



Renters' Housing Behaviour in Transitional Urban China

YOUQIN HUANG

To cite this article: YOUQIN HUANG (2003) Renters' Housing Behaviour in Transitional Urban China, *Housing Studies*, 18:1, 103-126, DOI: [10.1080/0267303032000076867](https://doi.org/10.1080/0267303032000076867)

To link to this article: <https://doi.org/10.1080/0267303032000076867>



Published online: 14 Jul 2010.



Submit your article to this journal [↗](#)



Article views: 354



View related articles [↗](#)



Citing articles: 8 View citing articles [↗](#)

Renters' Housing Behaviour in Transitional Urban China

YOUQIN HUANG

Department of Geography and Planning, University at Albany, Albany, NY 12222, USA

[Paper first received 22 January 2002; in final form 23 May 2002]

ABSTRACT *This paper aims to understand how renters make their housing decisions in urban China, where market mechanisms are being introduced into a previously welfare-oriented housing system. It is argued that while renters now enjoy more housing options, their choices are constrained not only by socio-economic factors as is the case in the West, but also by persisting socialist institutions such as the hukou system and work units. Using a national survey carried out in 1996 and a technique of multi-level modelling, the empirical study suggests that while private housing is becoming an important option, renters who can access public housing are still more likely to choose public housing because of heavy subsidies. Yet, renters with rural and temporary hukou, and those working in low-ranking work units are at a disadvantage in the housing market. In general they do not qualify for public housing, and private housing is their only option. Although the socialist housing system is under reform, it still defines renters' housing access and thus shapes their behaviour in the late 1990s.*

KEY WORDS: China, housing behaviour, renters

Introduction

As part of the institutional transition, housing reform in urban China aims to introduce market mechanisms into a previously welfare-oriented housing system. In contrast to the 'shock therapy' in Eastern European countries and the former USSR, China is following a path of gradual change (McMillan & Naughton, 1996), and a dual system with "new policies for the new housing stock, old methods for the old housing stock" (*xin fang xin zhi du, lao fang lao bai fa*) has been central to housing policies (State Council, 1998). While a housing market is emerging, socialist institutions continue to function in the housing system. This transitional nature of the housing system has created a different set of opportunities and constraints on housing behaviour from those in socialist and market economies. The aim of this paper is to understand how households choose their housing in such a unique context by focusing on the rental sector.

In socialist China, housing was considered to be a welfare benefit that the government or government agencies, such as work units and housing bureaux, should provide to households. While benefiting from housing subsidies, Chinese urban households virtually had no choice but to wait in a long queue for public

rental housing. The ongoing housing reform, launched nationally in 1988, has granted households a certain degree of freedom of housing choice. Sitting tenants of public housing are given the choice of either paying increased rents or purchasing their occupied flats at subsidised prices (Tolley, 1991), giving residents an opportunity to own a flat, something that was largely impossible before housing reform. In addition, private housing by developers and individual home owners is becoming a popular housing option, especially for those who have not had access to public housing. After decades of dependence on public housing allocation, Chinese urban households can now choose their preferred tenure (renting vs. owning) and housing (public vs. private housing). Instead of being forced to be renters of public housing in a socialist era when home ownership and private housing were discouraged, today's renters in China are a selective group who consciously made their housing decision. Thus it is important to understand the decision making of renters who are being given housing options and freedom of housing choice for the first time in decades.

However, the freedom of housing choice in the rental sector is constrained because of the persistence of socialist institutions such as the Household Registration (*hukou*) System and work units in the housing system. The *hukou* system in China was developed in 1950s, and it has been an important tool for government control (see Chen & Seldon (1994) for more details on the system). The *hukou* system, "an internal passport system" (Chan, 1994), divides the population into four groups based on birthplace (urban vs. rural) and registration status (permanent vs. temporary): a population with urban and permanent *hukou*, rural and permanent *hukou*, urban and temporary *hukou*, and rural and temporary *hukou*. A person's *hukou* status determines his/her socio-economic status and opportunities, e.g. employment opportunities and access to welfare benefits. Although the *hukou* system is becoming less important in Chinese society (Wang, 1997), it still defines people's access to subsidised rental housing. Only those with permanent *and* urban *hukou* can access public housing, while the rest have to provide alternative homes for themselves. Migrants with temporary *hukou* may have access to subsidised, but temporary, housing, such as dormitories and offices. In fact, for the first time peasants were allowed to move to cities in 1984, but only if they could supply their own food grain and accommodation (*Renmin Ribao*, 22 December 1984). Migrants, who usually have temporary *hukou* at the destination due to difficulties in changing *hukou* status (Huang, 2001), often live at construction sites, trading markets and in hotels, factory dorms and peasants' houses (Fan, 2001; Ma & Xiang, 1997; Solinger, 1995). In addition, work units continue to be the main housing provider, and public housing provided by work units is only available to those who are working in the state or collectively owned enterprises and government agencies. People working in the private sector, even if they have urban and permanent *hukou*, do not qualify for public housing provided by work units. Thus households with different *hukou* status and those working in different types of work units have been segmented into different housing sectors within which they exercise their limited freedom of housing choice. Yet, little is known about how households respond to the emerging housing options and persisting institutional constraints in a transitional housing system such as that in urban China.

It is the aim of this paper to study the 'matching' between households and different types of rental housing in transitional urban China. It is hypothesised that socio-economic factors begin to influence renters' housing choices as is the

case in the West. Yet institutional factors, such as the *hukou* system and work units, continue to play significant roles in the housing system and thus shape renters' housing behaviour. After a brief literature review, a framework will be presented based on the institutional relationships between major housing actors, and this will be followed by a discussion on possible housing options in urban China, and corresponding access requirements defined by socialist institutions. Then, using a national survey, renters' housing choices and their determinants will be empirically studied.

Literature Review and the Research Context

As private housing dominates most Western housing markets, the existing literature on housing behaviour focuses mainly on the choice between private rental and home ownership. While economists argue for the importance of income, house prices and housing market changes in home ownership (Arnott, 1987), sociologists and demographers focus on household characteristics (e.g. age, household size and marital status, the birth of a child) and macro socio-economic contexts such as class and ethnic division (e.g. Clark *et al.*, 1994; Myers, 1990; Rossi, 1980). In contrast, the choice of public and private housing within the rental sector is largely ignored because public housing accounts for a very small share of the housing stock.

In some European countries such as Britain and Netherlands, public housing plays a more important role and serves a more diverse population, especially in the post-war era (Clark & Dieleman, 1996). The recent growth in private rental housing (Wilcox, 1997) and the Right to Buy legislation in Britain (Forrest & Murie, 1983, 1990) have generated more research on renters' housing behaviour. Private rental housing in Britain was perceived as less desirable than public rental housing, and it served as a 'stepping stone' to social housing and eventually owner occupancy (Murie *et al.*, 1976). However, in recent years a process of 'residualisation' has been taking place in the public rental sector because better-off tenants of public housing are allowed to purchase their homes and become owners (Right to Buy) (Forrest & Murie, 1990), and there is a significant increase in residential mobility (Burrows, 1999). Therefore, the prevailing image of public housing has deteriorated (Power, 1997) and the proportion of households living in public housing has declined (Burrows, 1999). While the private rental sector continues to be the net exporter, households may move away from public renting to private renting for better housing or a better neighbourhood, or because of instability in personal relationships (Kemp & Keoghan, 2001). The choice between public and private renting is now more complex because of the residualisation process, an increasing number of breakdowns in relationships and tenants' increasing desire to exercise their housing choice.

While sharing some similarities with the British housing markets, the Chinese housing system is unique in nature such that a different conceptualisation is needed to understand housing behaviour in urban China. In socialist China, the housing stock was dominated by public rental housing with less than 20 per cent of private housing, which was mainly for owner occupancy (Bian *et al.*, 1997). Households had virtually no choice but to wait for the allocation of public rental housing. With the recent reforms, private housing by developers and individual

owners offers renters another option. It is necessary to understand how renters, who are now given options of different types of rental housing, make their housing decision.

Furthermore, the perception of public rental housing is different in China. In the West, public housing is often associated with poor quality and low-class stigma, thus is usually considered undesirable. Even though public rental housing in Britain was preferred to private rental housing (Murie *et al.*, 1976), the recent residualisation reinforces the negative image of public housing in the West. In socialist China, public housing was occupied mainly by the privileged groups (Bian *et al.*, 1997; Zhang, 1998), and the less privileged ones inhabited private self-built housing (Zax, 1997). Although equity is the goal of mass public housing, ironically, inequality is often embedded in the provision and allocation process (Bian *et al.*, 1997; Szeleny, 1983). While high quality private housing by developers has recently become highly desirable, access to public rental housing is still considered a privilege because of heavy subsidies.

Although discrimination is often practiced in housing markets (Galster, 1988; Massey & Denton, 1993), Western models generally assume freedom of housing choice. Residents can choose different types of housing based mainly on personal preference, family needs and affordability. In the socialist housing system where private housing and home ownership were discouraged, there was clearly much less freedom of choice. Although households now enjoy some freedom of housing choice, their housing decisions are constrained not only by household characteristics but also by persisting socialist institutions such as the *hukou* system and work units. With different housing stocks, housing perceptions and housing constraints in urban China, a modified conceptualisation of housing choice is needed to better understand housing behaviour in China. From the perspective of a transitional economy, a framework is proposed which is based on the institutional relationship between the main agents in the housing system, and it will be discussed in detail in the next section.

In addition, housing literature on China has been very limited until the recent reform. The existing housing research on China is mostly policy oriented and focuses mainly on the macro aspects of the housing system such as housing stocks, housing policies, housing problems and recent housing reform (e.g. Kirkby, 1990; Wang & Murie, 1999; Zhang, 1998; Zhou & Logan, 1996). The housing reform has changed the housing provision and allocation significantly, which has led to different housing behaviours. Yet, micro level research on housing is very limited. Recent research by Li (2000a, 2000b), Huang & Clark (2002), and by Ho & Kwong (2002) has provided important findings on housing behaviour in urban China. Based on his research on Guangzhou and Beijing, Li argues that the housing market is segmented and there are different forces governing tenure decisions in private and public housing sector. Both Li and Ho and Kwong argue that the traditional welfare-oriented housing system still imposes a significant influence on housing consumption even in cities known for their market orientation. Huang & Clark (2002) set tenure decisions in the larger context of institutional transition from a socialist toward a market economy. They argue that both market mechanisms and socialist institutions affect tenure choice in transitional urban China. They also argue that there are significant regional differences in the rate of home ownership and tenure decision. While we begin to understand tenure decision in China, more research is needed to better understand housing behaviour in the transitional context.

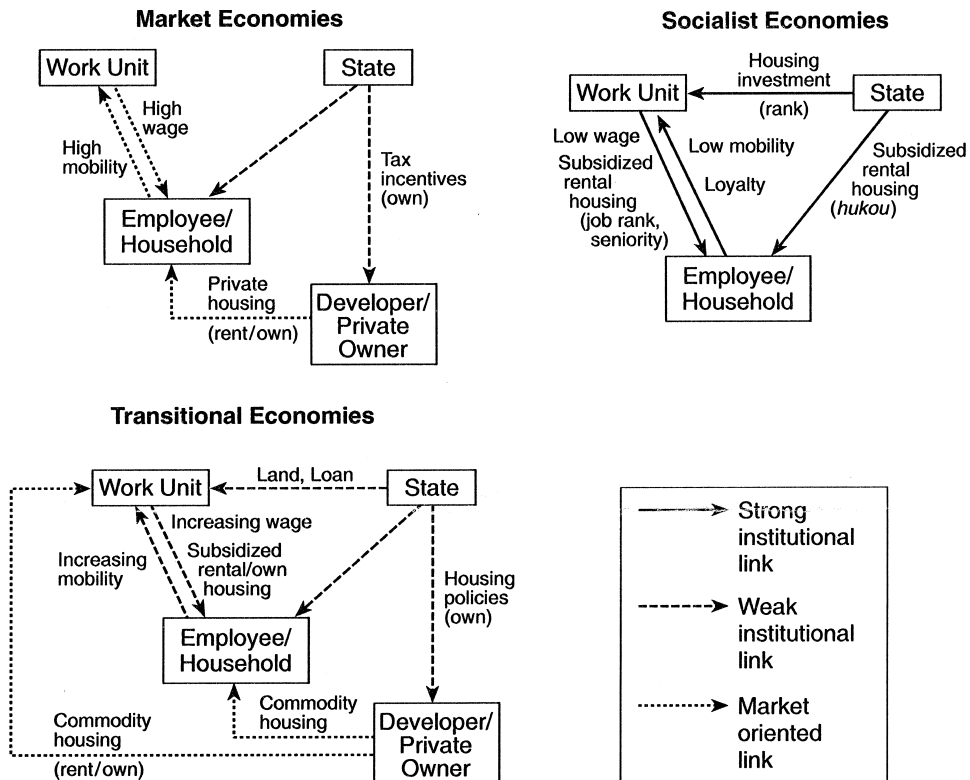


Figure 1. Institutional relationships and housing choices in different economies.

Institutional Relationships and Housing Behaviour

Housing decisions are never made in a vacuum. In addition to household characteristics and housing market factors (Clark *et al.*, 1994; Deurloo *et al.*, 1994), it is argued that the institutional relationships between the main agents in the housing system shape housing behaviour. There are different sets of institutional relationships in different housing systems. In market economies, these relationships are relatively straightforward and they are often ignored in the literature. With developers as the dominant housing providers, employers (or work units, as they are called in China) and the state have virtually no housing responsibility to employees or households. An exception is in the case of company towns where employers are the main housing providers to their employees. In some European housing systems such as that in the UK, the state also provides some public housing. Employers pay relatively high wages to their employees, who then rent or purchase housing from the market (Figure 1). With a few exceptions, the state has limited influence on housing behaviour through housing policies such as tax incentives to encourage home ownership. There is no direct housing relationship between the state and employers. Thus, the relationships between the state, employers and households are economically based, which leads to the importance of personal preference, household characteristics and affordability in housing decisions. As will be shown, the institutional relation-

ships between these agents are rather different in socialist and transitional economies, which limits the applicability of existing theories, most of which are developed in Western housing markets.

In socialist urban China, housing was considered a welfare benefit. Both employers (work units) and the state had a responsibility to provide subsidised housing while they paid low wages to employees. The allocation of public housing was based on a set of criteria such as job rank and job seniority, so that people with a higher job rank and job seniority were more likely to access public housing. Job rank, from the lowest to the highest, includes ordinary workers or staff, a group or team leader, village cadre, township level cadre, section (*gu*) level cadre, division (*ke*) level cadre, department (*chu*) level cadre and Bureau (*ju*) or higher level cadre. Job seniority means the number of years a person has worked in a work unit. The state played two important roles in the system. First, it provided housing investment to work units who then developed housing for their employees. The allocation of housing investment was based on the administrative rank of work units with high-rank work units receiving more investment (Wu, 1996). Work units in China are classified into different ranks based on their importance to the national economy. The rank of work units, from the lowest to the highest, includes village/section (*gu*) level, township/division (*ke*) level, county/department (*chu*), prefecture/bureau (*ju*), province/ministry level (*bu*) and central level (*zhongyang*). Second, the state directly provided housing (through local government agencies, Housing Bureaus) to households who could not access housing from their work units. Yet, only households with urban and permanent *hukou* qualified for housing provided by the state. Thus there was strong housing dependency between the three agents in the socialist era, and households had little freedom of housing choice.

Housing reform has changed the nature of the housing system in urban China. The institutional relationships between work units and employees have been changing from the previously symbiotic and interdependent relationship towards a simpler wage-based relationship. On the one hand, work units have gradually given up their responsibility for housing provision and have substituted in-kind subsidies with monetary rewards through higher wages (World Bank, 1992). Employees who have not had access to public housing are expected to purchase housing from the market (Tolley, 1991; Wang & Murie, 1999; Zhou & Logan, 1996). On the other hand, work units continue to provide housing subsidies because of the long-term socio-economic interdependency between employees and employers. Employees can continue to rent public housing. Rent for public housing, which used to be only 1–2 per cent of household income in the 1980s and early 1990s, is gradually increasing and is expected to reach 15 per cent of household income in 2000 (State Council, 1994 No. 43). Although rent is increasing, it is still less than a quarter of the market level. In addition, there are various new subsidies, such as housing vouchers (Wang & Murie, 1999) and monetary housing subsidies (*zhu fang bu tie*), to compensate for the increasing house prices. In regions where the ratio of house price (for a 60m² affordable housing) to household income is larger than 4, a work unit can issue monetary housing subsidies to households with no housing or those whose housing consumption is below the standard set up by the government (State Council, 1998 No. 23). These new forms of housing subsidies, many of which are still based on factors such as job rank and job seniority, are testimonies of lingering, although changing, housing dependency between employers and employees.

The roles of the state are also changing in the transitional economies.

Although the state still plays a significant role in aspects such as providing loans and land for housing development and setting up housing policies, it no longer allocates housing investment to work units, who are now responsible for housing investment from their own budgets (Logan *et al.*, 1999). Thus work units with more resources, often high-rank work units, are able to provide more subsidised housing to their employees. In contrast, employees who are working in 'poor' work units with few housing resources have no choice but to turn to the private sector. The state also no longer provides new housing directly to households. Instead, it attempts to affect housing behaviour through housing policies.

In addition to the changes in the relationships between three existing agents, private housing providers such as developers and individual home owners become increasingly important actors in the housing system. They provide private housing to households as well as work units who then allocate the housing to their employees with certain subsidies. The availability of private housing introduces a new set of housing constraints. Compared to the dominance of institutional variables such as *hukou* status, work unit rank, job rank and job seniority in the allocation of public housing, household characteristics (e.g. age and income) and housing market factors (e.g. house prices) are becoming important in the access of private housing. Thus housing decision in transitional economies is more complex due to the availability of both public and private housing, and the co-existence of both socialist institutions and market mechanisms.

In summary, the housing system in urban China is in the process of changing from a welfare-oriented housing system with strong institutional relationships among the state, work units and households towards a market-oriented housing system with relatively weaker institutional relationships but stronger market influences among the three agents. While households now enjoy more housing options, they face a set of constraints that are more complex than ever. From the perspective of transitional economy, both market forces and socialist institutions that affect housing behaviour can be studied. At the same time, the framework of institutional relationships allows an examination of housing behaviour not only from the perspective of households and the housing market, but also from the position of households in relation to other housing agents in the system.

Housing Options and Institutional Constraints in the Rental Sector

Because of the transitional nature of the housing system in urban China, housing behaviour is mediated by a different set of constraints from that in both socialist and market economies. In addition to micro factors such as affordability and family needs, housing behaviour is also affected by two different macro factors. On the one hand, renters now enjoy more housing options than in socialist era; on the other hand, their housing access and options are still constrained by persisting socialist institutions. To better understand renters' housing behaviour, a closer examination of these factors is necessary.

In contrast to the singular housing provision in the socialist era when public rental housing was the only option, a multi-layered housing system with different options has been formed in transitional urban China (see Figure 2). First, to reiterate, while work units and housing bureaux continue to provide public housing, private actors such as developers and individual owners are

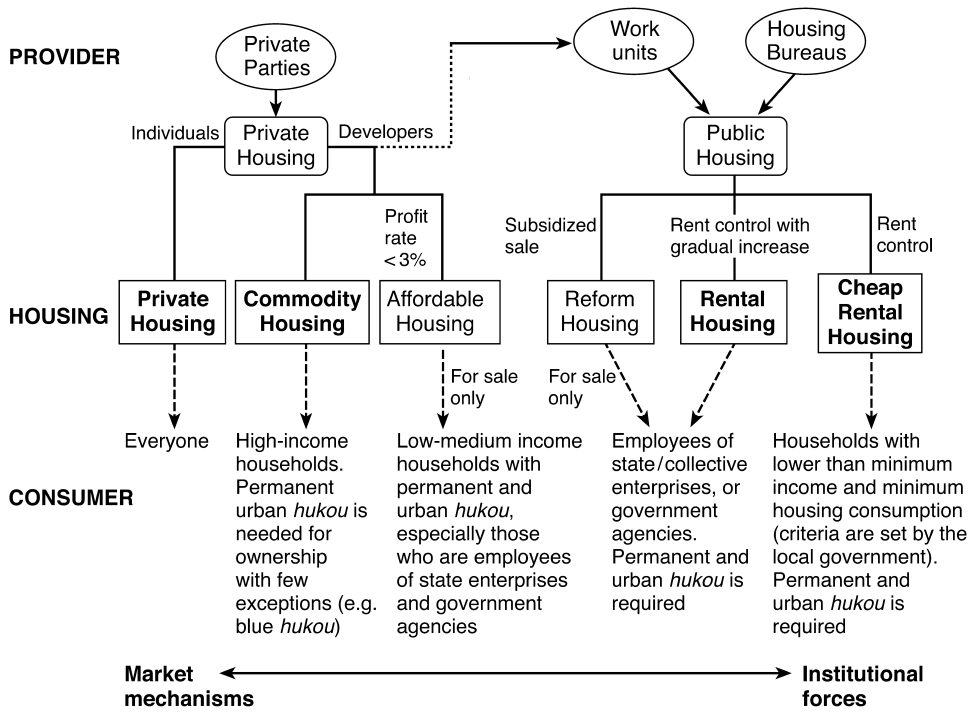


Figure 2. Housing provision and consumption in transitional urban China.

becoming important housing providers. Second, there are different types of housing within both the public and private sector. In the public sector, households can choose between 'reform housing' (*fang gai fang*), public housing sold at subsidised prices (e.g. the 'market price' (*shi chang jia*), 'cost price' (*cheng ben jia*) and the 'standard price' (*biao zhun jia*)), 'rental housing' (*zu lin fang*), public housing with an increased rent, and 'cheap rental housing' (*lian zu fang*), heavily subsidised housing for households with a minimum income and housing consumption. In the private sector, households can choose between 'commodity housing' (*shang ping fang*) and 'affordable housing' (*jingji shiyong fang*) provided by developers, and 'private housing' (*si fang*) by home owners who are recently given the freedom to sell or sublease their housing. 'Commodity housing' is the newly built private housing by developers. It is similar to private housing in the Western housing market, except that it is mainly for sale. 'Affordable housing' is a type of 'commodity housing' with government subsidies. The price of 'affordable housing' is set in such a way that it can cover its costs and include some profit (*bao ben wei li*). Its profit rate has to be less than 3 per cent (State Council, 1998). Every developer is required to construct 'affordable housing' that accounts for at least 20 per cent of its total housing development (State Council, 1994).

The development of private housing and a secondary housing market has been encouraged as an important method of privatising the housing sector. Urban households in China therefore now enjoy a range of housing options. As

'affordable housing' is, in principle, for sale (State Council, 1998) and 'reform housing' is public rental housing for sale, the options for renters include 'private housing' by individuals and 'commodity housing' by developers in the private sector, and 'rental housing' and 'cheap rental housing' in the public sector. Compared to the pre-reform era when public rental housing was the only option, renters now clearly enjoy more housing options.

However, not every renter can enjoy all these options. The persisting *hukou* system and the work-unit based allocation system have segmented households with different *hukou* and work units into different housing sectors where housing options are limited. Because of its heavy subsidies, the 'rental housing' is available only to people with permanent and urban *hukou*, and the 'cheap rental housing' is available only to households with permanent and urban *hukou* and who meet the minimum income and housing consumption criteria set up by the local government. Thus, households with rural and temporary *hukou* (e.g. most migrants) do not qualify for either 'rental housing' or 'cheap rental housing', no matter how low their income is and how desperate their housing condition is. Furthermore, 'rental housing' provided by work units, usually state- or collectively-owned enterprises and government agencies, is only available to their own employees who have permanent and urban *hukou*. In other words, people working in private sectors and those working in public sectors but with temporary or rural *hukou* are disadvantaged in the rental housing market. They may have access to temporary housing provided by work units such as dormitories, but they do not qualify for any type of long-term public housing.

Since 1988, private housing has been an additional housing option, especially for those who do not have access to public housing. Yet, compared to its contribution to an increase in home ownership, its roles in the rental sector are so far limited and a private rental market is still under-developed. First, individual owners contribute only a small amount of housing to the rental stock because per capita living space in urban China is very low (in 1997 it was only 8.8 m², ECCRESY, 1999, p. 87) and most individual owners are those who recently purchased their flats mainly for owner occupancy. In addition, there are various restrictions on leasing housing by individual home owners. For example, owners who purchased their flats at subsidised prices cannot release their flats on the market and profit from them in the first five years. In order to promote the development of the secondary housing market, the 'five year' limit is later removed if the owner can pay the part of the price that is subsidised by the housing bureau or work unit. Yet, a flat purchased at 'standard price' is still not allowed to be released on to the market (Ministry of Construction, 1999). When they are on the market, the housing bureau or work unit, the original provider, has priority to buy or rent them back. The gains from the transition must be shared between the housing bureau/work unit and individual owner according to their contributions for the original purchase (Ministry of Construction, 1999). In addition, owners have to obtain a license from the local government in order to sublease their housing legally. These restrictions, as well as high transaction costs and the heavy bureaucracy involved, discourage most owners from subleasing, although some households sublet their flats illegally on the black market.

Second, 'commodity housing' by developers is mainly for owner occupancy, thus its share in the rental stock is also limited. Although there is a large demand for rental housing, the demand for rental 'commodity housing' is small because of the high cost of 'commodity housing' and relatively low mobility in Chinese society. Households who can afford 'commodity housing' in general prefer owning than renting. Correspondingly, developers prefer quick profits through sales than long-term investments in apartment buildings because of the historical discouragement of private rental housing in the socialist era and uncertainty of government policies. There is a small sector of rental 'commodity housing' in big cities such as Beijing, yet, it mainly targets foreigners while Chinese citizens are, in general, not allowed to live in those complexes.

In summary, there are more housing options for renters in transitional urban China. Yet, not every renter can enjoy all options because of the persistence of the socialist institution in the housing system. Using a framework based on institutional relationships between main agents in the housing system, it is hypothesised that renters' housing behaviour is affected by not only socio-economic factors, but also institutional factors that define renters' relationships with work units and the state. It is also hypothesised that households with closer relationships with the public housing agents, indicated by urban and permanent *hukou*, high job rank, job seniority and high work-unit rank, are more likely to choose public than private housing. The following empirical analysis will test these hypotheses.

Empirical Analysis

Data and Methodology

The study utilises a national survey of *Life Histories and Social Change in Contemporary China* in 1996, which employs a multi-stage probability sampling stratified by education level (Treiman, 1998). This survey is a national survey with two classifications, rural and urban. Only the urban sample is relevant here. The survey follows Chan's classification of administrative hierarchy in China, which has clarified the relationship between different hierarchies. According to Chan (1994), county-level units include cities and counties in prefecture and autonomous prefecture, and city districts and counties in prefecture-level and provincial-level cities. Township-level units include town, townships and streets in county-level units, and the village-level units include residents' committees and village committees. The county-level units serve as the primary sampling units (PSUs). The PSUs are stratified into 25 equal population strata according to the county-level proportion of the population aged 20–69 with at least middle school education, which is obtained from the 1:100 subset of the 1990 census (Figure 3). Two county-level units are selected from each stratum with probability proportional to population size (PPPS). Then one township-level unit is selected from each selected county-level unit, and two village-level units are selected from each selected township level unit with same probability sampling technique. Within each village-level unit, 30 households are randomly selected. More than 3000 urban households were surveyed nationwide, of which about 53 per cent are renters.

It is expected that the dataset has cluster effects given its multi-stage sampling design, which violates the assumption of independent observations in the

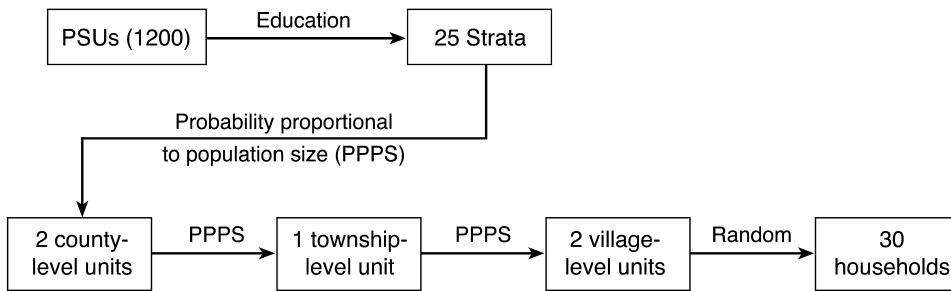


Figure 3. Sample design and sampling technique.

ordinary least square (OLS) regression. Thus a multi-level analysis, which is designed for dependent observations, is used in this research. Since households in the same city are under the constraints of same local housing policies and same housing stock, they are more likely to have similar choices than households in another city with different housing stocks and housing policies. Therefore, a cluster effect exists in housing choices at the city level, which will be taken into account in a two-level modelling with city (county-level unit) as the macro-level and individual households as the micro-level. Two reasons led to the decision that only county-level units, not the township level and village-level units, should be considered a statistical level in the multi-level analysis. First, the majority of the correlation among observations is occurring at the county level according to the sampling design test (Treiman, 1998). Second, households in different residents' committees (village-level units) in the same city share the same housing stock and housing market, from which they exercise their housing choices. In general, there are no factors unique to a specific residents' committee, which make its households behave similarly among themselves, but differently from households in another residents' committee. In other words, residents' committees do not really have contextual effects on households' housing behaviour and thus they are not considered as a level in the analysis. Similarly, township-level units are not considered as a level.

Furthermore, housing reform is uneven across cities and there are significant differences in rental housing choice across cities. Thus a random effect model is used to capture the regional differences. In other words, a two-level (with households as level one units and county-level units (cities) as level two units) multi-nomial logistic regression with random effects will be conducted to analyse renters' housing choices. According to the survey, renters' housing choices can be classified into public housing provided by work units, public housing provided by housing bureaux, private housing and others. 'Cheap rental housing' and 'rental housing' cannot be differentiated among public housing. Private housing and others are combined due to relatively small numbers of observations.

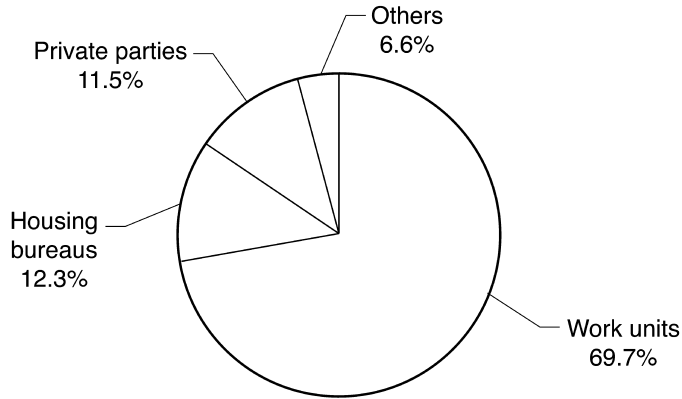


Figure 4. Housing choices in the rental sector, 1996.
Source: 1996 survey.

Descriptive Analysis

Although private housing is an increasingly important option, most renters still choose public housing. According to Figure 4, about 70 per cent of renters live in public housing provided by work units, 12.3 per cent in public housing provided by housing bureaus, and only 11.5 per cent and 6.6 per cent in private housing and others, respectively. The pattern of housing choices varies significantly across cities, indicated by very different rates of non-public housing (private or others) between cities (Figure 5). It ranges from 0 in a few cities to 100 per cent in Putian City in Fujian province, with a mean of 18.0 per cent and a standard deviation of 25.6 per cent. In coastal and small cities, renters seem to be more likely to choose non-public rental housing.

Housing choices also vary between different groups of renters. First, they vary by age. While more than 60 per cent of renters in all age groups choose public housing provided by work units, younger generations are less likely to choose public housing provided by housing bureaus (6.3 per cent of renters in their early twenties vs. 26.7 per cent of people aged 65–69) (Figure 6). Instead, they are more likely to live in private housing and others. More than a quarter of renters aged 20–24 (25.6 per cent) live in non-public housing, compared to only 9.5 per cent of those aged 65–69. In addition to the fact that young people are more open to new types of housing, institutional factors contribute to the age difference in housing type choices. According to the traditional allocation system, the young are less likely to obtain subsidised housing because of their generally low job rank and low seniority. Although young people are as likely to live in work-unit housing as older generations, they are more likely to live in temporary housing instead of flats. For example, while more than two-thirds (68.1 per cent) of renters aged 20–24 live in work unit housing, 42.4 per cent of them live in temporary housing such as dormitories and offices.

Second, renters' choices also vary by household income. Again, every income group is more likely to choose public housing provided by work units (Figure 7). Especially in medium-income households (10 000–25 000 *yuan*/year) (the

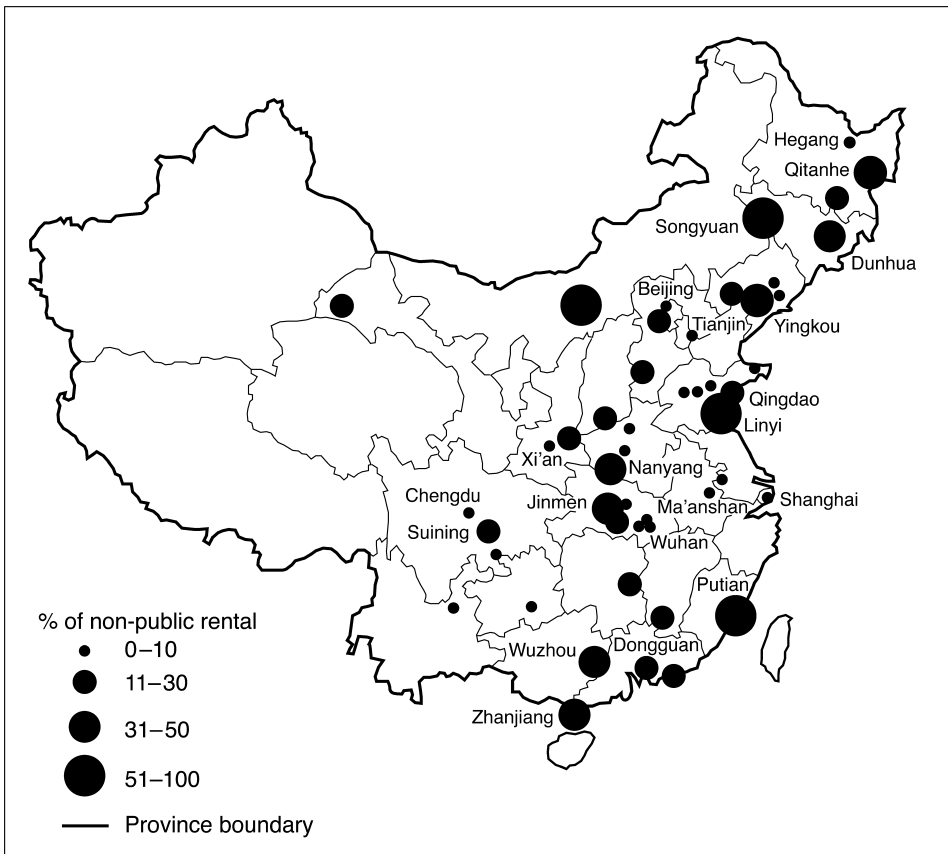


Figure 5. The rate of non-public rental in surveyed cities, 1996.

median household income for households living in rental housing is 11 000 *yuan*), more than 70 per cent choose work unit housing. In contrast, both low (< 5000 *yuan*/year) and high-income groups (> 25 000 *yuan*/year) are more likely to choose housing provided by housing bureaux (17.4 per cent and 18.1 per cent, respectively), and private housing and others (30.1 per cent and 19.4 per cent, respectively). It seems puzzling that a large percentage of the high-income group choose public housing, and a large percentage of low-income households choose private housing/others, given the former is subsidised and the latter is in general more expensive. Yet, with the persistence of institutional constraints in housing access, income is not the only factor affecting housing choice. For example, as mentioned earlier, permanent and urban *hukou* are the two main requirements for accessing subsidised public housing in urban China, which limits housing options for households with rural and temporary *hukou*. According to Figure 8, only about half of households with rural *hukou* (55.2 per cent) or temporary *hukou* (52.6 per cent) live in public housing provided by work units or housing bureaux, compared to the majority of households with urban (87.7 per cent) or permanent *hukou* (88.2 per cent) who live in public housing. Although the *hukou* system is under reform, clearly it is still an important factor affecting people's access to urban housing, especially subsidised public housing.

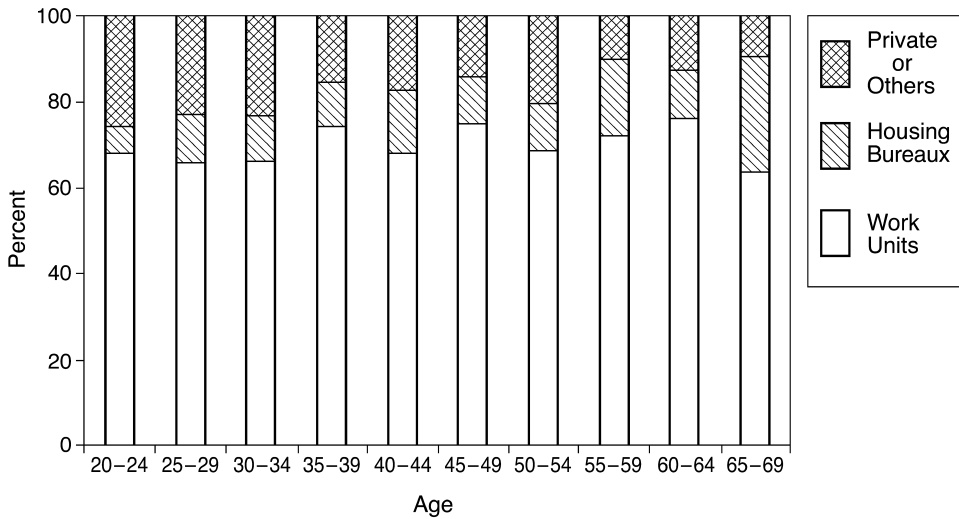


Figure 6. Housing choices by age group in the rental sector, 1996.

Source: 1996 survey.

Not surprisingly, renters living in different types of housing have different characteristics (Table 1). First, renters who choose private housing and others are generally younger (mean age 37.6), less educated (years of schooling 9.1) and have lower income (median household income 10 000 *yuan* annually) than those who choose public housing. It seems odd that the disadvantaged groups live in

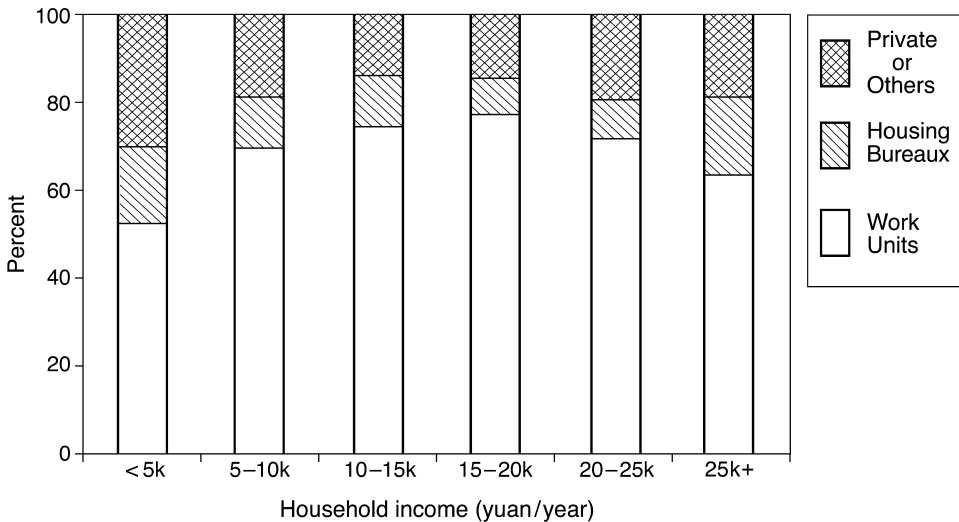


Figure 7. Housing choices by household income in the rental sector, 1996.

Source: 1996 survey.

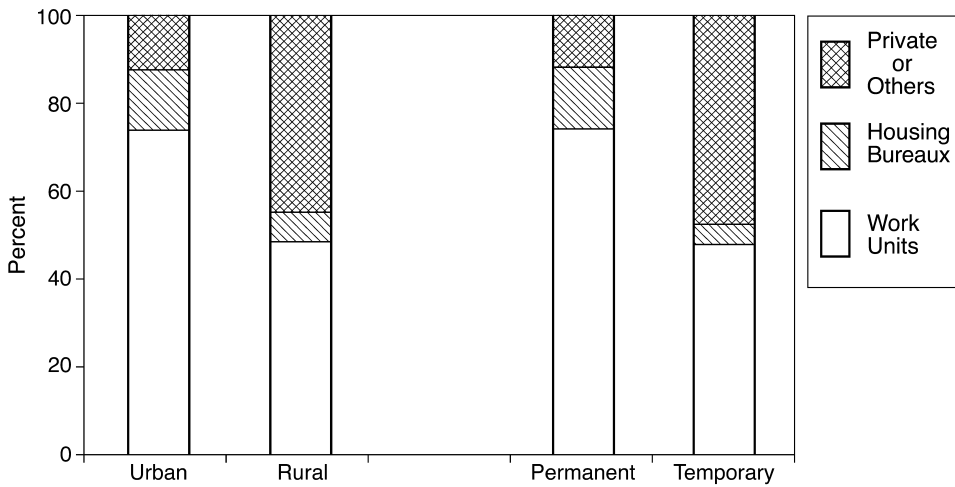


Figure 8. Housing choices by *hukou* in the rental sector, 1996.

Source: 1996 survey.

private housing, which is often more expensive. Yet, they have unfavourable *hukou* status. They are much more likely to hold rural (43.8 per cent) and temporary *hukou* (45.8 per cent) than those in work-unit housing (12.3 per cent, 12.0 per cent) and housing bureau housing (9.4 per cent, 6.4 per cent). Although they have a relatively high job rank, they have low seniority and work in low-rank work units. Second, within the public sector, those who live in housing provided by a housing bureau generally have lower socio-economic and institutional status than those in work unit housing. They are relatively older, less educated, poorer and have fewer workers in the household. They also have a lower job rank, less seniority and work in lower-rank work units. Yet, they are less likely to have rural and temporary *hukou*. These different profiles in the public sector are expected because the goal of housing bureaus is to provide housing to local urban households who cannot obtain housing from their work units.

In addition, there are considerable variations in housing quality between different types of rental housing. In general, public housing provided by work units is in the best condition followed by public housing provided by housing bureaus, and then private housing/others. In general, the newly built commodity housing by private developers is of good quality. Yet, this type of housing is mainly for owner occupancy by the Chinese, which is not included in this analysis. Work unit housing is the least crowded with the largest rooms per person (0.9) and space per person (14.0 m²) (Table 2). It also has better facilities, indicated by the higher number of flats equipped with private bathrooms, piped gas and tap water. An exception is that housing provided by housing bureaus is more likely to be facilitated with piped gas than work unit housing. However, public housing provided by work units (24.7 per cent) and housing bureaus (14.1 per cent) is older than private housing (58.7 per cent),

Table 1. Household characteristics by housing type, 1996

	Work units	Housing bureaux	Private parties or others
Age (mean)	41.34	44.72	37.64
Education (average years of schooling)	10.04	9.44	9.07
Marital status (% of married)	87.20	93.10	87.21
Average household size (persons)	3.17	3.10	3.10
Number of workers	1.70	1.52	1.69
Median household income (<i>yuan</i>)	12 000	10 000	10 000
<i>Hukou</i> classification (% of rural <i>hukou</i>)	12.28	9.41	43.77
<i>Hukou</i> location (% of temporary <i>hukou</i>)	12.03	6.44	45.79
Job rank	1.75	1.47	2.23
Job seniority (years)	8.75	8.01	7.01
Work unit rank	2.54	2.41	2.41

Source: 1996 survey.

Table 2. Housing conditions of different rental housing, 1996

	Work units	Housing bureaux	Private parties or others
Rooms per person	0.85	0.81	0.74
Space per person (m ² /person)	14.02	13.54	13.51
Private bathroom (%)	67.42	54.19	41.75
Piped gas (%)	19.25	23.15	12.79
Tap water (%)	93.90	90.15	84.18
Year built (%)			
Before 1980	31.86	47.06	11.64
1980–89	43.47	38.82	29.63
1990–96	24.66	14.12	58.73

Source: 1996 survey.

with a smaller share of housing built in the 1990s, which indicates a decreasing role of work units and housing bureaux in housing provision since the reform was launched in 1988.

Multi-level Multi-nomial Logistic Regression

In general, the descriptive analysis supports the hypothesis that renters' housing choices are affected not only by socio-economic but also institutional factors. A further statistical test of the hypothesis uses a multi-level multi-nomial logistic regression. The dependent variable is renters' housing choices; public housing provided by work units, public housing provided by housing bureaux, private housing/others (reference). There are three sets of independent variables that

Table 3. Definitions and descriptive statistics of variables

	Percentage	Mean	S.D.
Dependent variables:			
Housing choices			
1: housing by work units	69.66		
2: housing by housing bureaux	12.32		
3: private housing/others (reference)	18.02		
Independent variables:			
<i>Socio-economic variables:</i>			
Age		41.98	13.47
Education (years of schooling)		8.58	3.98
Household size		3.42	1.31
Number of workers		1.93	1.08
Household income (yuan)		14 456	46 562
Marital status			
1: Married	89.76		
0: Otherwise	10.24		
<i>Institutional variables:</i>			
Hukou classification			
1: Rural hukou	14.76		
0: Urban hukou	85.24		
Hukou location			
1: Temporary hukou	11.55		
0: Permanent hukou	88.45		
Job rank		1.75	1.71
Job seniority		9.44	9.09
Work unit rank		2.36	0.85
<i>City-level variables:</i>			
Sale price for commodity building (yuan/m ²)*		1423	1011

Note: * 1994 data

Source: 1995 Urban Statistical Yearbook of China

are used to test the impact of socio-economic, institutional and city-level variables (Table 3). The socio-economic variables include age, education, marital status, household size, number of workers and household income. It is expected that they all have positive effects on choosing public rental housing, except that a high household income encourages the choice of private housing. The second set are institutional variables characterising the relationship between renters and their work units, and the state. It includes *hukou* classification (rural vs. urban *hukou*) and *hukou* location (temporary vs. permanent *hukou*), work-unit rank, job rank and job seniority. It is expected that rural *hukou* and temporary *hukou* have negative effects, while work-unit rank, job rank and seniority have positive effects on the choice of public rental housing. The third set includes a single city-level variable, sale price for commodity building (including housing, office and other commercial buildings). It is considered as a proxy for market house prices. High housing prices are expected to encourage the choice of public rental housing due to its subsidies.

The model is a multi-level multi-nomial logistic regression with a random intercept. It has the following format:

$$\begin{aligned} \text{Level 1: } \text{Prob}(Y = 1) &= P_1 & \left\{ \begin{array}{l} \text{1: housing by work units} \\ \text{2: housing by housing bureaus} \\ \text{3: private housing or others} \end{array} \right. \\ \text{Prob}(Y = 2) &= P_2 \\ \text{Prob}(Y = 3) &= P_3 = 1 - P_1 - P_2 \end{aligned}$$

$$\log \frac{P_1}{P_3} = \beta_{01} + \beta_{i1} * X_i + \beta_{j1} * X_j$$

$$\log \frac{P_2}{P_3} = \beta_{02} + \beta_{i2} * X_i + \beta_{j2} * X_j$$

$$\begin{aligned} \text{Level 2: } \beta_{01} &= \eta_{001} + \eta_{011} * X + \mu_{001} \\ \beta_{i1} &= \eta_{i01} \\ \beta_{j1} &= \eta_{j01} \\ \beta_{02} &= \eta_{002} + \eta_{012} * X + \mu_{002} \\ \beta_{i2} &= \eta_{i02} \\ \beta_{j2} &= \eta_{j02} \end{aligned}$$

Y : Choice of different types of rental housing

P_i : Probability of choosing housing type i ($i = 1, 2, 3$)

X_i : Socio-economic variables ($i = 1, 2, \dots, 6$)

X_j : Institutional variables ($j = 1, 2, \dots, 5$)

X : City-level variables

μ_{001} : Random effect of the intercept for category 1, assuming $\mu_{001} \sim N(0, \tau_{001}^2)$

μ_{002} : Random effect of the intercept for category 2, assuming $\mu_{002} \sim N(0, \tau_{002}^2)$

The level 1 equations are a multi-nomial logistic regression of the probability of choosing housing type i (P_i) on socio-economic (X_i) and institutional variables (X_j). Both intercepts (β_{01}, β_{02}) and coefficients ($\beta_{i1}, \beta_{i2}, \beta_{j1}, \beta_{j2}$) at level 1 are dependent variables at level 2. The intercepts have random effects μ_{001} and μ_{002} to depict the inter-city heterogeneity in the average level of the probability of choosing housing type i , and city-level variable house price (X) is used to partially explain the variations. The coefficients for socio-economic and institutional variables are fixed.

The model is significant, and the results support the hypothesis that renters' housing choice is determined by not only socio-economic but also institutional factors (Table 4). First, with the introduction of market mechanisms, renters' housing decision shares some similarities with that in the market economies. For example, age has a positive effect (0.024) on choosing public housing by work units, but education (-0.064) and household income ($-2.2E-05$) have negative effects on choosing public housing provided by housing bureaus. In other words, while the elderly are more likely to choose public rental housing provided by work units than private housing, educated and better-off renters are more likely to choose private housing than public housing provided by housing bureaus. These results are expected as seniority is beneficial to access public housing and private housing is, in general, more expensive.

Second, with the promotion of a dual housing system, the institutional factors continue to affect the choice between different types of rental housing. As expected, both *hukou* classification and *hukou* location have negative effects on choosing public rental housing. Renters with rural and temporary *hukou* are 45 per cent (odds ratio = 0.55) and 66 per cent (odds ratio = 0.34), respectively, more likely to choose private housing/others than work unit housing, and they are about 29 per cent (odds ratio = 0.712) and 95 per cent (odds ratio = 0.075) more

Table 4. Multi-level multi-nomial logistic regression on housing choices in the rental sector

Independent variables	Work units			Housing bureaux		
	Coeff.	SE	Odds Ratio	Coeff.	SE	Odds ratio
<i>Socio-economic variables:</i>						
Age	0.024	0.009	1.024***	0.011	0.012	1.011
Education	-0.010	0.027	0.990	-0.064	0.035	0.938*
Marital status (1: married; 0: otherwise)	-0.627	0.285	0.534**	0.065	0.432	1.067
Household size	0.059	0.092	1.061	-0.044	0.130	0.957
Number of workers	-0.046	0.136	0.955	-0.010	0.184	0.990
Household income	-1.0E-0-5	7.0E-06	1.000	-2.2E-05	1.2E-05	1.000*
<i>Institutional variables:</i>						
<i>Hukou</i> classification (1: rural; 0: urban)	-0.601	0.323	0.548*	-0.340	0.510	0.712
<i>Hukou</i> location (1: temporary; 0: permanent)	-1.094	0.319	0.335***	-2.597	0.546	0.075***
Work-unit rank	0.207	0.063	1.230***	0.192	0.091	1.212**
Job rank	-0.061	0.057	0.941	-0.159	0.088	0.853*
Job seniority	-0.002	0.012	0.998	-0.022	0.017	0.978
<i>City-level variables:</i>						
Commodity building price (<i>yuan</i> /m ²)	2.5E-04	2.2E-04	1.000	0.001	2.5E-04	1.001***
Intercept	1.231	0.678	3.423	-0.661	0.893	0.516
Random effect	Variance	Chi-square		Variance	Chi-square	
Number of observations	1648	349.031***		2.591	218.490**	
- 2*Log likelihood	6138					
- 2*Log likelihood with no covariates	5691					
Estimation	Restricted PQL					

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; The reference group is housing by private parties/others.

likely to choose private housing/others than housing provided by housing bureaux. Among those who can access public housing, renters with temporary *hukou* are about 4.5 (0.335 vs. 0.075) times more likely to live in work unit housing than housing provided by housing bureaux. Again, the goal of housing bureaux is to provide housing to urban households, which almost eliminates the chances for migrants with temporary *hukou* to access their housing. Yet, work units still have some housing responsibilities to their employees regardless of their *hukou* status, and in general they provide temporary housing such as dormitories to employees with temporary *hukou*.

In addition, work-unit rank has a positive effect on choosing public housing by work units (0.207) and housing bureaux (0.192). High rank work units, often state-owned enterprises and government agencies, generally have more resources to provide rental housing to their employees, and only their employees can access their housing. It is not surprising that employees in high-rank work units, who have access to subsidised rental housing, prefer public housing to private housing. Yet, it is odd that high job rank encourages the choice of private housing/others over housing by housing bureaux (-0.159). In general, people with a high job rank were more likely to access public housing from their work units according to the socialist allocation system. With the ongoing reform, it is possible that they are able to convert their high status within their work units into resources that encourage the choice of non-traditional housing.

Furthermore, housing market conditions, indicated by house prices, also affect renters' housing choices. In cities with higher house prices, households are more likely to choose public housing provided by housing bureaux than housing provided by private parties or others (0.001). Although house price is not significant for the choice between work unit housing and private housing, the coefficient is positive, indicating that work unit housing is preferred. Thus, high house prices discourage the choice of private housing. With continuing subsidies in the public sector, this is in fact expected.

There are also significant random effects at city level (variance 2.098 and 2.591). They indicate significant differences in the pattern of housing choice between cities, which is not explained by house prices. Factors such as local government behaviour, local housing policies, history of housing development may affect the average pattern of housing choice.

Conclusion and Discussion

Housing reform in urban China aims to introduce market mechanisms into a welfare-oriented housing system. Compared to the pre-reform era when most households were forced to be renters of public housing, households now can choose to be renters and they enjoy a range of housing options. Yet, their choices are constrained by a set of complex constraints due to the transitional nature of the housing system. Instead of the socio-demographic and economic approach in the literature, a framework is used that is based on institutional relationships among major housing agents, households, work units, the state/local government and developers. This framework allows the study of renters' housing behaviour, not only from the perspective of households and the housing market, but also from the position of renters with respect to other housing agents in the transitional context. It is argued that both socio-economic factors and the lingering socialist institutions such as the *hukou* system and work units affect

housing choices. It is also argued that renters with a closer relationships with public housing agents enjoy more housing options and they are more likely to choose public housing.

Using a national survey from 1996, a multi-level multi-nomial logistic regression of renters' housing behaviour was conducted, which supports the hypotheses. With the introduction of market mechanisms, renters' housing behaviour in urban China has begun to share some similarities to that in market economies. For example, older generations are more likely to choose public housing, while better-off and educated people are more likely to choose private rental housing. In addition, in cities with high house prices, renters are more likely to choose public housing than private housing because the former is often subsidised. Yet, socialist institutions continue to shape renters' behaviour. For example, households with rural and temporary *hukou*, who are generally denied public housing, are more likely to choose private housing. In addition, high-rank work units continue to be important housing providers, and people working in these work units are more likely to choose public housing than private housing. In addition, there are significant variations between cities in renters' housing choice that is not explained by housing market differences. Case studies are needed to further appreciate the regional differences in renters' housing behaviour.

As households enjoy more freedom of housing choice and more housing options, housing inequality is increasing in urban China. Currently, the housing reform focuses more on privatisation of the housing system, and less on equity issues in the housing market. People with rural or temporary *hukou* and those working in private sectors, who were at a disadvantage in the socialist housing system, continue to be discriminated in the emerging housing market. They are still denied public housing, and they are not allowed to access some new housing options brought about by the reform. In addition, the current reform promotes home ownership and neglects the development of rental housing markets with public rental housing being sold and private housing mainly for sale. Renters, who were the majority of the society, have now become marginalised in the transitional housing system. With the rapid development of private economies and the increasing mobility in Chinese cities, there will be an increasing need for rental housing. The under-development of the rental housing market and the continuing housing discrimination based on *hukou* status and work-unit affiliation will result in severe housing problems for the large volume of, yet still growing, migrants in urban China. 'Migrant enclaves' are emerging at the edge of cities mainly because peasants' housing is the only viable option for migrants (Ma & Xiang, 1998). Thus, as the housing system is moving toward a market-oriented system, not every household in urban China can enjoy new housing opportunities brought about by the reform, and not every household enjoys the same degree of help from the government during the transition. More reforms are needed in the rental sector to have an efficient and more equitable housing system in urban China.

Acknowledgements

I am very grateful to Donald Treiman who provided me with the survey data. I also thank William A.V. Clark and C. Cindy Fan for their comments on an

earlier draft, and anonymous referees and the editors for their helpful suggestions.

Correspondence

Youqin Huang, Department of Geography and Planning, University at Albany, SUNY Albany, NY 12222, USA. Email yhuang@albany.edu

References

- Arnott, R. (1987) Economic theory and housing, in: E. S. Mills (Ed.) *Handbook of Regional Urban Economics*, Vol. 2, *Urban Economics* (Amsterdam, Elsevier Science Publishers BV).
- Bian, Y., Logan, J. R., Hanlong, L., Yunkang, P. & Ying, G. (1997) Working units and the commodification of housing: observations on the transition to a market economy with Chinese characteristics, *Social Sciences in China*, XVIII, pp. 28–35.
- Burrows, R. (1999) Residential mobility and residualisation in social housing in England, *Journal of Social Policy*, 28, pp. 27–52.
- Chan, K. W. (1994) *Cities with Invisible Walls: Reinterpreting Urbanization in post-1949 China* (Hong Kong, Oxford University Press).
- Chen, T. & Seldon, M. (1994) The origins and social consequences of China's hukou system, *The China Quarterly*, 139, pp. 644–668.
- China Real Estate & Housing Research Association (CREHRA) (Zhongguo fangdichan ji zhuzhai yanjiuhui) (1995) *China's Housing Reform in Progressing* (Qianjing Zhong De Zhongguo Fanggai). (Beijing, Zhongguo jianzhu gongyi chubanshe).
- Clark, W. A. V., Deurloo, M. C. & Dieleman, F. M. (1994) Tenure changes in the context of micro-level family and macro-level economic shifts, *Urban Studies*, 31, pp. 137–154.
- Clark, W. A. V. & Dieleman, F. M. (1996) *Households and Housing: Choice and Outcomes in the Housing Market* (Rutgers, The State University of New Jersey; New Brunswick, NJ, Center for Urban Policy Research).
- Deurloo, M. C., Clark, W. A. V. & Dieleman, F. M. (1994) The move to housing ownership in temporal and regional contexts, *Environment and Planning A*, 26, pp. 1659–70.
- Editorial Committee of Yearbook of China Real Estate Market (1996) *Zhongguo Fangdichan Shichang Jianjie 1996* (Yearbook of China Real Estate Market 1996) (Beijing, China Planning Press).
- Editorial Committee of Yearbook of China Real Estate Market (1999) *Zhongguo Fangdichan Shichang Jianjie 1998–1999* (Yearbook of China Real Estate Market 1998–1999) (Beijing, China Planning Press).
- Fan, C. C. (2001) Migration and Labor-market Returns in Urban China: Results from a Recent Survey in Guangzhou, *Environment and Planning A*, 33, pp. 479–508.
- Forrest, R. & Murie, A. (1983) Residualisation and council housing: aspects of the changing social relations of tenure, *Journal of Social Policy*, 12, pp. 453–468.
- Forrest, R. & Murie, A. (1990) *Selling the Welfare State* (London, Routledge).
- Galster, G. (1988) Residential segregation in American cities: a contrary review, *Population Research and Policy Review*, 7, pp. 93–112.
- Ho, M. H. C. & Kwong, T. (2002) Housing reform and home ownership behaviour in china: a case study in Guangzhou, *Housing Studies*, 17, pp. 229–244.
- Huang, Y. (2001) Gender, hukou, and the occupational attainment of female migrants in China (1985–1990), *Environment and Planning A*, 33, pp. 257–279.
- Huang, Y. & Clark, W. (2002) housing tenure choice in transitional urban China: a multilevel analysis, *Urban Studies*, 39, pp. 7–32.
- Kemp, P. & Keoghan, M. (2001) Movement into and out of the private rental sector in England, *Housing Studies*, 16, pp. 21–37.
- Kirkby, R. (1990) China, in: K. Mathey (Ed.) *Housing Policies in the Socialist Third World*, pp. 289–314 (London and New York, Mansell Publishing).
- Li, S. (2000a) The housing market and tenure decision in Chinese cities: a multivariate analysis of the case of Guangzhou, *Housing Studies*, 15, pp. 213–236.
- Li, S. (2000b) Housing consumption in urban China: a comparative study of Beijing and Guangzhou, *Environment and Planning A*, 32, pp. 1115–1134.
- Logan, J., Bian, Y. & Bian, F. (1999) Housing inequality in urban China in the 1990s, *International Journal of Urban and Regional Development*, 23, pp. 7–25.

- Ma, L. J. C. & Xiang, B. (1998) Native place, migration and the emergence of peasant enclaves in Beijing, *China Quarterly*, 155, pp. 546–581.
- Massey, D. & Denton, N. (1993) *American Apartheid: Segregation and the Making of the Underclass* (Cambridge, MA, Harvard University Press).
- McMillan, J. & Naughton, B. (1996) Elements of economic transition, in: J. McMillan & B. Naughton *Reforming Asian Socialism: The Growth of Market Institutions*, (Eds) (Ann Arbor, The University of Michigan Press).
- Ministry of Construction (1999) *Chengzhe Lianzu Zhufang Guanli Banfa* (A Regulation on Urban Cheap Rental Housing Management) (70).
- Ministry of Construction (1999) *Yigou Gongyou Zhufang He Jingji Shiyong Zhufang Shangshi Chushou Guanli Zaixing Banfa* (A Temporary Regulation on the Re-Sale of Purchased Public Housing and Affordable Housing) (69).
- Murie, A., Niner, P. & Watson, C. (1976) *Housing Policy and the Housing System* (London, George Allen and Unwin).
- Myers, D. (Ed.) (1990) *Housing Demography: Linking Demographic Structure and Housing Markets* (Madison, WI, The University of Wisconsin Press).
- Power, A. (1997) *Estates on the Edge: The Social Consequences of Mass Housing in Northern Europe* (Basingstoke, Macmillan).
- Renmin Ribao* (People's Daily) (1984) Guowuyuan dui nongmin banli jizhen hukou zuochu guiding (State council regulations on peasants seeking permission to living in towns), 22 December, pp. 1–2.
- Rossi, P. (1980) *Why Families Move* (Beverly Hills and London, Sage).
- Solinger, D. J. (1995) The floating population in the cities: chances for assimilation? in: D. Davis, R. Kraus, B. Naughton & E. J. Perry (Eds) *Urban Spaces in Contemporary China* (Cambridge, Cambridge University Press).
- State Council (1994) Guowuyuan Guanyu Shenhua Chengzhen Zuhfang Zhidu Gaige De Jueding (A Decision from the State Council on Deepening the Urban Housing Reform). State Council Documentation No. 43.
- State Council (1998) Guowuyuan Guanyu Jingyibu Shenhua Chengzhen Zhufang Zhidu Gaige Jiakuai Zhufang Jianshe De Tongzhi (A Notification from the State Council on Further Deepening the Reform of Urban Housing System and Accelerating Housing Construction). State Council Documentation No. 23.
- State Statistics Bureau (SSB) (1995) *Zhongguo Chensh Tongji Nianjie 1993–1994* (Urban Statistical Yearbook of China 1993–1994) (Beijing, China Statistical Press).
- Tolley, G. S. (1991) *Urban Housing Reform in China: An Economic Analysis* (Washington DC, The International Bank for Reconstruction and Development/The World Bank).
- Treiman, D. J. (1998) *Life histories and social change in contemporary China. Provisional code book.* Manuscript.
- Wang, F. (1997) The breakdown of a Great Wall: recent changes in the household registration system of China, in: T. Scharping (Ed.) *Floating Population and Migration in China: The Impacts of Economic Reforms*, pp. 149–165 (Hamburg, Institute of Asian Studies).
- Wang, Y. P. & Murie, A. (1999) *Housing Policy and Practice in China* (London and New York, MacMillan).
- Wilcox, S. (Ed.) (1997) *Housing Review 1997–1998* (York, Joseph Rowntree Foundation).
- World Bank (1992) *China: Implementation Options for Urban Housing Reform* (Washington DC, The World Bank).
- Wu, F. (1996) Changes in the structure of public housing provision in urban China, *Urban Studies*, 33, pp. 1601–1627.
- Zax, J. (1997) Latent demand for urban housing in the People's Republic of China, *Journal of Urban Economics*, 42, pp. 377–401.
- Zhang, X. Q. (1998) *Privatization: A Study of Housing Policy in Urban China* (New York, Nova Science Publishers).
- Zhou, M. & Logan, J. (1996) Market transition and the commodification of housing in Urban China, *International Journal of Urban and Regional Research*, 20, pp. 400–421.

