of temporary population. This temporary population is defined as residents without permanent household registration. Institutional reform and marketization of housing had to be undertaken. Housing for permanent residents has improved greatly but for the temporary population is problematic. Chan and colleagues (2003) undertook a field study at the end of 1999 and early 2000 and devised a short-term housing strategy for the temporary population (see figure 1). Their research findings concluded that:

“Theoretically, it is not hard to solve the housing problems of the temporary population in Guangzhou, since the city is rich in housing resources (like housing produced under the dual system). Yet, due to the fact that the temporary population is living within the demarcation of the central city district, their housing problem becomes an obvious contradiction to the fundamental restructuring of urban space. A housing strategy for the temporary population is proposed. The strategy can be used both as a part of the policy package for the temporary population and to benefit people.”

- Encourage contract employment, include the labour with temporary living status in the social insurance net and at the same time keep them away from illegal employment
- Ensure that those with temporary living status are guaranteed a reasonable level of income, comparable with those with permanent household registration.
- Encourage house purchasing among the temporary population by further relaxing the “blueprint” household registration policy and providing a more flexible and favourable mortgage policy
- Encourage employers to provide tenure housing for their employees in view of the tight budget and limited choice in the housing market for the temporary population
- Remove all unnecessary expenditure imposed in the transaction process of the housing market. Monitor the housing market, especially the tenure housing market, to ensure efficiency of resources thus involved
- Ensure a liveable and sanitary environment for tenants by setting basic standards and conditions, such as having certain equipment and accessories in tenure housing, and encouraging owners to innovate their houses
- Encourage the development of multi-story apartments near or within the current urban village demarcations, taking into account the needs of the low-income tenants, their marital status, their life cycle and their income and expenditure patterns
- Ensure that area where the temporary population is accommodated is socially, economically and ecologically balanced. This can be done by providing more green space, adopting an appropriate proportion of permanent residents to temporary population, encouraging capital and technology, restructuring of the street-based, town-based and village-based economy, and hastening the pace of institutional reform

Source: Adapted from: Chan et al., 2003, pp. 30-31

Figure 1. Short-term housing strategy recommended by Chan et al., (2003)

## 5. Urban-Rural Tensions and Solutions

Other experimental forms of housing are found elsewhere in China, such as the ‘capsule apartments’ in Beijing (Huang, 2010). Senior Engineer Huang Rixing saw that the Tangjialing apartments in Beijing were very small, 6 people living in a 10 square metre room. He therefore designed a self-assembly small apartment structure in July 2008, transforming private houses to be constructed of four ‘capsules’. In September 2008, an apartment with kitchen and bathroom, water heaters, washing machines, microwave ovens and other household items readily available, was designed and became known as the ‘first-generation capsule apartment’. Later, Huang designed a second-generation capsule apartment, each 2.4 metres long, 0.72 metres wide, which only allow a single bed, the bed can be used as a seat, and a small partition is the Internet space. There is a room with lights, plugs, sockets and broadband TV and a cooker, which rents for 200-250 Yuan per month (around US\$25-30). But Beijing announced the ‘Modify Beijing Rental Management of Certain Provisions of the Decision (draft)’ in May 2010, which requires the building floor area per capita to be 10 square metres, the cottage is 4 square meters, and Huang’s second generation of capsules per capita use only 2.2 square meters. Still later, Huang selected a floor area of 53 square metres of houses in Shijingshan District, Beijing, called the third-generation capsule apartments, single bed and double bed. The single bed room is a 2.4 meters long and 1.2 meters wide and 2 m high; the double bed room is width 1.6 m. In addition, the third-generation capsule apartment is also equipped with a kitchen, dining room and shower.

One feature of China’s recent development has been growing urban-rural contrasts. For example, Sun (2000), p.187) notes that:

“urban citizens enjoy government housing subsidies and have better housing conditions, such as clean water, gas and toilet facilities. In rural areas, farmers have to build their houses themselves, causing some to get into debt. Some houses are built from rough materials such as mud and grass.”



Also, there is a generally growing tension between urban sprawl and agriculture land protection in China, which has been brought into discussions in recent years. Land available for development in urban area is limited, while more and more rural population have become residents in the city in the process of urbanisation. Construction land exchange became a new mode to accommodate the newly urbanised rural population (Shi, 1997). The policy of 'Linked Exchanges of Urban and Rural Construction Land' published by the Chinese government in 2004 clearly legitimised such construction land exchange operation. In essence, it declares that construction land in urban and rural areas could be exchanged for development, following the principle of keeping a strengthened farmland protection and retaining the total amount of arable land unaffected. Construction land exchange policy was claimed to allow more rural land released for continuous urban development while Farmland protection is also secured.

Tianjin, for example, is a city of relatively small population and low density, which is lack of practical planning and construction management and necessary financial supports. The construction land per capita in rural area is inefficiently large. Public services and infrastructures are inadequately provided, the environmental quality needs to be improved, and the consciousness of protecting the environment remains weak. An operation of 'Homestead Wards in Exchange for House' was carried out from 2005 from a top-down manner with a vision of developing townships and new villages. The policy was then formally announced through the publication of 'Policy Guidance for Exchanging Homestead Wards for House in Tianjin' in 2007. The 'Exchanging Homestead Wards for House' refers to the operation of using homestead ward land in rural area to exchange for certain size house unit in newly built township or village. By turning homestead wards back into farmland in exchange for construction land allowance in higher value sites, an aggregation of population and industry in townships is claimed to be achieved, and more natural environment in rural area is protected (Song et al., 2006).

Similarly, in May 2007, Chongqing was approved as the experimental zone for the coordination of urban and rural development by the central government. An idea of a unified 'Rural Land Market' was discussed in order to find a coordinative approach for integrated urban and rural land use management, considering the factors that: (1) there is a huge gap between urban and rural development in Chongqing; (2) there is a shortage of construction land supply in Chongqing city; and (3) the publication of 'Linked Exchanges of Urban and Rural Construction Land' in 2004 by central government. A relevant policy document named 'Interim Measures of Chongqing Rural Land Transactions' was published on 17<sup>th</sup> November, 2008. A government funded, non-profitable organisation 'Chongqing Rural Land Market' was then opened later that year, which is specialized in 'land ticket' trade (Cui, 2010). 'Land ticket' refers to the construction land allowance which has been approved by land resource department, covering wide range types of rural land, such as homestead wards and related facilities land, local industrial land, rural public facilities land, rural public welfare land, and collectively owned construction land.

## 6. Conclusion

The PRC has been ruled via a one-party system dominated by the Chinese Communist Party. The CCP is not a monolithic entity, however, and contrasting policies have emerged at different times as regards low-income housing. The main contrast, as we have shown, is between the Maoist period under the *danwei*, and the market-led approaches introduced under Deng Xiaoping and his successors since 1978. The Maoist period provided mass housing that was adequate for the time, but was of generally low quality. The reform period has produced better-quality housing provision, but, as in other countries, has contributed to growing residential differentiation between lower-income and higher-income groups. The housing policy in China has shifted from a welfare urban-based housing system to a market-based housing provision system. This change in housing policy particularly affects migrant workers as they are not entitled to urban based housing and are therefore forced to take on the expense of private housing. This is an example of how China's updated housing policy has 'squeezed the household expenditure of the poor' (Wang, 2000 in Wu, 2010, p. 78). Perhaps in the future we shall see more emphasis on the self-help approach, however up till now this self-help approach has been only a small part of China's low-income urban housing provision, and this is likely to remain the case for some time to come.

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## References

- Appleton, S., Song, L., & Xia, Q. (2010). Growing out of Poverty: Trends and Patterns of Urban Poverty in China 1988-2002. *World Development*, 38(5), 665-678. <http://dx.doi.org/10.1016/j.worlddev.2009.11.016>
- Chan, K. C., Ngok, K. T., & Phillips, D. (2008). *Social Policy in China: Development and Well-being*. Bristol: Policy Press.
- Chan, K. W., & Buckingham, W. (2008). Is China Abolishing the Hukou System? *The China Quarterly*, 195, 582-606.
- Chan, R., Yao, Y. M., & Zhao, X. B. (2003). Self-Help Housing Strategy for Temporary Population in Guangzhou, China. *Habitat International*, 27(1), 19-35. [http://dx.doi.org/10.1016/S0197-3975\(02\)00033-4](http://dx.doi.org/10.1016/S0197-3975(02)00033-4)
- Chen, L., Otsubo, K., Wang Q., Ichinose, T., & Ishimura, S. (2007). Spatial and Temporal Changes of Floating Population in China between 1990 and 2000. *Chinese Geographical Science*, 17(2), 99-109. <http://dx.doi.org/10.1007/s11769-007-0099-5>
- Cook, I. G. (2008). 21<sup>st</sup> Century Issues and Challenges in Chinese Urbanization. In L. N. Wagner (Ed.), *Urbanization: 21<sup>st</sup> Century Issues and Challenges* (Chapter 4, pp. 133-153). New York: Nova Science Press.
- Cook, I. G., & Murray, G. (2001). *China's Third Revolution: Tensions in the Transition to Post-communism*, London: Curzon.
- Cui, Z. (2010). *To Ticket Transactions to Ensure That Farmers be Compensated in Chongqing*. Retrieved April 26, 2012, from <http://bbs.qstheory.cn/templates/qiushi/images/logo1.gif>
- Dreyer, J. T. (1996). *China's Political System: Modernization and Tradition* (2nd ed.). London: Macmillan.
- Durden, T. (2012). *Beijing Alone Has 50% More Vacant Housing than the US*. Retrieved July 22, 2012, from <http://www.zerohedge.com/news/beijing-alone-has-50-more-vacant-housing-us>
- Euromonitor International. (2010). *Top 10 Largest Economies in 2020, July 7<sup>th</sup> 2010*. Retrieved October 18, 2011, from <http://china-mike-com/facts-about-China/economy-investment-business-statistics/>
- Gilbert, A., & Gugler, J. (1992). *Cities, Poverty and Development: Urbanization in the Third World*. Oxford: Oxford University Press.
- Gu, C. (1998) Beijing's Socio-spatial Structure in Transition. In J. Breuste, H. Feldmann, & O. Ohlmann (Eds.), *Urban Ecology* (pp. 187-191). Berlin: Springer Verlag. [http://dx.doi.org/10.1007/978-3-642-88583-9\\_57](http://dx.doi.org/10.1007/978-3-642-88583-9_57)
- Gu, C. (1999). Social Polarization and Segregation Phenomenon in Beijing. In A. Guillermo (Ed.), *Problems of Megacities: Social Inequalities, Environmental Risk and Urban Governance* (pp. 359-377). Mexico City: Universidad Nacional Autonoma De Mexico.
- Gu, C. (2001). Social Polarization and Segregation in Beijing. *Chinese Geographical Science*, 11(1), 17-26. <http://dx.doi.org/10.1007/s11769-001-0003-7>
- Gu, C., & Cook, I. G. (2011). Beijing: Socialist Chinese Capital and New World City. In S. Hamnett, & D. Forbes (Eds.), *Planning Asian Cities: Risks and Resilience* (Chapter 4, pp. 90-130). London: Routledge.
- Gu, C., & Kesteloot, C. (2002). Beijing's socio-spatial structure in transition. In Schnell I., & Ostendorf W. (Eds.), *Studies in Segregation and Desegregation* (pp. 285-311). Aldershot: Ashgate.
- Gu, C., Chan, R., Liu, J., & Kesteloot, C. (2006). Beijing's Socio-Spatial Restructuring: Immigration and Social Transformation in the Epoch of National Economic Reformation. *Progress in Planning*, 66(2), 249-310. <http://dx.doi.org/10.1016/j.progress.2006.10.001>
- Gu, C., Sheng, M., & Hu, L. (2012). Spatial and Social Characteristics of the "Ant Tribe" Urban Village in Beijing: Case Study of Tangjialing, submitted paper.
- Halsall, J., & Cook, I. G. (2010). The Environmental Impact of China's Rapid Urbanization: A Case Study of Beijing. In S. Lehmann, H. Al Waer, & J. Al-Qawasmī (Eds.), *Sustainable Architecture & Urban Development* (Vol. I, pp. 419-434). Amman, Jordan: Centre for the Study of Architecture in the Arab Region (CSAAR).
- He, S., & Wu, F. (2007). Neighborhood Changes and Residential Differentiation in Shanghai. In F. Wu (Ed.), *China's Emerging Cities: The Making of New Urbanism*. London: Routledge.
- Hu et al. (1995). *Historic Photos of Old Beijing*. Beijing: Beijing Publishing House.

- Huang, Y. (2005). From work-unit compounds to gated communities: housing inequality and residential segregation in transitional Beijing. In L. J. C. Ma, & F. Wu (Eds.), *Restructuring the Chinese City: Changing Society, Economy and Space* (Chapter 11, pp. 192-221). London: Routledge. [http://dx.doi.org/10.4324/9780203414460\\_chapter\\_11](http://dx.doi.org/10.4324/9780203414460_chapter_11)
- Huang, Y. (2010). Retrieved April 26, 2012, from <http://news.qq.com/a/20100409/000782.htm>
- Jim, C. Y., & Chen, W. Y. (2006). Impacts of Urban Environmental Elements on Residential Housing Prices in Guangzhou. *Landscape and Urban Planning*, 78(4), 422-434. <http://dx.doi.org/10.1016/j.landurbplan.2005.12.003>
- Lian, S. (2009). *Ant Tribe - Record about the village inhabited by graduates*. Guilin: Guangxi Normal University Press.
- Lian, S. (2010a). Ant Tribe: Problems, drawing and countermeasures, In *Chinese Academy of Social Code Talent Blue Book*. Beijing: Social Sciences Academic Press.
- Lian, S. (2010b). *Ant Tribe II: Who's Time*. Beijing: CITIC Publishing House.
- Lin, G. C. S. (2002). The Growth and Structural Change of Chinese Cities: A Contextual and Geographical Analysis. *Cities*, 19(5), 299-316. [http://dx.doi.org/10.1016/S0264-2751\(02\)00039-2](http://dx.doi.org/10.1016/S0264-2751(02)00039-2)
- Longan, J. R., Fang, Y., & Zhang, Z. (2009). Access to Housing in Urban China. *International Journal of Urban and Regional Research*, 33(4), 914-935. <http://dx.doi.org/10.1111/j.1468-2427.2009.00848.x>
- Lu, D. (2006). *Remaking Chinese Urban Form: Modernity, Scarcity and Space, 1949-2005*. London: Routledge.
- Meng, X., Gregory, R., & Wang, Y. (2005). Poverty, Inequality and growth in Urban China, 1986-2000. *Journal of Comparative Economics*, 33(4), 710-729. <http://dx.doi.org/10.1016/j.jce.2005.08.006>
- National Bureau of Statistics. (2012). *The floating population 230 million in 2011*. Retrieved from [http://ifb.cass.cn/show\\_news.asp?id=44455](http://ifb.cass.cn/show_news.asp?id=44455)
- Newman, P., & Thornley, P. (2005). *Planning World Cities: Globalization and Urban Politics*. Basingstoke: Palgrave Macmillian.
- Shaw, V. N. (1997). Urban Housing Reform in China. *Habitat International*, 21(2), 199-212. [http://dx.doi.org/10.1016/S0197-3975\(96\)00052-5](http://dx.doi.org/10.1016/S0197-3975(96)00052-5)
- Shen, J. (2002). A Study of the Temporary Population in Chinese Cities. *Habitat International*, 26(3), 363-377. [http://dx.doi.org/10.1016/S0197-3975\(02\)00013-9](http://dx.doi.org/10.1016/S0197-3975(02)00013-9)
- Shi, Y. (1997). Reflecting on urban land replacement practice. *Social Science Shanghai China*, 11, 56-58.
- Snow, E. (1970). *Red China Today: The Other Side of the River*. Middlesex: Pelican.
- Song et al. (2006). The Arable Land Potential Calculation in the Land Consolidation Project of Rural Habitat Under Natural and Economic Limits in Tianjin. *Journal of Natural Resources*, 21(6), 888-899.
- Song, Y., Zenou, Y., & Ding, C. (2008). Let's Not Throw the Baby Out with the Bath Water: The Role of Urban Villages in Housing Rural Migrants in China. *Urban Studies*, 45(2), 313-330.
- State Council. (1998, July 3). The Notice on Further Reform of Urban Housing System and Speeding up Housing Development. Document No. 23.
- Sun, C. (2000). The Floating Population and Internal Migration in China. In X. Peng, & Z. Guo (Eds.), *The Changing Population of China* (Chapter 14, pp. 179-191). Oxford: Blackwell.
- Wang, S. (2008). *A History of Rural, Economic, and Social Policies in China*. Working Paper 8-13 of the Center for Social Development at Washington University in St. Louis. Retrieved October 12, 2011, from <http://csd.wustl.edu/Publications/Documents/WP08-13.pdf>
- Wang, Y. P. (2000). Housing Reform and its Impact on the Urban Poor in China. *Housing Studies*, 15(6), 845-864. <http://dx.doi.org/10.1080/02673030020002573>
- Wang, Y. P. (2004). *Urban Poverty, Housing and Social Change in China*. London: Routledge.
- Wang, Y. P., Shao, L., Murie, A., & Chenf, J. (2012). The Maturation of the Neo-Liberal Housing Market in Urban China. *Housing Studies*, 27(3), 343-359. <http://dx.doi.org/10.1080/02673037.2012.651106>
- Wang, Y. P., Wang, Y., & Wu, J. (2010). Housing Migrant Workers in Rapidly Urbanizing Regions: A Study of the Chinese Model in Shenzhen. *Housing Studies*, 25(1), 83-100.

<http://dx.doi.org/10.1080/02673030903362019>

- Wu, F. (2006). *Globalisation and the Chinese City*. London: Routledge.
- Wu, F. (2007). *China's Emerging Cities: The Making of New Urbanism*. London: Routledge.
- Wu, F. (2010). Property Rights, Citizenship and the Making of the New Poor in Urban China. In F. Wu, & C. Webster (Eds.), *Marginalization in Urban China: Comparative Perspectives* (Chapter 5, pp. 72-89).
- Wu, F. (2011). Retreat from a Totalitarian Society: China's Urbanism in the Market. In G. Bridge, & S. Watson (Eds.), *The New Blackwell Companion to the City* (Chapter 61, pp. 703-712). Chichester: Blackwell.
- Wuttke, C. (2011). From Industrial Enclaves to Prototypes of the Modern Chinese City: Development Zones in Guangdong, *Local Economy*, 26(5), 363-372. <http://dx.doi.org/10.1177/0269094211409137>
- Xu, J. (2001). The Changing Role of Land-Use Planning in the Land-Development Process in Chinese Cities: The Case of Guangzhou. *Third World Planning Review*, 23(3), 229-248.
- Zhang et al. (1993). *Hutongs of Beijing*. Beijing: Beijing Arts and Photography Publishing House.
- Zhang, L. (2008). Conceptualizing China's Urbanization under Reforms. *Habitat International*, 32(4), 452-470. <http://dx.doi.org/10.1016/j.habitatint.2008.01.001>
- Zhang, L., & Jiang, L. (2011). Housing Theories in Developing Countries: Multiple Trends and Incrementalism. *Urban Studies*, 18(3), 14-19.
- Zhang, L., Simon, X. B., & Tian, J. P. (2003). Self-help in Housing and Chengzhongcun in China's Urbanisation. *International Journal of Urban and Regional Research*, 27(4), 912-937. <http://dx.doi.org/10.1111/j.0309-1317.2003.00491.x>