

Investigating the factors affecting the residential satisfaction of new generation migrants- a case study of Hangzhou in China

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Abstract

This paper examines the residential satisfaction of new generation migrants in Chinese context. The study uses the survey data of residential satisfaction of new generation migrants in Hangzhou. The ordered logit model is employed to examine the factors affecting the residential satisfaction of new generation migrants, a special group of workforce in metropolitan cities of China. Unlike the previous studies of residential satisfaction of rural migrant workers in Chinese cities, we find that the residential satisfaction of new generation migrants does follow the standard patterns identified in the literature; the social-demographic attributes such as gender, education, income, housing characteristics of size and quality of kitchen and sanitary facilities and neighbourhood environment and location factors such as the distance to work place, accessibility to employment and other location and availability of entertaining amenities are significant determinants of residential satisfaction of new generation migrants. Additionally, the institutional factors such as tenancy agreement signed with landlord and lease length which provides tenants with residential stability and security have significant impact on residential satisfaction. This finding has policy implication of regulating the growing rental housing market in china. This finding also complements the existing research of residential satisfaction.

Key words: residential satisfaction, new generation migrants, Chinese cities

1. Introduction

Housing privatisation and commercialisation transformed the Chinese socialist housing system into a dynamic housing market, but new housing problems characteristic of market economies have emerged. In the large cities of China, the commercial housing more than doubled in prices since 2004. Consequently, housing becomes less and less affordable, especially, to the young people, especially the young migrants, called new generation migrants. Many of new generation migrants had high education and left their original places to search for better life and career opportunities in large and developed cities. They are being priced out of the housing market. These new generation migrants contribute to economic growth and enhance the competitiveness of the cities they chose to live and work. In order to compete for the new generation migrants, the governments in many cities provide them with housing subsidy as a policy to attract and retain them. At the same time, the governments at the national and local levels have taken new policies to increase the supply of affordable and social housing. One of the policies is to increase the provision of rental housing. Therefore, understanding the factors that affect the residential satisfaction of this group of workforce will help the policy makers to provide the right type of housing to them in the metropolitan cities.

Satisfaction creates stability in the neighbourhood, because satisfaction is a significant predictor of immobility (Speare, 1974). Dissatisfied people may have a tendency to move out, especially when they know that opportunities are available and affordable (Feijten & Van Ham, 2009). Therefore, an understanding of the factors that result in satisfied residents 'can play a critical part in making successful housing policies' (Lu, 1999, p. 264). Residential satisfaction has long been the subject of housing studies in developed countries. Recently there is a growing body of research on the residential satisfaction in developing countries such as China. Though the existing studies provide rich insights, there is yet little consensus on the general pattern or the specific mechanism of residential satisfaction across various groups in different countries, especially in developing countries. In this regard, residential satisfaction is an issue that requires careful study of specific geography or context.

In this study, we focus on the residential satisfaction of new generation migrants in China. New-generation migrants are those who were born in or after 1980, came from villages, townships or cities and are registered as temporary residents in host cities (Liu, 2010; Liu & Cheng, 2008; Wang, 2010). In comparison to previous generation, referred to as old-generation migrants or rural-to-city migrants, the new generation migrants bear more resemblance to urbanites, such as a higher educational achievement, stronger aspiration for social mobility, lower endurance for work, and a stronger tendency toward individualism and consumerism (Liu, 2010; Wang, 2010). Moreover, unlike previous generation migrant workers who located themselves in cities transiently, simply for the purpose of earning money, new generation migrants intend to settle permanently in cities (Yue, Li, Feldman & Du, 2009). It is no exaggeration to say that if such ever-growing social groups fail to be comprehensively and thoroughly integrated into an urban system and be housed in a satisfying dwelling and environment, China's rapid urbanization will be entangled with a wide range of social and economic problems.

Due to the rapidly rising house prices in Chinese cities, the housing problem for new generation migrants has been serious due to the shortage of affordable housing. New generation migrants in Chinese cities are a heterogeneous group; and their housing conditions, patterns, types, and facilities are by no means the same. Despite the recent establishment of a housing market and the similarity between some mechanisms affecting migrant housing in urban China and those influencing its Western/marketized counterpart, there may be special factors that affect the residential satisfaction of new generation migrants in China's context and affect their long-term residence in a city.

Though the Chinese government wants to increase the provision of rental housing and rental sector in many large cities, especially the first and second tier cities has been growing rapidly, there is little research about the residential satisfaction of new generation migrants who live in rented accommodation. This study aims to get some insight into the factors that affect the residential satisfaction of the new generation migrants.

We use the survey data of Hangzhou, a metropolitan city in the east coast area of China, and the capital of Zhejiang Province to investigate the residential satisfaction and the factors that affect

the residential satisfaction of new generation migrants. According to the data provided by the public security department in Hangzhou, in September, 2017, there were about 2.63 million of floating people registered with the local public security department. Among them, 71.8% lived in rented accommodation. Many of them lived in the inner city of Hangzhou. The renters included university graduate professionals (intellectual migrants, ITM), self-employed entrepreneurs (entrepreneurial migrants, EM), and labourers (labor migrants, LM) working in the sectors such as construction, facility maintenance, food, hospitality, transport, civil services, etc. Unlike their predecessor of rural-to-city migrant workers in the early stage of economic reform in 1980s and 1990s, the new generation migrants in Chinese cities are no longer a homogeneous and poor group. Instead they have differentiated into a heterogeneous group of varied socioeconomic status and play a crucial role in the daily operation of a city. Understanding their expectation for housing and providing the right type of housing will help to retain them in the city and contribute to the local economic growth.

The research objectives are as follows. First, we investigate the overall residential satisfaction as perceived by the new generation migrants in Hangzhou. Secondly, we explore factors that affect the level of residential satisfaction, especially the institutional factors in the ever growing rental market in China such as tenancy agreement and lease length; then we analyse whether the determinants of residential satisfaction are similar in different contexts, in our case, new generation migrants and their predecessor of rural-to-city migrants.

The paper is organized as follows. In section 2, we review the literature on residential satisfaction. Section 3 describes the data collected from the survey and fieldwork and the methodology to test the data. Section 4 reports and discuss the test results. The conclusions are drawn in section 5.

2. Literature review

Satisfaction is a process of evaluation between what was received and what was expected (Parker & Mathews, 2001). Satisfaction can be defined as a state in which a person's expectations are met. Higher residential satisfaction reflects a greater degree of congruence between actual and desired conditions. The residential satisfaction is multi-dimensional aspects. The existing literature

suggests that there are three aspects that affect the residential satisfaction with the housing, they are the effects of residents' socio-demographic attributes, the housing characteristics and variables describing the socio-spatial characteristics of neighbourhood (for a review, see Dekker, de Vos, Musterd & van Kempen, 2011). Although residential satisfaction is a complex construct, affected by a variety of environmental and socio-demographic variables (Lu, 1999), but the effects of these variables as determinants of residential satisfaction or dissatisfaction tend to vary by housing types, tenure, countries and cultures.

The socioeconomic and demographic attributes of a household can play a role in residential satisfaction. They include age, race, education, gender and marital status, income and presence of children. For instance, in the United States and some European cities, older residents show higher levels of satisfaction (Lu, 1999; Dekker, de Vos, Musterd & van Kempen, 2011). A low income can prevent a household from selecting a dwelling and place to live (Amerigo & Aragonés, 1997; Clark & Dieleman, 1996; Deurloo, Clark & Dieleman, 1994). Low-income families might have a positive attitude towards a housing if the rent they pay is low enough. Having a higher income generally means that there are more possibilities to move to a better housing. However, again this may go both ways (either acceptance of the present situation or negative attitudes). The impact of spending a large share of the income on housing can be positive or negative. Among other factors, the level of income is associated with the labour market situation and with an individual's educational level. The residents with a college education are more likely to express higher satisfaction than respondents without a college education in the United States case (Lu, 1999).

The length of residence has been shown to be important (Kasarda & Janovitz, 1974), as it can positively affect residential satisfaction. While many factors contribute to the greater transience of renters, Ahn and Blázquez (2007) found that lower residential satisfaction was a major cause of renter mobility. In the U.S, renters account for one-third of all Americans (Katz & Turner, 2007), but undertake over 68% of all residential moves. As a group, the median length of residence for renters is only about 2 years (Ahluwalia, Crowe & Corletta, 1992; National Association of Home Builders, 2002). Thus, residential dissatisfaction tends to increase transience.

The housing characteristics is often reflected in the price of the housing. The empirical studies show that building features such as number of bedrooms, size and location of kitchen and quality of housing units, are strongly related to residential satisfaction (Sirman & John, 1991; Sirmans, Sirmans, & John, 1994). Morris, Crull and Winter, (1976) found a positive relationship between number of rooms and housing satisfaction. Speare and Stewar (1974) also found a negative relationship between person-per-room ratio and housing satisfaction. As the number of person-per-room increases, creating a higher density living environment, housing satisfaction decreases. The housing quality is a determinant of residential satisfaction. The quality of the house, measured in objective or more subjective terms, has been seen by many authors as the main determinant of housing satisfaction, especially also among public tenants (Bird, 1976; Kintrea & Clapham, 1986, Mohit, Ibrahim & Rashid, 2010). The location factors generally refer to the accessibility to employment and to necessary services such as school, shops and green spaces and will influence satisfaction with the housing. For instance, if employment is further away, the residents of more remotely located housing may be less satisfied (Boyle, Halfacree, & Robinson, 1998). Other studies did not find an impact of location (Kearns & Parkes, 2003). However, relative location has its influence on the level of satisfaction, although its bearing may be undecided.

Preference for a specific type of dwelling structure has also been found to be related to housing satisfaction. Morris, Crull and Winter, (1976) and Rent and Rent (1978) found a single family detached home to be preferable over alternatives such as mobile homes and multi-family units.

The neighbourhood attributes such as crime, neighbours, school and traffic have significant effect on housing price and rent. Parkes, Kearns and Atkinson (2002), by analysing the 1997–1998 Survey of English Housing data, concluded that although socio-demographic factors were much less important than residential perceptions in helping to predict dissatisfaction, the type of neighbourhood remained a significant independent predictor of dissatisfaction even when residents' views were taken into account. Ukoha and Beamish (1996) observed that while the residents of public housing in Abuja, Nigeria, were satisfied with neighbourhood facilities, they were dissatisfied with structure types, building features, housing conditions and management.

Majority of the previous studies on residential satisfaction in China's context focus on rural migrant workers' satisfaction with housing and find that the residential satisfaction of migrant workers in China does not follow standard patterns (Li, Duda & An, 2009). The characteristics of rural migrant workers were young age, low education, low wage, doing low-skilled work, having high mobility and no sense of belonging and no *hukou*, a household registration card (Chan, Yao, & Zhao, 2003; Li, 2006; Shen & Huang, 2003; Wong, Li, & Song, 2007; Wu, 2004; Zheng, Long, Fan, & Gu, 2009). In general, most of migrant workers chose to live in dormitories or rented housing in urban villages - rural settlements that have been transformed into poor living spaces for migrant workers. Overcrowding is the most commonly reported quality issue by migrant workers (Li & Duda, 2010; Wang, Wang, & Wu, 2010; Wu, 2004). These housing characteristics are attributed to the specific characteristics of migrant workers (i.e., household-level strategies, the transitional economic environment, and individual migration characteristics) as well as the *hukou* system in China (Huang & Jiang, 2009; Li, Duda & An, 2009; Logan, Fang, & Zhang, 2009; Wu, 2004). The studies on residential satisfaction of rural migrant workers find that socio-demographic status and institutional factors (i.e. *hukou* status and possession of residence card) do not always have significant effect on their residential satisfaction. Social attachment within the community, kinship and friendship, mobility, family life, and housing conditions have significant effect (Tao, Wong & Hui, 2014; Li & Wu, 2013). For instance, Li and Wu (2013) study the rural migrants' satisfaction with their informal settlement in Beijing, Shanghai and Guangzhou, and find that except income and floor space, other social-demographic attributes and housing facilities (except for air-conditioner) are not significant. What they are mostly dissatisfied with is exclusion and their status of being "rootless", that is the lack of neighbourhood attachment. Tao, Wong and Hui (2014) study the residential satisfaction of migrant workers in Shenzhen and find that migrant workers who live with or close to friends or family members are more likely to feel satisfied with their residence and the residential satisfaction levels are significantly affected by the housing facilities and services.

Fang (2006) conducted a survey of inner urban residents in Beijing and observed that only the unit size and length of stay significantly related to residential satisfaction. It is also found that low residential satisfaction does not result in higher frequencies of relocation, in contrast to the findings from the Western literature. Huang and Du (2015) examine the determinants of residential

satisfaction with public housing in Hangzhou and find that neighbourhood environment, public facilities and housing characteristics are the main factors that influence residential satisfaction.

The foregoing literature review reveals that various socio-demographic, housing and neighbourhood characteristics determine the level of residential satisfaction/dissatisfaction, the impacts of these variables as determinants of residential satisfaction/ dissatisfaction tend to vary by housing types, tenures, countries and cultures what stand to indicate that further studies are required to determine residential satisfaction/ dissatisfaction on case specific situations to guide public policies on housing (Mohit, Ibrahim & Rashid, 2010, p.20).

3. Data and methodology

This paper focuses on residential satisfaction and investigates the factors that affect the residential satisfaction of new generation migrants.

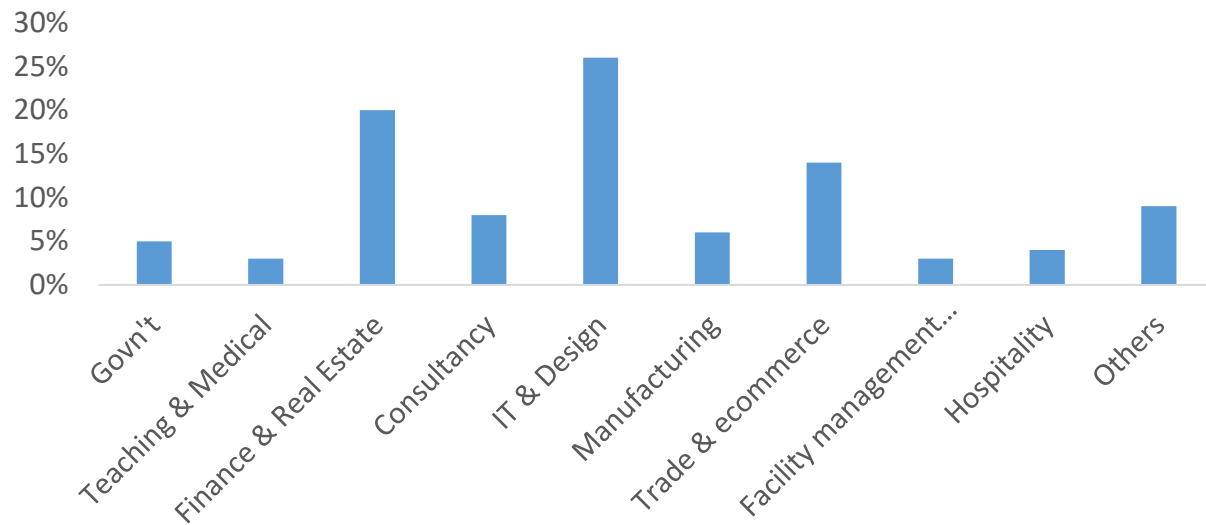
The empirical dataset is derived from a survey carried out in Hangzhou. The survey was conducted on line or face to face from August to September, 2017 and targeted the young migrants. Although academia has not yet formed a standard definition of new migrants in the cities, new generation migrant is defined as the ones who were born in or after 1980 and whose household registration (hukou) status remains in their place of origin (Li, 2011). Therefore, we deleted the observations that do not meet the criterion of new general migrants. The number of effective response are 1404.

This survey is unique and the targeted new generation migrants could be divided mainly into two types: intellectual migrants (ITM) and labour migrants (LM). ITMs refer to new generation migrants who held university degrees or had a college education. LMs are the ones with low education level and work in factories, construction, food and hospitality sectors or as traders. The wide range of the sectors the respondents work is shown in figure 1.

The respondents live in 11 districts of Hangzhou and work in different sectors. Figure 1 presents the sectors where the respondents work. 26% of respondents work in IT or design industry, 20% of them are in finance and real estate industry, 14% of them are in trade and ecommerce sector,

8% of them work in consultancy firms and 6% work in manufacturing industry. The remaining respondents are teacher or medical doctor, or work in government department, and facilities management, delivery and hospitality sectors, etc.

Figure 1. Profession distribution of the respondents.



The selection of explanatory variables for the study follows the literature of residential satisfaction. Three groups of variables are selected. The first group includes socioeconomic and demographic attributes of the respondents; they are age, gender, marital status, presence of child, high education attainment, income, employment length and residence length. The socioeconomic and demographic characteristics of new generation migrant is included in the analysis to control for possible differences in the assessment of the same housing conditions by individuals with different background.

The second group of variables is composed of housing characteristics. They are property size, the number of co-resident in housing unit, and adequacy of kitchen and sanitary facilities, rent. Tenancy agreement signed with landlord and lease length are included here as institutional factors related to rented houses.

The third group of variables includes neighbourhood and locational variables. The quality of neighbourhood is measured by quality of residential environment, public facilities such as school, hospital, retail shop, public transport. The respondents were asked to evaluate the community environment is poor or not based on availability of these services. The locational characteristics is proxied by the distance to work place measured by commute time (minutes per single trip). The summary of the variables is reported in Table 1.

Table 1. Summary of study variables

Socioeconomic and demographic characteristics	
-Age (years)	1=25 or below, 2=26-30, 3=31-35
-Gender	0=Female; 1=Male
-Married	0=No, 1=Yes
-Having child	0=No, 1=Yes
-High education	0=No; 1=Yes
-Employment length (years)	1=1or less, 2=1-3, 3=3-5, 4=5-10, 5= over 10
-Monthly income (Yuan)	1=2000, 2=2001-4000, 3=4001-6000, 4=6001-8000, 5=8001-10000, 6=10001-15000, 7=over 15001
-Residence length (years)	1=under 1, 2=1-3, 3=3-5, 4=5-10, 5= over 10
Housing characteristics	
-Size per person	Log size
	0=zero, 1=below 1000, 2=1001-1500, 3=1501-2000, 4=2001-3000, 5=3001-4000, 6=over 4000
-Monthly rent (yuan)	
Tenancy agreement signed	0=No, 1=Yes
-Lease length (years)	0= under 1, 1=1-3
-Number of co-resident	
-Adequate Kitchen & sanitary facilities	0=No, 1=Yes
Neighbourhood characteristics	
-Good residential environment	0=No, 1=Yes
-Commute time (in minutes)	1=15 or less, 2=15-30, 3=31-45, 4=46-60, 5= over 60
-Good accessibility	0=No, 1=Yes
-School	0=No, 1=Yes
-Hospital	0=No, 1=Yes
-Amenities (supermarket, restaurant, etc.)	0=No, 1=Yes

The research objective is to assess the residential satisfaction of new generation migrants and explore the factors that affect the residential satisfaction. The dependent variable on satisfaction with regard to the housing is measured on a 5-point scale: least satisfied (1), less satisfied (2), neutral (3), satisfied (4) and very satisfied (5).

Methodology

This study uses the ordered logit regression model. The aim of the paper is to examine the factors that affect residential satisfaction of new generation migrants. The factors include housing characteristics and neighbourhood characteristic. We also control resident's socioeconomic and demographic characteristics in the equation. The logit equation is constructed as follows:

$$\text{Satisfaction} = \alpha + \beta_1 \text{HC} + \beta_2 \text{NC} + \beta_3 \text{SD} + \varepsilon$$

HC is housing characteristics such as size, kitchen and sanitary facilities, lease contract, lease length, rent, number of co-resident.

NC is neighbourhood characteristics such as residential environment, accessibility to employment and other locations via public transport, commute time, availability of public services such as school and hospital and amenities such as supermarket, restaurant, etc.

SD is socioeconomic and demographic characteristics including age, gender, marital status, having child, education, employment length, residence length, income.

4. Test results

Table 2 report the descriptive statistics of socioeconomic and demographic characteristics, housing characteristics and residential environment characteristics.

Table 2. Descriptive statistics of study variables

		Percentage			Percentage
Age (year)	< 25	44.00%	Size (sqm)/unit	Mean	22.4
	26-30	41.30%		S.D	35.475
	31-35	14.60%		Zero	1.20%
Gender	Female	50.90%	Rent (RMB)	<750	9.10%
	Male	49.10%		751-1000	17.30%
Employment length (years)	<1	28.30%	1001-1250	14.40%	
	1-3	36.10%	1251-1500	18.40%	
	3-5	23.30%	1501-2000	21.20%	
	5-10	9.90%	>2000	18.30%	

	>10	2.30%	Adequate kitchen& sanitary facilities	Yes	80.70%
High education	No	39.70%		No	19.30%
	yes	60.30%	Residence length	< 1	51.30%
Marital status	Single	71.50%	(year)	1-3	34.80%
	Married	28.50%		3-5	10.40%
Child	No child	81.30%		5-10	2.50%
	Child	18.70%		> 10	1.10%
Income (RMB)	<2000	2.80%	Tenancy agreement	No	12.10%
	2001-4000	29.60%		Yes	87.90%
	4001-6000	32.00%	Lease length (years)	<1	91.90%
	6001-8000	19.10%		1-3	8.10%
	8001-10000	10.00%	Commute time	>15	28.10%
	10001-15000	4.90%	(minute)	15-30	38.80%
	>15000	1.70%		30-45	19.90%
No of co-resident	Mean	2.63		45-60	8.20%
	S.D	1.53		>60	5.10%
Environment	Good	85.60%	Accessibility	Poor	58.10%
	Poor	14.40%		Good	41.90%
School	No	92.8%	Amenities	No	92.60%
	Yes	7.2%		yes	7.40%
Hospital	No	96.50%			
	Yes	3.50%			

As reported in table 2, average age of the respondents are below 30 years old. Young age is a distinct characteristics of new generation migrants. The respondents have an almost balanced gender ratio, 49% of the respondents are man and 51% are woman. 60% of them have university degree, 28.5% of them are married and 19% of them have child. The average employment length with their current employers is 1-3 years. The average residence length is about one year, indicating the high residential mobility. Over half of respondents have monthly income below RMB 2000-6000 (30 % of them earn between RMB2000-4000 and 32% earn RMB 4000-6000), which is at the similar level of the average income of Hangzhou. The average size per person is 22.4 sqm. The rent payment ranges from zero to over 2000 per month. 1.2% of the respondents stay in the accommodation provided by the employer and pay no rent. 88% of the renters have signed tenancy agreement with their landlords. 21% of respondents report poor and inadequate kitchen and bathroom facilities. The average number of residents in one housing unit is 2.6. The average lease length is about one year or less. Short lease is norm. 86% of them are happy with the residential environment. The average commute time to work place per trip is about 30 minutes.

In term of other neighbourhood factors, 58% of them say the accessibility is poor. Less than 10% of them say there is school, hospital and entertaining amenities in their neighbourhood area.

Figure 2: Residential satisfaction

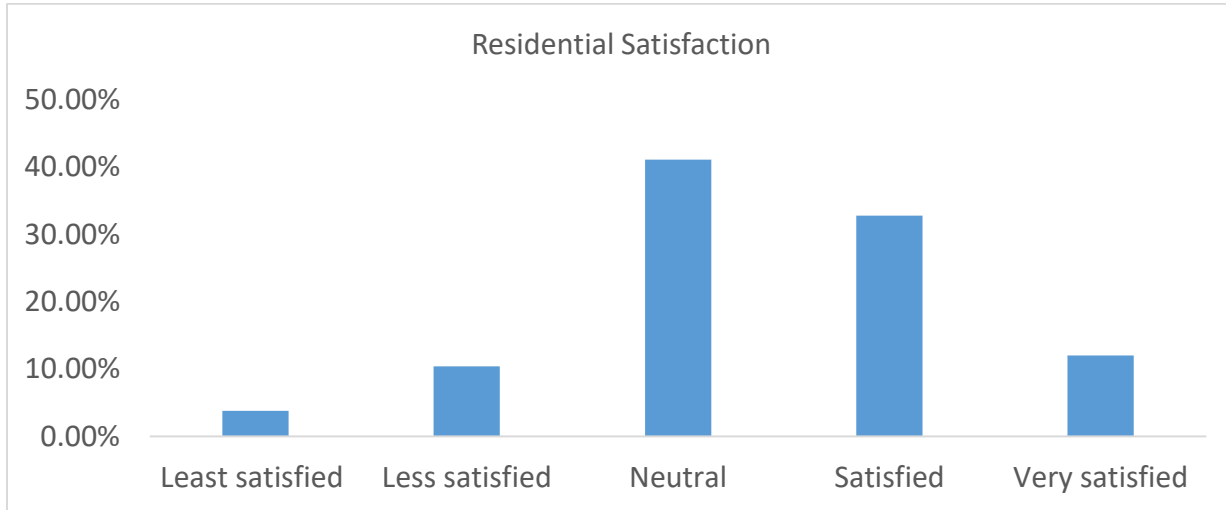


Figure 2 presents the residential satisfaction. 45% of the respondents are satisfied or very satisfied with their current residence. Only less than 15% of the respondents express least satisfied (3.8%) or less satisfied (10.4%) with their current residence. This finding is broadly in line with the previous studies of “old” migrant workers’ satisfaction with the residence (Wu, 2004, Tao, Wong & Hui 2014, Li & Wu, 2013), but the levels of satisfaction in this study are higher, which can be partly explained by the change of socioeconomic and demographic characteristics of new generation migrants compared to their predecessor of rural migrants or “old” migrants and the improvement of their living conditions. Majority of the respondents in our case live in privately rented flat, while majority of rural migrants lived in the urban villages where the size was small and living conditions were poor. For example, Tao, Wong and Hui (2014) study rural migrants’ satisfaction with their current residence and find that 23.8% of respondents are satisfied (including both satisfied and very satisfied) with their current residence. The small size and poor and inadequate kitchen and bathroom facilities were the major issues.

The purpose of the study is to examine the determinates of residential satisfaction of new generation migrants. The dependent variable is residential satisfaction. The explanatory variables

include socioeconomic and demographic status, housing characteristics and neighbourhood and location characteristics. In total, 20 variables are used to control the factors that, according to the literature, may affect residential satisfaction. The three models are reported in Table 3. Model 1 tests the relation between socioeconomic and demographic characteristics and residential satisfaction. In model 2, the housing characteristics variables are included. In model 3, the neighbourhood and location variables are included. The additional of housing characteristics and neighbourhood characteristics improve the goodness of fit from 0.12 (model 1) to 0.22 (model 3) and the estimation results of the coefficients are robust. The high education is significant in model 1 and 3. We discuss the variables according to the estimation results in model 3.

Table 3. Logistic regression test results

	Model 1	Model 2	Model3
Age	0.104 (0.08)	0.026 (0.08)	0.075 (0.82)
Gender	0.467*** (0.11)	0.378*** (0.11)	0.421*** (0.11)
High education	-0.274* (0.11)	-0.172 (0.11)	-0.245* (0.11)
Married	0.081 (0.16)	-0.04 (0.17)	0.004 (0.17)
Child	-0.371 (0.18)	-0.37 (0.18)	-0.405 (0.19)
Income	0.189*** (0.04)	0.173*** (0.05)	0.155*** (0.05)
Employment length	-0.25*** (0.07)	-0.259*** (0.07)	-0.234*** (0.070)
Residence length	0.263*** (0.07)	0.189*** (0.07)	0.171** (0.07)
Size		1.863*** (0.21)	1.812*** (0.22)
Rent		-0.088* (0.03)	-0.092* (0.03)
Tenancy agreement		0.603*** (0.16)	0.589*** (0.16)
Adequate kitchen & sanitary facilities		0.436*** (0.13)	0.41*** (0.13)
Number of co-resident		0.09** (0.04)	0.069* (0.04)
Lease length		0.556*** (0.19)	0.626*** (0.19)
Commute time			-0.308*** (0.05)
Good environment			0.079 (0.15)
Accessibility			0.31** (0.11)
School			0.071 (0.21)
Hospital			0.16 (0.27)
Amenities			0.581*** (0.2)
No of observation	1404	1404	1404
R ²	0.12	0.19	0.22

Note: 1. The numbers in the parentheses are standard errors.

2. ***, ** and * stand for the significance at 1%, 5% and 10% level.

Regarding the socioeconomic and demographic factors, age, marital status, and the presence of child have no significant impact on residential satisfaction. Gender, high education, income, employment length, and residence length, are significant determinants of residential satisfaction. The positive sign of gender suggests that man is more likely to be satisfied with their dwelling than woman. The negative sign of high education coefficient indicates that the individual without high education is more likely to be satisfied with the residence than the ones with high education, it may reflect the different perception of satisfaction. In the US case, it is found that the residents with a college education are more likely to express higher satisfaction than the respondents without a college education (Lu, 1999) since the level of income is associated with an individual's education level. But this seems not to be the case in our survey. The correlation test¹ of the study variables report high level of correlation between high education and income and rent. On interview, some of the respondents replied that they stayed in the dormitories or accommodation provided by their employers and paid no or humble rent. So the low financial cost may be the main concern for the individuals without high education and influence their residential satisfaction. So this finding should be treated with caution and more in-depth investigation is needed. The positive sign of income indicates that higher income is also associated with the increased satisfaction, consistent with the literature (Amerigo & Aragonés, 1997; Clark & Dieleman, 1996; Deurloo, Clark & Dieleman, 1994). Having a higher income generally means that there are more possibilities to move to a better housing. The positive sign of the residence length suggests that the individuals who are satisfied with their residence tend to stay in their current place longer; but the negative and significant coefficient of employment duration is difficult to explain. There may be some factors affecting individual employment duration that cannot be captured by the survey data.

Regarding the relationship of residential satisfaction and housing characteristics, when everything else is being controlled, we find that size, housing cost measured by the rent, the adequacy of kitchen and sanitary facilities and the number of co-resident per housing unit, tenancy agreement signed with landlord and lease length are significant factors in explaining the levels of residential satisfaction. The residents who live in larger apartments with adequate kitchen and sanitary facilities tend to be more satisfied. Housing cost measured by rent is negatively related to the levels of satisfaction. The lower housing cost will increase the levels of residential satisfaction,

¹ The correlation test of the study variables is not reported here but available upon request.

indicating the cost is a major concern for many new generation migrants. The coefficients of tenancy agreement signed with the landlord and least length are positive and significant, indicating the renter prefers long lease and signing tenancy agreement which defines the responsibility and obligation between renter and landlord and provides residential security and stability. This finding has policy implication in term of how to regulate the rental market in China where short lease term is pervasive and landlord often does not sign lease contract. Surprisingly, the number of co-resident per housing unit is positively related to the satisfaction, inconsistent with the literature that finds a negative relationship between person-per-room ratio and housing satisfaction (Speare & Stewar, 1974). This finding should be treated with caution. There may be some factors affecting the residential satisfaction that could not be captured by the survey data. For example, the survey did not ask whether the respondents share the house with their family, friends or others. The correlation test² shows that the number of co-resident per housing unit is significantly correlated with age, education, marital status, presence of child, income, rent payment and size. The co-residents tend to be older, married and have child. They have lower education and lower income, but pay higher rent and stay in a larger dwelling. All these demonstrate that residential satisfaction is multi-dimensional aspects and is determined by a mix of factors.

The quality of residential environment variable is insignificant as reported in model 3. The neighbourhood and location factors measured by the distance to work place, accessibility to employment or other locations via public transport and amenities are significant determinants of residential satisfaction. The commute time has a negative and significant impact on residential satisfaction, suggesting the location affects the level of satisfaction and the respondents living far away from work place tend to be less satisfied with their housing. The coefficient of accessibility to employment or other locations via public transport is positive and significant, indicating the transport convenience is an important factor affecting the residential satisfaction. Public services such as school and hospital has no significant impact on the residential satisfaction, which may be explained by the fact that most of the respondents are young and single and they care less about these services. However, the entertaining amenity variable is positive and significant, indicating that new generation migrants value the amenities greatly. The availability of entertaining amenities in the local neighbourhood will improve the possibility of the residential satisfaction. The findings

² The correlation test results are not reported here but available upon request.

suggest that the socioeconomic and demographic attributes, housing features and neighbourhood characteristics have significant effect on residential satisfaction. The findings are generally in line with the findings in previous research about the residential satisfaction in Europa and the U.S (e.g. Lu, 1999, Dekker, de Vos, Musterd, & van Kempen, 2011), and complement the previous studies by including more factors such as accessibility, commute time and amenities. It is different from the previous studies of residential satisfaction of rural migrant workers in China. These studies find that the socio-demographic factors such as age, marital status, employment length, income are insignificant, which means that being young, having low income and having low educational attainment have limited effects on the residential satisfaction of rural migrant workers (Tao, Wong & Hui, 2014, Li & Wu, 2013).

5. Conclusions

In this study, we use the survey data to assess the residential satisfaction of new generation migrants in Hangzhou and explore the factors that affect the levels of residential satisfaction. The new generation migrants are different from their predecessor of rural migrant workers, they are young, most of them have high educational attainment, a special group of workforce in the cities. They bear more resemblance to urbanites. So attracting and retaining them in the cities is an important policy for local government. However, the research of underlying reason for the residential satisfaction of new generation migrants was seldom explored in Chinese context. Dissatisfied people may have a tendency to move out, especially when they know that opportunities are available and affordable somewhere else. Therefore, an understanding of the factors that result in satisfied residents plays an important part in making successful housing policies.

The study finds that housing characteristics and neighbourhood characteristics are the main sources of residential satisfaction. The housing characteristics variables such as size and quality and adequacy of kitchen and sanitary facilities and cost measured by rent significantly influence residential satisfaction of new generation migrants. The institution factors related to housing rent market such as tenancy agreement and lease length are found to significantly influence the level of residential satisfaction. Tenancy agreement and lease length can provide tenant stability and

security and protect the interest of the tenants. The government should regulate the housing market by enforcing both parties signing lease contract and promoting long lease at the same time.

The new generation migrants have their own different concerns about the residence. For example, the location and access to employment via public transport, commute time to work place and the availability of entertaining amenities are more advantageous and are more likely to influence their residential satisfaction. This finding is different from previous studies of rural to urban migrant's residential satisfaction and residential satisfaction with public housing. The dominant determinants that affect the residential satisfaction of the individuals living public housing such as school and hospital and residential environment are insignificant in this study. This may be explained by the target group of the survey. Our study targets a special group of people, the new generation migrants who are characterized as young, single and many of them are well educated.

Since Chinese government actively promotes rental housing market and encourages the institutions to increase investment in rental houses and provide affordable and satisfying housing for the new generation migrants who are regarded as the driver of future economic growth and raising a city's competitiveness. The findings have strong policy implication for planning officer, developer and institutional investor when they provide rental housing to new generation migrants and provide the services they prefer. The findings also have policy implication about supervising and regulating rental market through lease contract and ensure both renter and landlord to sign tenancy agreement and follow the responsibility and obligation defined in lease contract. This will increase residential stability and security for the renters.

This is our major contribution to the existing understanding of residential satisfaction of the new generation migrants who exist not only in Chinese large cities and other large cities in the world. Providing the accommodation in the neighbourhood environment that they prefer and provide the services that satisfy their lifestyle will help them settle in the city they chose to live and work and contribute to the local economic growth.

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