Do institutional factors influence housing decision of young generation in urban China: Based on a study on determinants of residential choice in Beijing

Yuna Wang [a, *], Toshio Otsuki [b]

[a] Department of Construction and Real Estate, School of Management, Harbin Institute of Technology, Harbin 150001, China
[b] Department of Architecture, Graduate School of Engineering, The University of Tokyo, Tokyo 113-8656, Japan

A B S T R A C T

In this study, housing decision of China's young generation is investigated, focusing on the impact of institutional factors and socioeconomic elements as in previous studies taken from western literature. Data are from a questionnaire survey to young people in Beijing, and a multinomial logit model is employed to determine the choice among three main residential types: owner occupancy, housing rent, and housing share. Personal characteristics considered are income, educational background, working conditions, local identity and family support. *Marital status*, *Hukou*, *parents' assets*, *willingness to settle down*, *monthly income*, and *housing subsidy* are found to be the main factors that influence the housing ownership of a group. Moreover, *marital status* and *monthly income* are key elements that influence their choice of different renting options. However, work units and working years play no role in either decision. These findings demonstrate that institutional factors no longer influence housing decision of the younger generation, except for the household registration system "*Hukou*" that still prevents the non-local from exercising a free choice in the housing purchasing market.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

Housing tenure decision is an important life-time plan. Studies on housing tenure choices in developed countries began many years ago and have covered a wide range of findings. Elements and events that influence housing decision are dependent on three main aspects: (i) nature of households, e.g., age, gender, marital status, income, assets, children, job (Eppli & Childs, 1995; Jones, 1995; Robst, Deitz, & McGoldrick, 1999; Tan, 2008; VanderHart, 1994), educational background (Asberg, 1999; Ioannides & Rosenthal, 1994), and housing history (Boehm & Schlottman, 2004; Ioannides & Kan, 1996; Kan, 2000); (ii) factors such as basic housing attributes, e.g., room type and area (Ellickson, 1981; Tu, Kwee, & Yuen, 2005), housing expenditure (Ermisch & Salvo, 1996; Robst et al., 1999), and housing location (Boehm & Schlottman, 2004; Cho, 1997); and (iii) macroeconomic factors

such as the impact of social environment, e.g., income tax (Fallis, 1983; Rosen, Rosen, & Holtz-Eakin, 1984), inflation (Follain, 1982), macroeconomic shifts (Clark, Deurloo, & Dieleman, 1994), related laws (Brownstone, 1988), and housing policy (Bourassa & Yin, 2006, 2008). There are also some individual psychological elements such as expected mobility (Kan, 2000; Schulz, Wersing, & Werwatz, 2014), eagerness for housing ownership (Seko & Sumita, 2007) and housing market expectation (Ho, 2006; Kraft & Munk, 2011). Generally, a longitude analysis is performed when focusing on individual lifecycle and trigger events such as childbirth, marriage, and tax fluctuation (Andrew & Meen. 2003; Bourassa & Yin, 2008; Dewilde, 2014), whereas a cross-section analysis is employed when concentrating on comparing housing behaviors among people of different personal attributes (Cho, 1997; Tan, 2008).

In China, studies on housing tenure choices are available only from recent years since a market-oriented housing system has been developed in 1998. Before housing reform, the state work units offered housing as a benefit scheme to their employees, called the welfare housing distribution system (Li, 2003). A hierarchical housing demand was emerging with the elimination of the system, after which urban residents could buy or rent in the housing market (Zhou, 2011). However, scholars found that in early stages of

* Corresponding author. Postal address: Room 425, School of Management, Harbin Institute of Technology, No.13 Fayuan Street, Nangang District, Harbin 150001, China.
E-mail address: yunawang@hit.edu.cn (Y. Wang).

China's housing marketization, remnants from the old housing system, i.e., *institutional factors*, still influenced housing behavior. Li (2000a, 2000b) was the first person to report important findings. He reported that besides elements found in the western housing market, occupation is a significant factor in citizens' housing decision. Huang and Clark (2002) further defined institutional factors as the relationships among households, work units and the government, e.g., *Hukou and work unit rank*, that limit the tenure choice in urban China. Li and Li (2006) developed the same idea from the viewpoint of tenure stability. They found that the type of work unit where an individual works is an important element that affects the tenure switch. Employees of state-owned sectors have lower risks of tenure change. Chinese Communist Party membership was also found to strongly influence the tenure status in China's particular institutional setting (Li & Zheng, 2007), a fact that is easily understood by its connection with state work units. However, as housing reform progresses, institutional forces play an important but decreasing role (Huang, 2004).

What is the situation after almost two decades of housing marketization? We are interested to know determinant factors of tenure choice in this new era of China. Have institutional rules changed or have they remained unchanged? There are no official individual housing data as in western countries, making such a study quite difficult to be performed, which explains why only a few articles exist on micro-level housing tenure choice in China. To make this study work, we take the steps as follows: (i) base our investigation in Beijing, where is attractive to young adults to live and has typical housing affordability problem as one of the four first-tier cities in China; (ii) we have targeted the younger generation whose individual housing history has started after housing marketization. They have a rigid demand of housing, but are facing high housing price and low housing affordability; (iii) focus on a group that does not have a large age gap to perform a cross-section analysis. We define the group as *new college graduates*, a popular term in China that refers to the young educated adults. These are new entrants to a society who are in their initial stages of independent life, and housing is of great importance to them. *New* means they have been graduated for short period, a length of less than five years is defined in this study. *College* covers a wide range from vocational colleges to universities. Because of our emphasis on studying institutional factors, we mainly focused on the non-native, and local ones are incorporated for a complete group of new college graduates.

Besides the importance of economical, educational, and demographical factors (Andrew & Meen, 2003; Asberg, 1999; Attanasio, Bottazzi, Low, & Nesheim, 2012; Bourassa, Haurin, Haurin, & Hendershot, 1994; Haurin, Hendershott, & Kim, 1994; Hughes, 2003; Mulder, 2003) such as those found in aforementioned studies, family behavior (Henretta, 1987), motivation to leave parental home (Mulder, 2003), and financial support from parents (Munro & Smith, 1989; Ost, 2012; Pickvance & Pickvance, 1995; Saunders, 1990) are discovered to be very important determinants of homeownership for young households, and these determinants influence housing decision in young adults.

As illustrated previously, this study focuses solely on the housing decision of those young adults whose housing behavior is determined by personal characteristics. The study targets at two aspects: the institutional elements of the group such as work units, working years, and local identity and the group's personal socioeconomic characteristics such as age, education, income, marital status, children, and availability of family support.

Five types of residences can be defined for new college graduates when considering the significant roles of both company and family on housing support: owner occupancy, housing rent, housing share, dormitory of work units, and living in parents' housing

(Fig. 1). Owner occupancy, housing rent, and housing share can be selected in housing market, while dormitory is job welfare offered by work units, parents' housing is family support. Because of the fact that only large and high-ranking work units can offer dormitory to their employees (Smith & Pun, 2006; Wu, 2002; Zhou & Logan, 1996) and that most of the local people chose to live with their parents (Chen, 2005; Li & Shin, 2013; Logan, 1999), dormitory and parents' housing are not selected. On the other hand, although housing ownership and renting are the two main residential choices of people worldwide from the viewpoint of housing behavior in the course of their lives and has been considered to be the case by most scholars (Boehm & Schlottman, 2004; Yates, 2000), because new college graduates considered in this study are mainly renting their housing during the transition from school to social life and from living with complete parents' support to living independently, their renting possibilities should be further divided. Correspondingly, in this study, the housing decision of the group is expanded to three residential types: owner occupancy, housing rent, and housing share.

2. Methodology

A questionnaire survey was performed from April to October, 2012 that targeted young generation in Beijing. We focused our analysis on individuals who (i) live in Beijing, (ii) have been graduated within five years, and (iii) graduated from colleges. The questions compromised two parts: personal information and residential situation. Questions on individual socioeconomic characteristics were asked on income, educational background, working status, local identity, and possibility of financial support from parents. During the questionnaire design, literature studies and online interviews to new college graduates in Beijing were made to find the complete set of possible answers to each question; moreover, a repeated correction after several times of fill-in test is performed to the questionnaire, which ensured the questionnaire representative. The survey is performed by two stages. The first part is done through a net questionnaire. The link to the questionnaire is sent to potential respondents by email or other communication tools. It is also put upon some public website that readers are mainly young people to make the samples random and cover a wider scope, 183 questionnaires were retrieved, with 169 being valid after a check on IP address and logical relations of answers. Next, revised questionnaire are handed out in field study in Beijing. With the help of 38 investigators, questionnaires are sent out to target population in their working places, on the street or by home visit. 336 questionnaires were retrieved, with 260 being effective after a check on answers missing and logical relations. In general, a total of 519 questionnaires were retrieved, with 429 being valid. Checked from the preliminary results, for personal information, a wide coverage of all possible answers was found, which makes the respondents representative of the group. As mentioned above, dormitory of work units and living in parents' housing are the two residential types that are strongly associated with job and native place separately, and thus, they are not selectable options to the entire group. Therefore, for the discussion of housing decision as a free choice in this study, we utilized 342 out of the total 429 samples that are under the three residential types, i.e., owner occupancy, housing rent and housing share.

Concerning the statistical analysis, the *multinomial logit model* (MLM) as the method and the SPSS statistics software package as the tool were employed. The *MLM* is an expanded version of *logistic regression model*, which is a widely used statistical method for the analysis of categorical variables for which a *linear regression model* that focuses on continuous variables no longer works. In a basic model such as *binary logistic regression*, a binary dependent variable