

Regional Disparities in Homeownership and Headship Trajectories of Two Young Cohorts during China's Housing Reform: Marriage, Migration, and Gender Imbalance

Zhou Yu

AEB 234

Department of Family and Consumer Studies

University of Utah

Salt Lake City, UT 84112

Tel: (801)892-5521

Fax: (801)581-5156

Email: zhou.yu@fcs.utah.edu

ABSTRACT

Housing reform has greatly changed China's housing distribution system in the early 2000s, a period coincided with delayed marriages and increasing gender imbalance. While young cohorts have struggled to be independent and to become homeowners, little research has examined how the changing demographics and economy has affected their housing outcomes across the country. This paper uses Census data from 2000 and 2005 to study changes in homeownership and headship rates at the city level among two young cohorts, who were born in the 1960s and 1970s (those aged 30-39 and those aged 20-29 in 2000 respectively). We find substantial increases in the homeownership of young cohorts, but not in headship. Rising marriage rates are positively associated with headship changes, so is growing gender imbalance. Changing demographics have less impact on homeownership growth. Evidence shows greater homeownership gains in areas with more non-agricultural *Hukou* population, higher marriage rates, increasing mobility, and lower housing cost.

INTRODUCTION

Over the last thirty years, China's real GDP has grown at an average rate of 10% per year and average income has increased by about 10 times (World Bank 2011). Rapidly rising income has led to a substantial growth in the housing sector especially after urban housing became commercialized in the late 1990s (Liu and Shen 2005; Nie 1999). Housing consumption has increased dramatically and private homeownership has soared (Yu 2006).

Not everyone has benefited from the housing boom. Housing has been used not only for residence in recent years, but also as an investment instrument especially in major cities such as Beijing and Shanghai. This has led to a rapid rise in housing prices in select cities (Wu, Gyourko, and Deng 2011). While a growing number of people own multiple homes

(Huang and Yi 2011), declining housing affordability has forced many young adults to delay household formation, stay with their parents and roommates, and even congregate in crowded "ant tribes" on the urban fringe of major cities (Lian 2009).

A unique force behind China's emerging housing market is demographics. The one child policy initiated in the 1970s and formally implemented in 1979 has delayed marriages, abruptly reduced birth rate, increased gender imbalance, and slowed population growth within a short period of time (Riley 2004; Banister 1987; Zhao and Chen 2008)¹. These demographic events ought to significant effects on housing demand.

The so called post 1970 generation (the P70G) and the post 1960 generation (the P60G) are at the forefront of changing demographics. The P70G and the P60G refer to those who were born 1970-79 and 1960-1969 respectively. They were aged 25-34 and 35-44 respectively in 2005. They represent China's first postwar babyboom. Similar to the post-war baby boomers in the US and Canada who dominate the demographic landscape, the two generations in combination are the largest in terms of population size, signifying their importance in the housing markets.

Not only are the P60G and the P70G the largest generations in China's history, it has experienced the full force of economic reform. In particular, the two cohorts have more freedom in the labor market and in their migration decisions than their predecessors. As a result, they have seen a big increase in residential mobility, initiated the largest rural-urban migration in human history (Liang 2001; Zhao and Chen 2008), and started the phenomenon of "floating population" (Shen and Huang 2003; Goldstein, Guo, and Goldstein 1997). However, the *Hukou* status (the household registration system), which is unique to China, still limits the opportunity of migrants, most of whom are from rural areas (Wu and Treiman 2004). In contrast, urban residents who have non-agricultural *Hukou* are no longer eligible for welfare housing and guaranteed jobs as their predecessors. The two generations are also the witness of growing regional disparities in socioeconomic development, even though the central government has repeatedly attempted to reduce the disparities (Wei 2002; Zhao and Tong 2000; Chen, Guo, and Wu 2011).

People of the P70G were in their prime age of household formation in 2005, and they faced great uncertainty in the markets and significant demographic pressures. Many of them may have postponed the formation of independent households. The extent to which they formed independent households will help determine the generation's future housing consumption and affect overall demand for housing in the country (Myers 1990; Jiang and Ren 2005). In contrast, the P60G was in a more stable condition. They are less mobile than the P70G but no less affected by the dramatic changes in the economy and demographics.

¹ Total fertility rate for China decreased from 6 children per woman in 1970 to slightly more than 2 children per woman in 1980 (Poston 2000; Banister 1987). As a result of the one child policy, a typical women also married and gave birth to her first child later.

While there is a rich literature on housing distribution at the household level and in selected urban areas (e.g., Huang 2003; Li 2003; Jiang 2006), little is known about how changing demographics have affected housing outcomes during the vital period of housing reform. The present paper uses Census data from 2000 and 2005 collected by the China's National Bureau of Statistics to examine the homeownership and headship trajectories of two young cohorts (those aged 30-39 and those aged 20-29 in 2000 respectively) at the city level². After the five years, they became 35-44 and 25-34 years old in 2005 respectively. Multivariate regression is used to control for other factors such as institutional factors, migration, and changing demographics and economics,.

In the following sections, we will first review housing reform in China and literature on household formation. We will then assess headship rate trends in recent years. Research questions and study approach are discussed in the following section. We will report research findings and discuss relevant policy issues in the end.

BACKGROUND

Housing reform and its outcomes

Urban China went through housing reform which started in the early 1980s and plateaued in the late 1990s (Wang and Murie 1996; Tong and Hays 1996). The main thrust of the reform was to abolish welfare-oriented housing system, establish market mechanisms in housing distribution, and accelerate housing production in urban areas through market privatization. As a result, private homeownership rates³ in Chinese cities, such as Shanghai and Beijing, jumped from 20% in 1994 to more than 60% in 2000 (Yu 2006). Housing has quickly become the largest household expenditure for almost all households (Song, Chu, and Chen 2004).

Housing has also become a major form of investment in recent years, due in part to the lack of alternative investment instruments. Major cities such as Beijing has seen 30% to 70% increase in price-to-rent ratios since the beginning of 2007 (Wu, Gyourko, and Deng 2011). Parallel to the rapid rise in housing prices, second home ownership has increased dramatically in recent years. A recent estimate shows that more than 15% urban households owned multiple homes⁴ in 2007 (Huang and Yi 2011). Increases in second

² A total of 345 cities and prefectures are identified in the 2005 mini census. These cities and prefectures include both urban and rural areas, covering all residents in mainland China. In the following sections, city refers to both city and prefecture.

³ Since the state owns urban land and urban homeowners lease the land from the state, private homeownership in urban areas is not complete. In contrast, the vast majority of houses in rural areas are self-built and privately owned.

⁴ Some of the second homes are used for vacations, while others are rented out for additional income. In the first case, un-occupied homes would be counted as vacant housing units in the census. In the latter case, they would be counted as rental units instead of owner-occupied. Census defines ownership based

home ownership have reduced housing supply and raised the barrier for new entrants to the housing market, making it more difficult for young people to form independent households and create new families.

While urban housing reform has largely succeeded its goal of encouraging production and reducing government subsidy, there is also evidence of increasing inequality in housing distribution. Occupation and education have become more important factors in housing allocation (Yu 2006). Housing reform has reinforced inequality existed in the socialist system, giving favors to insiders and urbanites (Logan, Bian, and Bian 1998; Logan, Fang, and Zhang 2010). Rural migrants have great difficulty in urban housing and labor markets (Chan and Zhang 1999; Guo and Iredale 2004; Wu 2004). Little research has done on young adults and their housing demand.

Whereas the urban housing sector has changed dramatically, rural housing distribution remains largely unchanged. Most houses in rural areas are still self-built and privately owned⁵. Even though per capita housing space has roughly doubled from 1985 to 2005, there are few renters outside major cities (Xie and Zhang 2009). Rural housing market is almost nonexistent (Liu 2006). Furthermore, multi-generation households are more prevalent in rural areas than in urban areas (Wang 2006). Therefore, lower headship rates should be expected in areas of higher prevalence of rural population.

RESEARCH QUESTIONS

What missing from the housing literature is an assessment of household formation and homeownership attainment across the country and an examination of factors behind the increases in headship and homeownership rates of young cohorts. Building on the discussion above, three specific questions will be addressed in this paper:

- 1) To what extent have the homeownership and headship rate of young cohorts changed from 2000 to 2005? To what extent are regional variations evident?
- 2) What are the relative importance of economic, demographic, and geographic factors in determining the homeownership and headship rates of two cohorts at the city level?
- 3) To what extent are the two cohorts different from each other and why?

Data: To address these questions, the analysis will primarily rely on 2000 Census and the recently available Chinese 2005 One-Percent Population Survey data⁶. The datasets,

on the status of the residents in the housing units. If current residents rent the housing units, then they are considered as rental units.

⁵ In contrast to urban land which is largely owned by the state and leased by urban homeowners, rural land is collectively owned.

⁶ The 2005 population survey relies on a two-stage sampling approach and covers the whole nation. Enumeration was taken between November 1 and 15, 2005. According to an official report, there is a 1.72% net undercount of total population (Feng 2006).

which are collected by the National Bureau of Statistics of China, are arguably the most comprehensive and up-to-date data on housing and population in China, by which household formation and homeownership attainment can be closely investigated across the nation.

Study areas: This study will cover all cities (or prefectures) in China. The Census data separately identifies 345 individual cities. Demographic, economic, housing market data are aggregated to the city level⁷. The unit of analysis in this study will be these cities.

METHODS

The dependent variables: The dependent variables are homeownership and headship rates of the cohorts in 2005.

The models are specified as follows:

$$\text{Hown (25-34)}_{2005} = \text{GEOG} + \text{ECON} + \text{DEMOG} + \text{HOUSEM} + \text{INSITU} + \text{Hown (20-29)}_{2000}$$

$$\text{Hship (25-34)}_{2005} = \text{GEOG} + \text{ECON} + \text{DEMOG} + \text{HOUSEM} + \text{INSITU} + \text{Hship (20-29)}_{2000}$$

$$\text{Hown (35-44)}_{2005} = \text{GEOG} + \text{ECON} + \text{DEMOG} + \text{HOUSEM} + \text{INSITU} + \text{Hown (30-39)}_{2000}$$

$$\text{Hship (35-44)}_{2005} = \text{GEOG} + \text{ECON} + \text{DEMOG} + \text{HOUSEM} + \text{INSITU} + \text{Hship (30-39)}_{2000}$$

where

$\text{Hown (25-34)}_{2005}$ = Homeowners as a percentage of households aged 25 to 34 in 2005 by city.

$\text{Hship (25-34)}_{2005}$ = Householders as a percentage of population aged 25 to 34 in 2005 by city.

The higher the city's headship rates, the larger the number of households per population in the two cohorts. The higher the city's homeownership rates, the larger the number of homeowners per household in the two cohorts.

⁷ Ryder (1987) has forcefully advocated for macro-analysis because populations have "manifested in their aggregate behavior something more than the arithmetical summarization of assemblages of evidence about individuals."

Here are the explanatory variables:

GEOG =	geography (1. cities of four tiers; 2. seven major regions in China);
ECON =	economic factors (1. median annual personal income by city; 2. income differentials from city medians by city; 3. percent city population not currently employed);
DEMOG=	demographic factors (1. the levels of gender imbalance in the cohorts; 2. changing marriage rates of the study cohorts; 3. percent city population of the cohorts with college education; 4. percent of people in the two cohorts lived in another province 5 years ago);
HOUSEM=	housing market characteristics (1. median housing cost of self-built housing by city; 2. median housing size by city; 3. percent housing units rented; 4. percent commercial housing by city);
INSITU=	institutional factors (1. percent city cohort population away from the places of their <i>Hukou</i> registration by city; 2. percent cohort population with agricultural <i>Hukou</i> by city).

Ordinary linear squares (OLS) method is used in the multivariate analysis. After examining factors behind rising headship rates by cities, we will use the same multivariate model to assess factors behind rising homeownership rates separately for the two birth cohorts.

EXPECTED FINDINGS

Housing market is integral to China's economy. As China improves its economy, there has been a growing demand for housing. However, economic prosperity has not benefited everyone. Young adults seem to face many challenges in their path to forming independent households and to becoming homeowners.

We expect to find the dramatic increase in the homeownership rates occurred in almost every cities. The positive gains also occurred for the two young cohorts. However, different from the life cycle theory would predict, P70G has seen a smaller increase than P60G who are more insulated from economic changes and more likely to have benefited from the socialist housing distribution system.

There is a large degree of variation in areas that saw increased homeownership rates. The growth is most evident in major cities and in coastal cities where private homeownership was largely nonexistent before housing reform. While the presence of temporary migrants is negatively associated with homeownership rates, the presence of permanent migrants has a positive effect. The presence of commercial housing is positively associate with homeownership. There are growing disparities between

regions with respect to homeownership rates. Evidence shows greater homeownership gains in areas with more non-agricultural *Hukou* population, higher marriage rates, increasing mobility, and lower housing cost.

The effect of demographics on headship rates is also salient. The growth in headship rates is most evident in major cities and in coastal areas, while rural areas have seen relatively little increases. Evidence shows greater headship gains in areas with higher marriage rates, large non-agricultural *Hukou* population, higher rates of mobility and migration, and more rental units.

Our findings underscore the effect of institutions and demographics on the housing outcomes of the two young cohorts, even though housing market in China is gradually maturing. Temporary migrants are very different from permanent migrants with respect to their housing outcomes. While the two young cohorts have experienced similar market conditions, they have experienced different trajectories in their housing attainment. Surprisingly, upward mobility is more evident among the P60G, which is the older cohort of the two in this study.

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