

**Social Capital and Housing for Temporary Migrants in Urban China:
Evidence from a Twelve-City Migrant Survey**

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Abstract

Rural-urban migration and housing for low-income migrants have attracted worldwide attention from both scholars and policy makers. In China, empirical studies have revealed tremendous exclusion of temporary migrants in the urban housing system. Migrant workers have limited housing choices and often live in substandard housing in informal settlements such as urban villages. However, most studies have highlighted constraints by formal institutions such as the hukou system. Drawing from the international literature on social capital and housing for the urban poor, this paper adopts the sociological theory of social capital to investigate the role of informal social networks in temporary migrants' housing experience in urban China. Using data from a twelve-city migrant survey conducted in 2009, we first develop a measure of migrants' social capital that captures informal social networks and social interaction of rural migrants in the neighborhood and the city of residence. Statistical analysis is employed to test the extent to which size and characteristics of social ties at different scale and locations determine both migrants' use of housing information channels and access to formal urban housing market.

Keywords: Social Capital, Social Network, Temporary Migrant, Housing, Urban China, Development, Urban, Suburban, Housing

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Social Capital and Housing for Temporary Migrants in Urban China: Evidence from a Twelve-City Migrant Survey

1. Introduction

As China celebrates its thirty years of economic success and looks forwards to the acceleration of urbanization, access to decent housing by the large number of rural-to-urban migrant workers has greatly challenged the long-term social sustainability of China's urbanization. Deeply rooted in China's household registration system (hukou) that divides the "urbanite" from the "rural" (Fan, 2008), continuous rural-to-urban migration of a massive scale not only is a source of China's industrialization and economic growth, but also drives up demands for informal housing settlements such as urban villages that are marginalized spatially and socially from the mainstream urban society (Wang, 2004; Wang, et al., 2010).

Numerous studies have revealed that temporary migrant workers experience tremendous discrimination in the urban labor and housing markets as "second-tier citizens" simply because they do not have local hukou. Compared to local residents and permanent migrants (i.e. migrants who managed to acquire local hukou in the city of residence), temporary migrant workers are often segregated into certain low-class sections of the labor market, such as service, manufacturing, and construction sectors (Yang and Guo, 1996; Fan, 2001, 2003; Sun and Fan, 2011). Meanwhile, migrants are excluded from social opportunities. Until very recently, welfare programs funded by urban government are discriminated against migrant workers (Xu, Guan, and Yao, 2011; Tao and Xu, 2007). Even when migrant workers may have worked and lived in a city for many years, they still can be denied entitlement to affordable housing, health care insurance, and social security, and their children excluded from public schools.

Discrimination and marginalization of migrant housing experience are particularly acute. Recent housing reforms have been limited to housing for "urban residents" and largely neglected the needs of temporary migrants despite their large contribution to urban economic development. Wu (2002, 2004) and Zheng et al. (2009) found that migrants are largely excluded from the mainstream urban housing system. Temporary migrants face limited housing choices such as renting informal housing, and it is very difficult for them to become homeowners or even renting formal housing. Temporary migrants also tend to live in housing units of smaller size and with inadequate utilities and neighborhood amenities (Zheng, et al., 2009). Both income status and hukou status have contributed to such housing disadvantages of migrant workers (Wu, 2004)

Whereas there is a sizable literature on migrant housing experience in China, most studies have focused on effects of individual socio-demographic factors such as income and formal institutional constraints such as the hukou system. Little attention is given to the kind of "coping" strategies that migrant workers adopt as they face the double exclusion in the urban housing system. Migrants are not passive recipients of discriminated urban experience, but actively seek strategies and means to overcome such disadvantageous situations. Social capital, as have been documented in other countries, constitutes an important social mechanism through which disadvantaged groups such as the urban poor get by and get ahead in urban society

(Briggs, 1998; Wilson, 1987; Curley, 2010). The positive consequence of social capital comes from being embedded in social networks that function as an information channel, a leverage of support, and network-mediated access to resources (Coleman, 1988; Portes, 1998; Granovetter, 1995). For disadvantaged population such as the urban poor and migrants, social capital enables them to benefit, materially or spiritually, from engaging in social groups, so that they can “get by” while facing discrimination and marginalization by the mainstream urban society. Social capital is also considered critical for facilitating social cohesion and empowerment in marginalized poor neighborhoods (Forrest and Kearns, 2001; Saegert and Winkel, 1998).

Therefore, the aim of this paper is to empirically investigate the effects of social capital as the informal social mechanism that help migrant workers expand access to housing information and housing opportunities while facing formal institutional constraints. From a sociological approach to social capital (Bourdieu, 1980, 2002; Coleman, 1988; Portes, 1998), we define social capital as resources embedded in social relations and social structure “that can be mobilized when an actor wishes to increase the likelihood of success in a purposive action” (Lin, 2001, p.24). Taking advantage of a twelve-city migrant survey conducted in 2009, we employ statistical analysis to empirically test whether the effects of size and characteristics of migrant’s social ties at various spatial scales and locations on migrant access to housing information and housing opportunities. Specifically, this paper aims to answer two questions. First, to what extent does social capital affect the use of various information channels by temporary migrant workers in search for housing? Second, to what extent does social capital help temporary migrant workers expand access to the formal urban housing system?

It is of particular importance to investigate the kind of social mechanisms that enables China’s migrant workers to reduce barriers to the formal urban housing system. The significance of adequate and appropriate housing goes beyond provision of basic sheltering for migrant workers. Rather, housing, and related residential amenities and neighborhood environment, offers equal access to services and opportunities and help build up migrants’ identity and sense of attachment to the urban society. Failure to provide sufficient housing to migrants will not only result in residential segregation and slum areas as seen in many other developing countries, but also cause urban social problems such as concentration of poverty, unemployment, and anti-social behavior (UN-Habitat, 2003). Therefore, investigation into the role of informal mechanisms such as social capital would offer a more complete picture of migrant housing experience in urban China.

This paper consists of six sections. Following the introduction, section two reviews the literature on social capital theory and its application to housing for the urban poor and introduces the context of housing disadvantages of migrant workers in urban China. Research questions, data, and methodology are presented in section three. Sections four and five present findings from descriptive statistics and multinomial regression analysis, with conclusion and discussions presented in the last section of the paper.

2. Literature Review and Research Context

2.1 Literature Review: Social Capital and Housing for the Urban Poor

Social capital theory has attracted worldwide interest from urban scholars and policy makers in the fields of affordable housing, community development, and neighborhood renewal. Many have recognized social capital as a critical social mechanism that enables disadvantaged groups to cope with tremendous discrimination and marginalization in the urban society (Coleman, 1990; Curley, 2009, 2010; Pinkster, 2009). Community development proponents argue that enhancing social capital of deprived neighborhoods would result in positive outcomes such as improved social cohesion and empowerment (Forrest and Kearns, 2001; Saegert and Winkel, 1998). However, the term social capital has been embraced by different disciplines, reinterpreted according to different theoretical roots, and adapted to different social problems. Indeed, there is hardly one coherent definition of social capital. Scholars from different theoretical backgrounds have offered various conceptualizations of social capital, which this concept “proliferation” (Portes, 1998) has led to confusions over its conceptualization, measurement, and analytic focus in empirical research (DeFilippis, 2001).

The first systematic definition of social capital was given by Pierre Bourdieu (1980), who defined social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of a more or less institutionalized relationships of mutual acquaintance or recognition” (Bourdieu, 2002: p. 286). Involvement in social groups is an important nonmonetary form of capital that individuals can invest in and benefit from, just like other forms such as economic capital and human capital. By using the term “capital”, the social capital theory stresses positive consequences of individual’s position in social networks and broader social structure (Portes, 1998). Social networks shape individual opportunities sets because they provide information channels, leverages of support, or additional credibility (Granovetter, 1995; Coleman, 1988; Lin, 2001).

As can be seen, for sociologists, social capital is the capital possessed by individuals and “captured through social relations” (Lin, 2001: p.19). It is the kind of resources embedded in inter-personal social networks, which is determined by the characteristics of one’s social networks and one’s own position in the network (Portes, 1998). This conception of social capital differs from that by political scientists, who view social capital as a property of communities, such as neighborhoods (Saegert and Winkel, 1998), regions (Putnam, 1993), and nations (Fukuyama, 1995; Putnam, 2000). Social capital refers to the amount of social interaction and civic engagement at the community level, which will lead to positive outcomes such as coordinated actions, economic prosperity, or less crime.

Both approaches to social capital have been applied in the literature on the urban poor and on marginalized neighborhoods. If social capital means the level of civic engagement in a neighborhood (i.e. following Putnam), it is natural to investigate whether or not certain neighborhood physical environment or social mix may encourage neighborhood-based social interaction. For instance, DiPasquale and Glaeser (1999) found that homeowners in the US have more incentives to invest in social capital building, hence have higher neighborhood-based social capital and stronger sense of neighborhood attachment. Public housing tenants in mixed-income

neighborhoods tend to have wider social networks and higher social capital than those living in concentrated low-income public housing communities (Kleit, 2001; Pinkster, 2009). Ha (2010) also found that, in Korea, long-term public housing tenants have higher social capital than private housing tenants.

If following a sociological definition of social capital, however, it is important to investigate how social networks and social interaction function as an informal mechanism through which low-income residents “get by” and “get ahead” in urban life. For instance, many American studies have shown that informal interactions with family, relatives, and friends can shape employment opportunities by providing work-related information or support of referral (Granovetter, 1995; Coleman, 1988; Lin, 2001). Low-income residents are marginalized in the urban society and thus more inclined to use social ties as information channels. Yet, Social contact of low-income residents is often limited to other low-income people, hence possessing smaller and homogenous social networks with limited information and resources. This lack of social capital is argued to contribute to social isolation of low-income residents, as well as poor labor market performance and economic outcomes in high-poverty neighborhoods (Wilson, 1987; Kleit, 2001; Pinkster, 2009).

These above studies mostly emphasized labor market outcomes of social capital. The links between social capital and the overall life chances of the urban poor, however, are more complicated partly due to the multiple attributes of social capital. Briggs (1998) and Narayan (1999) differentiated supportive social ties that help the urban poor “get by” and bridging ties that help them “get ahead” in the urban society. Putnam (2000) also distinguished “bonding” social capital that connects people alike from “bridging” social capital that connects people different from each other. Another debate concerns strong ties versus “weak ties”. Coleman (1988) argues the positive impacts of a strong, dense, close network that offers supports to disadvantages groups, whereas weak ties—as articulated by Granovetter (1995) and Burt (1992)—are more likely to function as the “bridging” social capital that offers individual with greater leverage of information or resources.

Thus, investment in social capital building constitutes being involved in wide and diverse social networks as well as occupying an advantageous position in the networks that lead to positive consequences in the future. Being socially and spatially excluded by the mainstream society, the urban poor, particularly those isolated in high-poverty neighborhoods, rely much on a dense, close, neighborhood-based network for material or psychological support to get by daily life (Curley, 2009). On the other hand, being too much involved in strong and close networks prevent disadvantaged groups from engaging a larger and more diverse social network that is crucial for getting information or resources in order to “get ahead”.

2.2 Research Context: Urban Experience of Migrant Workers in China

China’s urbanization in the past three decades has featured a massive scale of rural-urban migration, a unique phenomenon attributed to the urban-rural dual system in China that differentiate the “urbanite” from the “rural” (Fan, 2008). According to the Sixth Population Census in 2010, 221.4 million out of the 1.34 billion total population of Mainland China, or 16.53%, currently live in other municipalities than where they were born (National Bureau of

Statistics of China, 2011). The share of migrant population is even higher in large cities such as Beijing, where 35.9% or over 7 million of its 19.61 million urban population are temporary migrants without official local residence (*hukou*) (BMSGO-SNPC, BMSB, and NBS-BST, 2011).

Low-income migrant workers constitute the largest group of the “new urban poor”, and their housing experience resembles much of that of marginalized populations in other countries (Wang, 2004). Empirical evidence has demonstrated the exclusion of temporary migrants from the mainstream urban housing system. Wu (2002, 2004) found that in Beijing and Shanghai, temporary migrants are constrained to renting private housing and employer-provided dormitories as two key housing choices, compared to local residents and even permanent migrants. Even renting public housing is less likely for temporary migrants, let alone becoming an urban homeowner. In fact, many temporary migrants are left with no option but informal housing settlements such as urban villages (Zheng et al, 2009; Wang et al, 2010; He et al, 2010). In addition to limited housing choices, migrants are also found to often live substandard housing of a small size and inferior quality, often with inadequate provision of utilities and neighborhood amenities (Wu, 2002, 2004; Jiang, 2006; Zheng et al, 2009).

Migrant housing disadvantage is rooted in China’s unique context of market transition (Wang, et al., 2010) as it reflects both migrants’ lower capability to compete in the urban housing market and their political status in that the lack of local urban residency adds to the institutional barrier for temporary migrants in terms of access to the urban housing system. First, whereas housing marketization has opened up more freedom and choices for all urban residents, it is hardly accessible for temporary migrants as they are mostly in the lower-income strata. China’s emerging housing market is probably more accessible to those more educated, affluent, professional migrants (Huang, 2003; Li & Yi, 2007), not only because those migrants can afford but also because they are often “talented labors” that city governments try to attract with preferential offers including urban residency, housing and other benefits. Second, affordable housing programs, such as the homeownership-oriented Economic and Comfortable Housing Program and the rental-oriented Cheap Rental Housing Program, are strictly reserved for residents with local urban *hukou*. Even though the newly-launched public rental housing program (*gonggong zulin zhufang*) began including non-*hukou* migrant workers as intended beneficiaries, thus marking a step forward, this program’s implementation was rather limited and often prioritized toward more educated, professional migrants. As such, migrants face double constraints in urban housing experience from their income status and *hukou* status (Wu, 2004).

Given such tremendous exclusion in the urban housing system, to what extent migrant workers can take advantage of their social networks to increase the access to appropriate housing? In other aspects of urban experience, it has been found that China’s migrant workers rely on strong ties such as extended family members, relatives, and fellow villagers in search for job opportunities (Fan, 2003; Zhuang, 2009; Li and Wu, 2010). Social capital—measured by social networks and trust also contribute to the participation in community organizations by migrant workers in urban China (Palmer et al, 2011). Does social capital also contribute positively to greater access to the mainstream urban housing system for migrant workers? On the other hand, some scholars contend that informal housing settlements such as urban village provided temporary migrants with market-based affordable housing with good accessibility to

employment opportunities and relatively acceptable amenities (Wang, et al., 2010). Informal housing settles also are characterized with strong and dense interactions among migrant from same counties or even villages often live in the same settlement. Thus, it is likely that migrants chose to live in informal housing settlements so that they can be close to fellow villagers and other migrant friends.

3. Research Questions and Methodology

3.1 Research Questions and Hypotheses

This paper draws upon the sociological theory of social capital to investigate the roles of social capital in determining migrant access to housing information and resources in Chinese cities. Social capital is defined as resources embedded in social relations and social structure “that can be mobilized when an actor wishes to increase the likelihood of success in a purposive action” (Lin, 2001, p.24). It refers to “the ability of actors to secure benefits by virtue of membership in social networks or other social structures” (Portes, 1998: p.6). Being excluded from the mainstream urban society, migrant workers are able to mobilize resources possessed by their social networks to overcome constraints in the urban housing market. For migrant workers, being involved in wider, diversified, and privileged social networks yields higher likelihood to gain access to information and resources from which migrants are deprived by their economic and institutional status.

Specifically, this paper aims to answer two related questions. The first research question concerns the role of social capital in access to housing information. As other disadvantaged groups, migrant workers in Chinese cities are involved in small and homogenous social ties who possess similar sets of information. Social networks, particularly weak ties, offer an important channel of information about opportunities (Granovetter, 1995). Thus, those migrants who manage to expand and diversify their social ties are more likely to expand their channels of housing information as well.

Hypothesis 1: A wider social network in the city facilitates the diversification of information channels when migrants look for housing. Hence, size of social networks—particularly weak ties—in the city increases the probability of using social ties as housing information channels.

The second research question concerns the extent to which social capital may expand the housing opportunities of migrant workers in urban China. First, Social capital enables its possessor to gain access to certain resources through connections to privileged persons or memberships in certain groups. Whereas migrants in Chinese cities face strong constraints in access to the formal housing system by their own economic and *hukou* status, those who are embedded in social networks with privileged status (such as local urban *hukou*) have higher bridging social capital that increases migrant access to housing opportunities. Second, dense and strong ties constitute important bonding social capital for marginalized social groups to gain material and psychological support in daily life. Third, social capital is not naturally given but can be invested in to enables its possessor to benefit that otherwise would not be possible (Coleman, 1988; Lin,

2001). Privilege status of social ties indicates more resources or power embedded in one's social networks, hence higher social capital.

Hypothesis 2: For migrant workers in Chinese cities, being acquainted with residents with local urban *hukou* in the host city is expected to expand migrant access to the formal housing market, i.e. increasing the likelihood of migrants to rent or own formal housing as opposed to staying in the informal rental market.

Hypothesis 3: Compared to weak ties, strong ties are more important means that migrant workers rely on to gain access to housing opportunities.

Hypothesis 4: Migrants who maintain more frequent interaction with local residents are expected to have higher chances to overcome such exclusion through the power and resources of local ties.

3.2 Research Design and Data Sources

We employ statistical models to empirically investigate the extent to which social capital plays a role in migrant access to housing information and resources in cities. Many scholars have noted the difficulty of measuring the “fuzzy” concept of social capital as a multi-dimensional, multi-scale social construct (Lochner et al., 1999; Paldam, 2000). Nevertheless, there is a growing consensus that, when referring to an individual attribute, social capital can be measured the size and characteristics of social ties possessed by the individual (Portes, 1998). Urban scholars such as Wilson (1987), Curley (2007), and Kleit (2001) emphasize neighborhood as an important place where the urban poor build up social capital, whereas migrant workers in China are embedded in two different yet sometimes interacted groups of social contacts—their families and friends in hometowns, as well as acquaintances in the local city where they current work and live.

Thus, we differentiate migrant social capital in the neighborhood, in the local city, and in hometown. First, neighborhood-based social capital is measured by whether migrants know any other people in the neighborhood before moving in. This involves two variables, with kin ties referring to extended family members and relatives and non-kin ties referring to fellow villagers, colleagues, and friends. Second, social capital in the host city is measured by size and *hukou* status of social ties at the city scale, and we also distinguish strong ties (relatives and fellow villagers) and weak ties (colleagues, friends, and other acquaintances). Third, social capital in hometown is measured by family education and political background of migrant workers.

Data for this analysis was derived from a twelve-city survey of migrant workers conducted in 2009. The purpose of the survey was to collect information about various aspects of migrant's life experience in the city and in hometown, such as employment, housing, welfare access, social network and trust, political participation as well as life satisfaction. Respondents for the survey were limited to temporary migrants who currently worked in the survey city but did not have local urban *hukou*, including migrants from other municipalities and those who were born in the same municipality but only had rural *hukou*.

The sampling process is as follows. Twelve survey cities were selected from four major urbanized regions in China—Yangtze Delta, Pearl River Delta, Bo-Hai Rim, and Chengdu-Chongqing. The four urbanized regions are not only where most economic activities take place, but also major destinations of rural-urban migration in China. Yangtze Delta, Pearl River Delta, and Bo-Hai Rim are located along the east coast whereas the Chengdu-Chongqing region is located in the southwest region. In each region, three cities were selected including one large-size city, one medium-size city, and one small-size city in order to seek representativeness of various types of destinations of rural-urban migrations (Table 1). In each city, five sub-districts (*jiedao*) were selected, and in each sub-district, forty migrant workers were selected to participate in the survey, which in total made 200 respondents in each city. As it was almost impossible to acquire a complete list of migrant workers to form a satisfying sample frame for the study, we adopted a combination of random sampling (whenever possible), convenience sampling, and quota sampling to ensure representativeness as satisfied as possible. The survey was carried out in a manner of face-to-face structured interviews to ensure higher response rate and accuracy. Each interview lasted for about 2–2.5 hours, during which the interviewer asked migrants to answer information regarding The whole survey yielded a total of 2398 valid samples.

Table 1 shows socio-demographic structure of the sample. As revealed in many previous studies, migrant workers in this survey tended to be younger rural-to-urban migrants. Over 80% of respondents said they currently held agricultural *hukou*. Average age of the sample was 32, while median age was 30. This indicates that about a half of surveyed migrants were born since 1980 (the so-called “second-generation migrant workers”). 56.24% of respondents are male migrant workers, and 43.76% female. Most respondents were married (62.44%), while slightly more than one third (37.56%) were single, divorced or widowed. Slightly over 40% of respondents were inter-provincial migrants. On average, respondents had worked in the same city for 5.6 years (median value=4 years). Total family income from non-agricultural work may not be significantly lower than that of local residents, but migrants received less education from the school. Average years of schooling of the sample barely met the government’s nine-year mandatory education rule.

Table 1: Socio-Demographic Structure of the Sample

		Frequency	Percentage
Gender	Female	1,049	43.76%
	Male	1,348	56.24%
Marital Status	Not married	900	37.56%
	Married	1,496	62.44%
Hukou	Agricultural	1,956	81.60%
	Non-agricultural	441	18.40%
Type of Migration	Within-province	1,419	59.17%
	Inter-provincial	979	40.83%
Age (years)		Avg. 31.9 ^a	
Years working in current city		Avg. 5.6 ^a	
Years of schooling		Avg. 8.9 ^a	
Household income (1,000 yuan) ^b		Avg. 46.2 ^a	

^a Mean value of the sample. ^b Total household income from non-agricultural work.

(Data source: 2009 twelve-city migrant survey)

4. Descriptive Statistics

This section presents findings from descriptive statistics. We first present summary statistics of social capital profile of migrant workers derived from the survey. Then we present cross-tabulation results to show difference in housing opportunities among migrants in possess of different size and structure of social ties in the host city.

4.1 Limited Social Capital of Migrant Workers in Urban China

Neighborhood-Based Social Ties

Summary statistics reported in Table 2 show interesting patterns of neighborhood-based social capital of migrant workers before and after moving into the neighborhood. On average, migrants knew four people in the neighborhood before moving in, but their acquaintances were limited to strong ties (relatives and fellow villagers, 32.10 percent and 36.4 percent respectively; Table 2). However, migrants are capable of expanding their neighborhood-based social ties, and particularly weak ties since moving into the neighborhood. Among an average of 13 acquaintances in the neighborhood, 75 percent belong to weak ties such as colleagues and other friends. In addition, neighborhood-based social ties have higher variance among migrant workers.

Table 2: Mean and Median Values of Neighborhood-Based Social Capital of Migrant Workers

	Mean	Std. Dev.	N
1. Number of acquaintances in the neighborhood, prior to moving in	4	13	2240
- % of relatives	32.10%	41.80%	1222
- % of fellow villagers	36.40%	41.80%	1222
- % of colleagues	19.80%	35.70%	1223
- % of other friends	11.60%	29.70%	1225
2. Number of acquaintances in the neighborhood, current	13	28.2	2308
- % of relatives	11.40%	24.10%	2101
- % of fellow villagers	23.50%	30.40%	2101
- % of colleagues	34.60%	38.30%	2102
- % of other friends	30.40%	36.80%	2101

(Data source: 2009 twelve-city migrant survey)

Social Ties in the Host City

Table 3 report summary statistics of size and characteristics of migrant social ties in the city of residence. Compared to strong neighborhood-based social ties, migrants possess rather small and truncated social ties in the city. Migrant workers reported to know only 38 local residents in the city, and on average they know only 4 relatives and 9 non-relative friends also working in the same city (Table 3). Even when they know relatives or friends in the city, migrants have very limited chance to know people with local hukou—on average, only 10.8 percent and 6.5 percent of relatives and friends migrants know, respectively, have local urban hukou. Virtually migrant workers have few acquaintances in the city that are local cadre.

Table 3: Summary Statistics of Social Capital in the City of Migrant Workers

	Mean	Std. Dev.	N
Total number of local residents known	37.7	323.1	2036
Number of relatives known working in the city	4.3	7.1	2205
- % of relatives with local hukou	10.80%	27.00%	1505
- % of relatives who are local cadres	0.80%	7.10%	1505
Number of non-relative friends know working in the city	8.9	45.2	2258
- % with local hukou	6.50%	18.70%	1390
- % of local cadres	0.50%	5.60%	1390

(Data source: 2009 twelve-city migrant survey)

4.2 Comparing Use of Housing Information Channel by Size of Social Ties

Table 4 compares use of information channels for current housing by size of strong ties and weak ties possessed by migrant workers. Although there is an overall low percentage of migrant workers who seek current housing information from social ties, those migrants who have a sizable network of strong ties have higher tendency to do so. As shown in Table 3, 19.9% of respondents with more than 3 relatives working in the same city found the information of current housing through social ties. More strong ties also correspond to higher percentages of migrants to seek housing information by themselves as opposed to through employers. Of migrants with more than 3 relatives in the same city, 51.5% found their current housing by themselves, compared to 42.8% and 43.7%, respectively, for migrants who know 1–3 and zero relatives in the same city (Table 4). But for migrant workers who know 1–3 or zero relatives, about 40% received information of current housing from employers, much higher than that of migrant workers who know more than three relatives (28.5%).

By contrast, size of weak ties in the city—defined as the number of friends (e.g. colleagues and other friends) seems to correspond to higher tendency to receive housing information from employers while lower percentages by oneself or through social ties. Of migrants who reported to have zero friends working in the city, nearly a half found current housing by themselves (Table 4). Yet for migrant workers with more than 5 friends in the city, 39% used employers as an information channel, comparable to 38.4% of migrants with 1–5 friends but much higher than 32.4% for migrants with zero friends working in the same city (Table 4).

Table 4: Information Channel for Current Housing by Size of Social Ties

Size of Social Ties	Self		Employer		Social Ties		Pearson Chi-Square (F-Statistic)
	Obs.	%	Obs.	%	Obs.	%	
> 3 relatives	401	51.5%	222	28.5%	155	19.9%	29.161 (0.000) ***
1-3 relatives	289	42.8%	272	40.3%	114	16.9%	
Zero relatives	377	43.7%	342	39.6%	144	16.7%	
> 5 friends	332	44.2%	293	39.0%	126	16.8%	10.861 (0.028) **
1-5 friends	256	43.2%	228	38.4%	109	18.4%	
Zero friends	479	49.3%	315	32.4%	178	18.3%	
Total	1067	46.1%	836	36.1%	413	17.8%	

(Data source: 2009 twelve-city migrant survey)

4.3 Comparing Sources of Current Housing by Hukou Status of Social Ties

Table 5 compares sources of current housing by the hukou status of social ties possessed by migrant workers. Overall, migrant workers are excluded from the formal urban housing market. Renting from the informal market is the major source of migrant housing, accounting for 46.1% of all valid responses (Table 5). Also 38.8% of migrant respondents report that they currently

lived in dorms provided by employers. Many of them are construction and industrial workers of large factories. Only a very low percentage of respondents bought or rented formal housing (15.1%).

Table 5: Sources of Current Housing by the Hukou Status of Social Networks

	Dorm by Employers		Formal Market		Informal Market		Pearson Chi-Square (F-Statistic)
	Obs.	%	Obs.	%	Obs.	%	
Does not have relatives with local hukou	771	39.7%	272	14.0%	900	46.3%	17.573 (0.000) ***
Have relatives with local hukou	81	32.0%	60	23.7%	112	44.3%	
Does not have friends with local hukou	774	39.0%	280	14.1%	932	46.9%	17.663 (0.000) ***
Have friends with local hukou	78	37.1%	52	24.8%	80	38.1%	
Total	852	38.8%	332	15.1%	1012	46.1%	

(Data source: 2009 twelve-city migrant survey)

However, migrant access to housing resources reflected significant difference by the hukou status of both strong ties and weak ties. Specifically, knowing relatives or friends with local urban *hukou* corresponds to higher chance for migrants to rent or buy formal housing. Of migrants who knew at least one relative with local *hukou* in the city, 23.7% rented or bought current housing from the formal market, much higher than only 14% of migrants with no relative with local *hukou* (Table 5). This percentage of living in formal housing is 24.8% for migrants knowing at least one friend with local *hukou*, also ten percentage points higher than that of migrants with zero friends with local *hukou*. On the other hand, 46.3% and 46.9% of migrants rent housing in the informal market do not have a relative or friend with a local urban *hukou*.

5. Findings from Regression Models

Multinomial logistic regression is utilized to test the effects of social capital on migrant housing experience while controlling for other socio-demographic variables. Two regression models were conducted. The first model tests the role of social capital in the use of information channels by migrants in search for housing. Information channel for current housing is the dependent variable, with three categories—i.e. oneself, employer, and social ties (such as relatives, colleagues, fellow villagers, and friends), with “oneself” as the reference category. The second model tests the role of social capital in expanding migrant access to the formal urban housing market. Source of current housing is the dependent variable, with three source identified: dorms provided by employers, owning or renting formal housing (renting or owning), and renting informal housing (reference category).

5.1 Effects of Social Capital on Housing Information Channels

Table 6 reports results from the multinomial regression of utilization of various channels of housing information by migrant workers. Overall, size of strong ties and weak ties exhibited significant effects on migrant use of information channels while *hukou* status of social ties is not significant, after other variables are controlled for.

Table 6: Multinomial Regression Results for Information Channels for Current Housing

	Model 1				Model 2			
	Employer		Social Ties		Employers		Social Ties	
	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)
Number of relatives working in the city (Ref = zero)								
- More than 3 relatives					-0.379	0.684**	-0.1	0.904
- 1-3 relatives					0.003	1.003	-0.149	0.862
Number of friends working in the city (Ref = zero)								
- More than 5 friends					0.547	1.728***	0.145	1.157
- 1-5 friends					0.311	1.364*	0.107	1.113
Strong ties in the community when moving in (1=yes)					0.208	1.231	0.997	2.711***
Weak ties in the community when moving in (1=yes)					0.359	1.433**	0.149	1.16
Relatives in the city with local hukou (1=yes)					-0.249	0.78	0.088	1.092
Friends working in the city with local hukou (1=yes)					-0.166	0.847	-0.313	0.731
Interaction with local residents (Ref = not at all)								
- Frequently					-0.306	0.737	0.721	2.057***
- Relatively Frequently					-0.046	0.955	0.082	1.085
- Occasionally					-0.6	0.549***	-0.011	0.989
- Rarely					-0.207	0.813	-0.136	0.873
Parent average education	0.042	1.043**	-0.039	0.962*	0.052	1.054**	-0.041	0.96

Family political capital	-0.004	0.996	0.061	1.063	0.103	1.109	-0.103	0.902
Relatives as cadres in home provinces	0.356	1.427***	-0.079	0.924	0.181	1.198	-0.09	0.914
Ln(Household income)a	-0.09	0.914	-0.009	0.991	-0.101	0.904	-0.043	0.958
Years of education	0.065	1.067***	0.009	1.009	0.079	1.082***	0.022	1.022
Years working in the city	-0.054	0.947***	-0.045	0.956***	-0.048	0.953***	-0.046	0.955***
Non-agricultural hukou	-0.419	0.657***	0.031	1.032	-0.487	0.614	0.114	1.121
Inter-provincial migrant	0.349	1.418***	-0.038	0.963	0.528	1.696***	0.062	1.064
Post-1980 migrant	0.285	1.33*	0.065	1.067	0.394	1.483**	0.018	1.019
Gender (Male=1)	0.242	1.273**	-0.259	0.772**	0.155	1.168	-0.391	0.677***
Married	-1.271	0.281***	-0.821	0.44***	-1.258	0.284***	-0.862	0.422***
Intercept	0.359		0.235		0.18		-0.029	
Number of Observations	1947			1633				
Pseudo R-Square	0.198			0.269				
(-2 log likelihood ratio)	430.632***			511.122***				

Note: *** < 0.01; ** < 0.05; * < 0.1

a. household income only include all income from non-agricultural work by family members in 2008.

b. Kin ties refer to relatives and fellow villagers; non-kin ties refer to colleagues and friends.

(Data source: 2009 twelve-city migrant survey)

Size of Social Ties in the Host City. Number of ties in the city is significantly correlated with the probability of migrant workers to seek housing information through employers as opposed to themselves, but its effects on the probability of social ties as the information channel are not significant. This is probably because friends (as well as fellow villagers, colleagues) often play an important role in migrants' job search in the labor market, thus playing a bridging role while migrants seek housing information. Also, strong ties (relatives) and weak ties (friends) play contrasting roles. Larger kinship ties reduced the probability of seeking housing information from employers as opposed to by themselves, whereas migrants who know more friends working in the city have higher probability to do so. As shown in Table 6, for migrant workers who know more than 3 relatives working in the city, the odds of using employers as the information channel for current housing is only 68.4% of the odds for migrants who know zero relatives in the city (coefficient=-0.379). Yet for migrants who know more than 5 friends in the city, the odds of

using employers as the information channel is 1.728 times of the odds for migrants with zero friend.

Neighborhood-based Social Ties. Whether migrant workers already had social ties in the neighborhoods prior to moving to current housing also significantly correlates to the probability of using different information channels. If migrant workers already had relatives or fellow villagers living in the neighborhood, the odds of finding the information for current housing was 2.711 times higher than if migrants did not have strong ties have prior strong ties (Table 6). On the other hand, existence of weak ties before moving to current housing increases the probability of migrants to receive housing information from employers. For migrants who already new friends or colleagues in the neighborhood before relocation, the odds of finding this housing through employers was 1.433 times higher than that of migrants with no prior weak ties.

Family Background. First, parent average year of education increases migrant worker's likelihood to seek housing from employers, possibly indicating the transfer of family human capital into individual access to housing opportunities (Table 6). Also, if migrant workers have relatives working as cadres in home provinces—an indication of family political capital—also increases their likelihood of find current housing through employers. But the significant effect disappears when introducing social capital variables.

Other Socio-demographic Variables. In general, more educated, unmarried, male, second-generation, inter-provincial are more likely to find current housing through employers as opposed to by themselves, whereas married female migrants are more likely to find housing information from social ties (see Table 6). Neither *hukou* nor household income has significant effect on use of housing information channels. Years of working in the host city, however, are negatively correlated with the odds of using employers or social ties as housing information channels. That means, the longer migrant workers live in the city, the more capable migrant worker become to seek housing information by themselves, confirming that migrant workers gradually adapt to urban life and that assimilation does happen to some extent. Inter-provincial migrants and second-generation migrants are also more likely to find current housing through employers, though they are not necessarily more likely to use social ties as a housing information channel. This is possibly because being far away from hometown and less experienced in adapting to urban life leads to their reliance on an organized channel—i.e. employers—for housing and other opportunities.

5.2 Effects of Social Capital on Sources of Current Housing

Table 7 present model results with “informal market” as the reference category of sources of current housing, with Model 3 introducing only individual socio-demographic variables and family background variables, and Model 4 further includes social capital variables.

Table 7: Multinomial Regression Results for Sources of Current Housing

	Model 3				Model 4			
	Dorm		Formal Market		Dorm		Formal Market	
	B	Exp (B)	B	Exp (B)	B	Exp (B)	B	Exp (B)
Number of relatives working in the city (Ref = zero)								
- More than 3 relatives					-0.408	0.665**	-0.445	0.641**
- 1-3 relatives					0.021	1.021	-0.109	0.896
Number of friends working in the city (Ref = zero)								
- More than 5 friends					0.325	1.384**	-0.145	0.865
- 1-5 friends					0.088	1.092	-0.08	0.923
Strong ties in the community when moving in (1=yes)					0.005	1.005	-0.101	0.904
Weak ties in the community when moving in (1=yes)					0.197	1.217	-0.336	0.714
Relatives in the city with local hukou (1=yes)					-0.226	0.797	0.528	1.695**
Friends working in the city with local hukou (1=yes)					-0.021	0.98	-0.013	0.987
Interaction with local residents (Ref = not at all)								
- Frequently					-0.333	0.717	1.578	4.843***
- Relatively Frequently					-0.009	0.991	1.302	3.678***
- Occasionally					-0.42	0.657**	1.446	4.245***
- Rarely					-0.118	0.888	0.877	2.404***
Parent average education	0.058	1.059**	0.028	1.029	0.063	1.064***	-0.011	0.99
Family political capital	0.018	1.018	0.31	1.363	0.056	1.058	0.215	1.239
Relatives as cadres in home provinces	0.251	1.286**	-0.26	0.771*	0.135	1.145	-0.328	0.72*
Ln(Household income) ^a	0.034	1.035	0.404	1.498**	0.032	1.033	0.261	1.298**
Years of education	0.103	1.109***	0.147	1.159**	0.098	1.103***	0.098	1.103***
Years working in the city	-0.043	0.958***	0.037	1.038*	-0.031	0.97*	0.035	1.036**
Non-agricultural hukou	-0.239	0.788	0.339	1.404*	-0.495	0.609	-0.176	0.839
Inter-provincial migrant	0.474	1.606***	0.539	1.715**	0.589	1.801***	0.354	1.425**
Second-generation migrant	0.32	1.378**	-0.003	0.997	0.412	1.509**	-0.138	0.871
Male gender	0.326	1.385***	0.028	1.028	0.259	1.296**	0.026	1.027
Marital status (1 =	-0.984	0.374***	-0.004	0.996	-1.014	0.363***	-0.089	0.915

married)							
Intercept	-1.536		-7.015		-1.458		-5.767
Number of Observations	1838				1549		
Pseudo R-Square	0.243				0.271		
(-2 log likelihood ratio)	510.685***				489.171***		

Note: *** < 0.01; ** < 0.05; * < 0.1

a. household income only include all income from non-agricultural work by family members in 2008.

b. Kin ties refer to relatives and fellow villagers; non-kin ties refer to colleagues and friends.

(Data source: 2009 twelve-city migrant survey)

Size of Social Ties. Number of kinship ties (relatives) working in the city negatively relates to migrant access to formal housing. For migrants with more than three relatives in the city, the odds ratio of living in formal housing as opposed renting informal housing) is 0.641, and the coefficient is significant (Table 7). Migrants with more than three relatives are also less likely than migrants with no relatives to live in dorms as opposed to renting informal housing (odds ratio=0.665). On the other hand, the number of friends that migrants know in the city increases the possibility of migrants to live in dorms as opposed to informal housing, but it does not significantly increase their accessibility to the formal housing market. As seen in Table 7, for migrants who know more than five friends in the city compared to those with no friends, the probability of living in dorms is 1.384 higher than that of renting informal housing, but probability of living in formal housing is not significantly different.

Hukou Status of Social Ties. As expected, whether or not migrants have relatives with local urban *hukou* also significantly correlates the odds of migrant access to the formal housing market. All other variables held constant, migrants who have relatives with local *hukou* are 69.5% more likely to rent or buy in the formal housing market as opposed to rent informal housing (Table 7). On the other hand, the *hukou* status of weak ties (friends) has not significant effect on the odds of migrants living in formal housing.

Put together, the above findings seem to reflect the complex nature of social capital in migrant access to formal housing. First, strong ties rather than weak ties are determinants of housing opportunities of migrant workers in Chinese cities. Second, while migrants are excluded from the mainstream urban society by their “temporary” *hukou* status, having relatives with local *hukou* indicates certain privilege that is likely to be transferred through social networks to benefit migrant workers in terms of reducing the barrier to the formal housing market.

Interaction with Local Residents. Frequency of interaction with local residents has positively correlation with migrants’ probability of renting or buying in the formal market. Compared to migrants with no interaction with local residents, those who frequently interact with local people have nearly four times higher chance of living in formal housing as opposed to renting from the informal market when other variables are controlled for (Table 7). The causal relationship, however, may be two-directive in a sense that more frequent interaction with local residents increases information flow regarding possible housing opportunities, while at the same time, living in a unit from the formal housing market also increases the opportunity for interacting with local residents.

Family Background. Parent human capital is found with positive correlation with migrants' probability of living in dorms provided by employers, but it does not necessarily increase migrants' access to the formal housing market. Having relatives as cadres in home provinces seems to reduce migrant probability of living in formal housing as opposed to informal housing (though only statistically significant at 0.1 level) (Table 7).

Personal Economic, Human, and Political Capital. It is not surprising to find positive relationship between household income and years of education with migrant access to the formal housing market. Migrants with higher education are often the target groups in many cities to attract talented people, and they are often treated differently in local housing and welfare policies. Political capital, measured by non-agricultural *hukou*, does not have robust effects on migrant housing opportunities. Non-agricultural *hukou* is positively related with the probability of formal housing in Model 3, but the coefficient is only significant at the 0.1 level and it is no longer significant in the full model (Model 7). This indicates that all else held constant, having non-agricultural *hukou* does not increase migrant access to the formal housing market; rather, what matters is whether migrants have local *hukou* or whether they have strong ties with local *hukou* in the city.

Other Socio-demographic Variables. The longer do migrants work and live in the city, the more adapted they are to the urban life, and therefore gradual assimilation takes place through which migrants gain access to the formal housing market. As reflected in Table 6, more years of working in the city corresponds to lower odds of living in dorms as opposed to renting informal housing, but higher odds of living in formal housing. Inter-provincial migration, however, are more likely to live in dorms or seek housing from the formal housing market, while less likely to rent in the informal market. Regarding other socio-demographic variables, age cohort, gender, and marital status do not significantly correlate with the odds of formal housing but the effects are significant on migrant chances of living in dorms provided by employers. Specifically, unmarried, male, second-generation migrants are more likely to live in dorms, compared to older, married, female migrants.

6. Conclusions and Discussions

This paper investigated the urban housing experience of temporary migrant workers in Chinese cities from a social capital perspective. Taking advantage a twelve-city migrant survey, we developed a multi-dimensional, multi-scale measure of social capital to capture the ability of migrants to benefit from being embedded in social networks and social structure, and employed statistical analysis to test the effects of size and characteristics of social ties on migrant's access to housing information and housing opportunities. Main points of finds from analysis are summarized as follows.

First, similar to the urban poor in other countries, neighborhoods are important localities where China's migrant workers build up social capital. The survey shows that migrants tend to move to neighborhoods with strong ties but are capable of developing weak ties over time. Beyond the neighborhood scale, migrants possess a small and truncated social network in the city of residence, indicating the marginalized situation of migrant workers in Chinese urban society.

Second, strong ties and weak ties seem to play opposite roles in migrant access to housing information and housing opportunities. Whereas size of kinship ties in the city reduces the likelihood of relying on employers for housing information, size of non-kin ties in the city increase the likelihood. Similarly, size of kinship ties in the city reduces migrant chance of living in employer-provided dormitories whereas size of non-kinship ties increases the likelihood.

Nevertheless, it is strong ties rather than weak ties that are more important for migrants when it comes to their access to formal urban housing system. Size of kinship ties in the city encourages migrants to live in informal housing settlements, probably because such strong ties are also temporary migrants and can offer only limited leverage of support themselves. But migrants have strong ties with local urban hukou—that are more significant in determining migrants' access to formal urban housing market.

In conclusion, our research findings suggest social capital—social networks and social interaction—constitutes an informal social mechanism in migrant's urban experience in urban China. The role of social capital not only lies in the facts that migrants are embedded in dense and strong networks of other migrants and that such networks are important information channels for job information and means of material and psychological support. Social capital also plays a critical role in migrant's urban housing experience. Being embedded in a wide, diverse, and privileged social network also renders diversification of housing information channels and higher chance to overcome institutional barriers and gain access to formal urban housing system. Of course this research is limited due to time and space constraints, and more studies need to be done to further investigate whether social capital also renders better housing quality and accessibility to urban amenities, and if so, whether positive consequences of social capital contributes to higher quality of life and subjective wellbeing of temporary migrants in Chinese cities.

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