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Ph.D. Dissertation

**Migrant Workers' Choices for Settlements
with the Redevelopment of Urban Villages
in China**

February 2014

**Seoul National University
Graduate School of Environmental Studies
Urban and Regional Planning**

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this approved version of the following dissertation:

**Migrant Workers' Choices for Settlements with the
Redevelopment of Urban Villages in China**

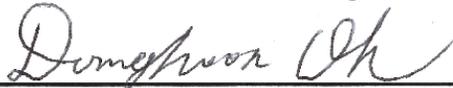
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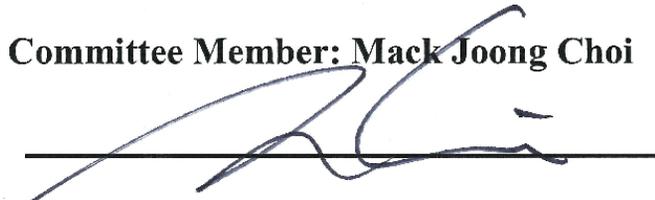
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**Migrant Workers' Choices for Settlements
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中國城中村改造에 따른 農民工移居地의 選擇

2014년2월

서울대학교 대학원

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Migrant Workers' Choices for Settlements with the Redevelopment of Urban Villages in China

中國城中村改造에 따른 農民工移居地의 選擇

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ABSTRACT

Since the reform and opening-up, China has experienced rapid urbanization and massive migration, and migrant workers are the main part of it. As the low-income group, they used to be farmers but have left rural areas and found jobs in cities. To some extents, they have made a significant contribution to burgeoning labor market and played an important role in speeding up the transition from a planned to a market economy of China. Most of them come from relatively undeveloped areas to developed areas (i.e. Beijing, Shanghai, Shenzhen, and Guangzhou).

Beijing is one of the cities where most migrant workers live and work. They generally live in the urban villages of Beijing due to low rental costs. Gradually, some problems, such as environmental deterioration, public or social security, illegal building, and so on, have arisen in urban villages. To deal with these problems, Beijing city government carried out a plan of urban village redevelopment, and thus migrant workers have to make choices for their next settlements as well.

The study aims at analyzing the migrant workers' choices for settlements (four choices: return, another urban village, resettlement, and urban area) with the redevelopment of urban villages in Beijing, and mainly focuses on which factors influence their different choices for settlements, as well as how to influence their choices.

For exploring the mentioned questions, the study makes a survey on the six urban villages (Mingguang, Shiliuzhuang, Guanzhuang, Yamenkou, E'fang, and Zhongtan) located in six districts (Haidian, Fengtai, Chaoyang,

Shijingshan, Daxing, and Changping) in Beijing, interviews 50 migrant workers from each region, and collects 300 copies of questionnaire concerned with the 12 surveyed items designed based on the previous researches and the real situations in urban villages. A method of Multinomial Logistic Regression is used to analyze the factors influencing migrant workers' choices.

The results show that the independent variables, except “redevelopment style”, have different extents of effects on migrant workers' choices for settlements. The factors “rental affordability”, “social belongingness”, “working stability”, and “educational level” have large and wide effects on their choices among four settlements; “commuting time” is found to only influence their internal migration in cities; “redevelopment level” has comparatively weak impacts on their choices for “resettlement” or not. Some personal factors (age, sex, marital status, and family structure) strongly affect their choices for “return” or not. By analyzing the effects of their different choices for settlements on urban development, the study proposes that inducing migrant worker's choice to resettle in redeveloped urban village (resettlement) might solve and avoid various urban problems caused by their other choices. To fulfill that, the study recommends some policies based on main findings, referring the education of migrant workers and children, social security and welfare, occupational training, construction of low-rent houses, construction of migrant worker community, and so on.

Keywords: rapid urbanization; urban village; migrant worker; urban village redevelopment; choice for settlement

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Chapter 1: Introduction

1.1 Background, Purpose, and Method

China has experienced rapid urbanization and massive rural-urban migration since the reform and opening-up in 1980s. The rate of urbanization increased from 21% of 1982 to nearly 50% of 2011, expected to exceed 50% by 2015 (Chinese Statistics Year Book 2012). Rural-urban migration is responsible for roughly 70% of Chinese urban population growth (Zhang and Song, 2003). The increasingly growing scales of Chinese cities cause the urban extension. As a result, more and more rural areas are transformed to urban areas for city construction, but some of rural housings are left because city governments cannot afford the compensatory payment. Gradually, urban construction surrounds the regions where villagers live, and these regions become so called “urban village” (Wang, et al., 2010).

The relatively developed cities, such as Beijing, Shanghai, Shenzhen, and Guangzhou, have more urban villages. The study takes Beijing as a case because it is one of the most representative one and has many urban problems caused by urban villages. The most serious problem in the urban villages of Beijing is caused by both local villagers and migrant workers. Villagers privately build some illegal housing for renting to low-income migrant workers. These “new buildings” not only affect the urban landscape but cause some safety risks. Besides, more and more migrant workers live in the urban villages, and most of them are not well educated and low-income.

Thus, the social safety there becomes worse year by year.

Beijing city government has started a plan focusing on redeveloping 50 urban villages distributed in Beijing since 2010. Certainly, the government ought to make arrangements with local villagers who will become parts of permanent urban residents (Zhang and Luo, 2013). All local villagers can get money or houses after they sign in the agreements about compensation of demolition. However, migrant workers cannot get that because they have no household registers (Jian and Kun, 2007), and Instead of it, they must make choices for the next resettlements.

The previous studies focused on which factors influence people's migrations, according to which, the factors such as sex, age, educational level, income, working places, commuting time, social pressure, and so on, were found to affect migrant workers' choices for whether leave a city or not, however, they neglected the spatial differentiation inside cities caused by the formation and redevelopment of urban villages. The study advocates the necessity of considering their migrating behaviors inside cities. By field survey, it finds that migrant workers have four settlements to choose after the redevelopment of urban villages they used to live in, namely, "return (hometown)", "another urban village", "resettlement (redeveloped urban village)", and "urban area". In addition, the study also finds that their different choices for settlements might have positive or negative effects on city development, so exploring the factors influencing their choices for settlements might be meaningful to city development.

This dissertation aims at analyzing migrant workers' choices for four settlements (return, another urban village, resettlement and urban area) with the redevelopment of urban villages in Beijing, and mainly focuses on which factors influence their different choices for settlements, as well as

how to influence their different choices. To find the answers to the mentioned questions, the study makes a survey on six urban villages located in different districts of Beijing, interviews 300 migrant workers, and collects 300 copies of questionnaire referring 12 surveyed items designed based on previous researches and field surveys. The method of Multinomial Logistic Regression is used in this study to analyze the factors influencing migrant workers' choice because the dependent variable includes more than two categories. Besides, this study also reviews some policies implemented for solving the problems of rural-urban migration, indicates the necessity of considering various settlements of migrant workers compared with only focusing on rural-urban migration, proposes that the resettlement of migrant workers might avoid and solve the problems caused by migrant workers' migration, and recommends some policies to induce migrant workers' choices for settlements toward sustainable development.

1.2 Organization

The dissertation is organized into five chapters. Chapter 2 makes a background research by reviewing the previous researches referring urban village, the redevelopment of urban village, theories of migration, migrant workers' choices for settlements, and the previous policies carried out by Chinese government.

Chapter 3 refers to the empirical characteristics of migrant workers and urban villages based on field survey, and it introduces the situation of Chinese migrant workers from the change of number, the characteristics of sex, age, educational levels, occupation, monthly income, residential style,

and their special contributions. Then it introduces the redevelopment situation of urban villages in Beijing, the six selected urban villages, the typical intentions of respondents, and the contents of survey.

As a core part, Chapter 4 shows the whole process of analyzing the factors influencing migrants' choices for settlements, including the definition and explanation of selected variables, the descriptive statistics, the introduction of Multinomial Logistic Regression model, the results of statistical analysis, and some important findings. Chapter 5 concludes the whole study, and proposes some policy recommendations based on the findings.

As shown in Figure 1-1, the study first reviews some researches on basic definitions and concepts concerned with the research theme, and meanwhile introduces some related theories, some empirical studies, and the previous policies implemented by Chinese government. Based on this, dependent and independent variables are defined and used for questionnaire and field survey. By collected data, *Multinomial Logistic Regression* is used through SPSS 20.0 to analyze the factors influencing migrant workers' choices for settlements. In this process, the statistical methods such as correlation analysis, multicollinearity test, *MLR* model test, *MLR* analysis, and robustness test are used to get the analytical results. Then, the study gets some findings based on the previous analysis, including the rules of migration, the maximum probability of migrant workers' choices, and the controllable factors by regulating policies. At last, the study gives some policy recommendations, and introduces the implications and limitations of this study.



Figure 1-1 Framework of research

Chapter 2: Urban Villages and Migrant Workers in China

2.1 Urban Village

The previous researches referring urban village focused on definition, characteristics, and effects. In terms of definition, as asserted in Pu, et al. (2011), *urban village* was also known as *villages-in-a-city* or *Chengzhongcun* in Chinese; Wang (2011) argued that it was a special phenomenon emerging in China's political and economic transition; Solinger (1999) and Tait (2003) stated that it was quite different from the *village-style of neighborhoods* in western cities or *squatter areas* in some developing countries; as stated in Liu, et al. (2010), Smart (1985) and Cooper, et al. (2006), *urban village* was thought to be *a new type of urban neighborhood* in Chinese cities and produced by large-scale rural-urban migration and radial expansion of urban built-up areas with rapid urbanization.

On the characteristics of urban village, Li and Chang (2002) considered that it involved the concept of both city and village and reflected the basic characteristics of dual land system; Wei and Yan (2005) claimed that urban village was essentially a rural community implementing a system of collective management; Zhang (2010) found it was usually of non-agricultural physical form and lifestyle; Tong and Feng (2009) stated that the proportion of migrants was larger than aborigines in urban village; Liu, et al. (2010) and Wang, et al. (2011) emphasized that the majority of land in

urban village was non-agricultural and mainly for residential land use; Fan (2004) found that urban expansion directly caused some villagers lost their farmland but still maintained the property rights over housing plots due to the collective land tenure system of China; as stated in Fan's paper (2002), for increasing salaries, local villagers tend to redevelop their houses at high densities and rent to the migrant workers (or *Nongmingong* in Chinese) who move to city for better living; gradually, as Gao (2004) argued, there is a symbiotic relationship between local villagers and migrant workers: migrant workers (renter) pay less for rental houses and the villagers (landlord) earn more rental income than farming.

With regard to the effects of urban village, Zhang, et al. (2003) found many problems existing in urban villages without planning, design and management, such as unsuitable land use, poor housing construction, severe infrastructure deficiencies, intensified social disorder, deteriorated urban environment, and so on. Moreover, Liu and Liang (1997) perceived many negative effects of urban villages on land use efficiency, the order of real estate market, social safety, social equity, and urban morphology. By contrast, the urban village is also deemed to play a positive role by a few researches. Yan and Wei (2004) advised that urban village should be allowed to be exited as the settlement for a mount of low-income migrant workers; Zhang and Song (2003) and Chan, et al. (2003) emphasized that urban village had played an important role in solving the housing problems of migrant workers from the perspective of self-help housing strategy; Zhang (2001) argued that urban village provided cheap accommodation for low-income migrants and put less pressure on the government to develop a costly program to house migrant laborers during the rural-urban transformation. In addition, Liu, et al. (1997), Zhu (2002), Gilley (1996) and

Smith (2000) also insisted that urban village not only reduced the cost of city development but met the demands of basic living of migrant workers, and the surplus labor force (villagers) found a new way of earning a living, which shortened the gap between urban and rural areas. However, in Yuan (2010)'s opinion, it is an obvious question of how to redevelop rather than whether or not urban villages should be redeveloped.

The mentioned researches have explained what the urban village is, how it is formed and what effects it has. However, they have the following deficiencies. First, the definitions are various based on different characteristics of case cities but lack the unity; second, they only purely consider of positive or negative effects of urban villages without dialectical viewpoints.

Therefore, based on their researches, the study proposes a formation mechanism of urban village as shown in Figure 2-1. With urban sprawl and urbanization, a city gets some lands used for construction from rural areas by acquisition or demolition, some villages of no value or high demolition costs are left, gradually forming the urban villages. Losing their lands, many villagers rent houses to migrant workers, resulting in the expansion of urban villages and some urban problems. Urban villages might solve the residential problems of migrant workers only in short term. From long-term development, however, they need to be redeveloped for urban development.

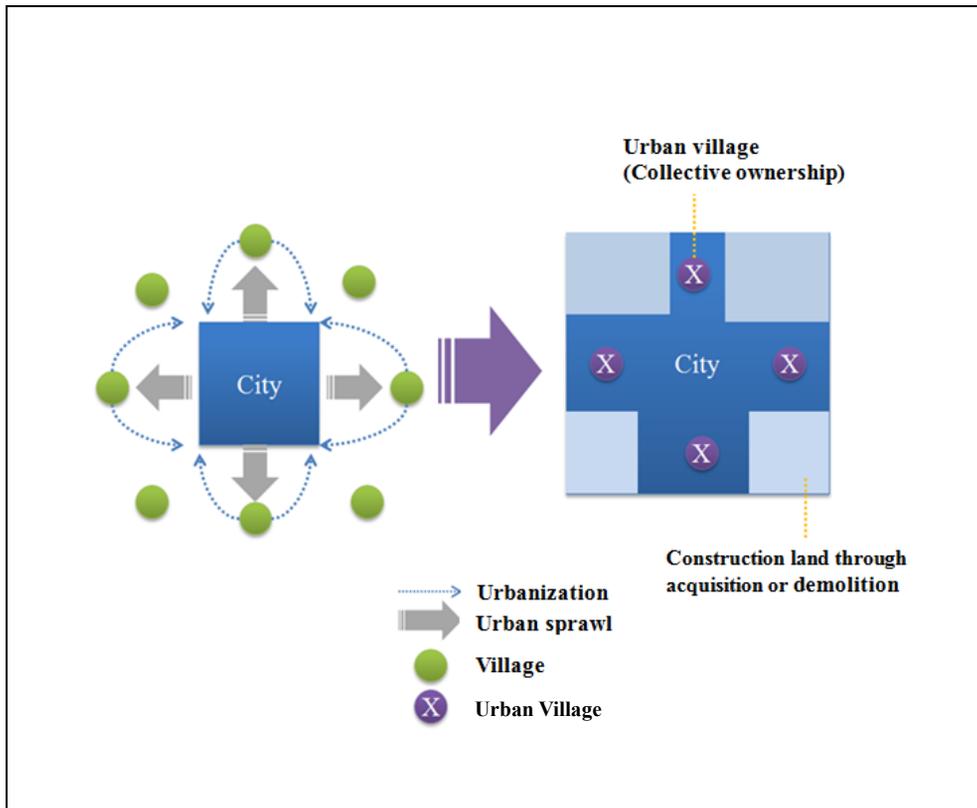


Figure 2-1 Formation mechanism of urban village (arranged by author)

2.2 Redevelopment of Urban Village

Migrant workers and local villagers can get benefits from urban villages, but it is not a reason for continuously allowing the vicious cycle of urban villages, accordingly, redevelopment might be necessary by aggregately analyzing the opinions from the following researches. Wei and Yan (2005) indicated that the main purpose of urban village redevelopment was to improve the residential environment and living quality of both

villagers and low-income migrant workers, which has met the universal approbation. However, the opinions about how to redevelop are divergent. Guo and Wu (2007) found that urban villages had evolved into low-income communities of migrant workers by providing low-rent housings, and the methods of redevelopment only focusing on villagers' benefits were proved wrong. It is also concluded that the mode of *self-redevelopment* guided by government would be feasible. Xue, et.al (2008) stressed that some problems, such as land property right, removal compensation, migrants' settlements, and surplus housing trade after redevelopment, were caused by urban village redevelopment, whereas, no solution was mentioned in Xue 's research.

In addition, by analyzing the redevelopment planning in Guangzhou CBD area, Zhu, et al. (2011) pointed out that urban village redevelopment should maintain the harmony and unity with urban area, but it neglected the feature of urban village, namely, the residents are composed mainly of local villagers and migrant workers, and generally the number of migrant workers is larger than villagers in the big city like Guangzhou, so how to solve migrant workers' residential problems should also be explored.

To explore the relationship among stakeholders in the process of urban village redevelopment, Yun and Chang (2006) analyzed the interest relationship among stakeholders as shown in Figure 2 -2. The main stakeholders are regarded as government, developer, and village group. By *Game Theory*, it is found that the redevelopment of urban villages refer to the direct and indirect interests of all stakeholders, and it not only involves the direct interests of villagers and villager group, but also involves the interests of public, community, enterprise, and government. Generally, redeveloping urban villages will help local government to get lands so that

fiscal revenue will be increased as well; it will also help developers getting more benefits from developing commercial housings and improving their competitiveness; for villager groups, obviously, their living condition will be improved, and what's more, their core benefits will be fulfilled by becoming urban residents successfully. However, migrant workers, the largest groups living in urban villages, are not considered as stakeholders by Yun's research, which might result in ignoring their interests while redeveloping. Actually, migrant workers also play important roles, and their staying or leaving might also affect urban development.

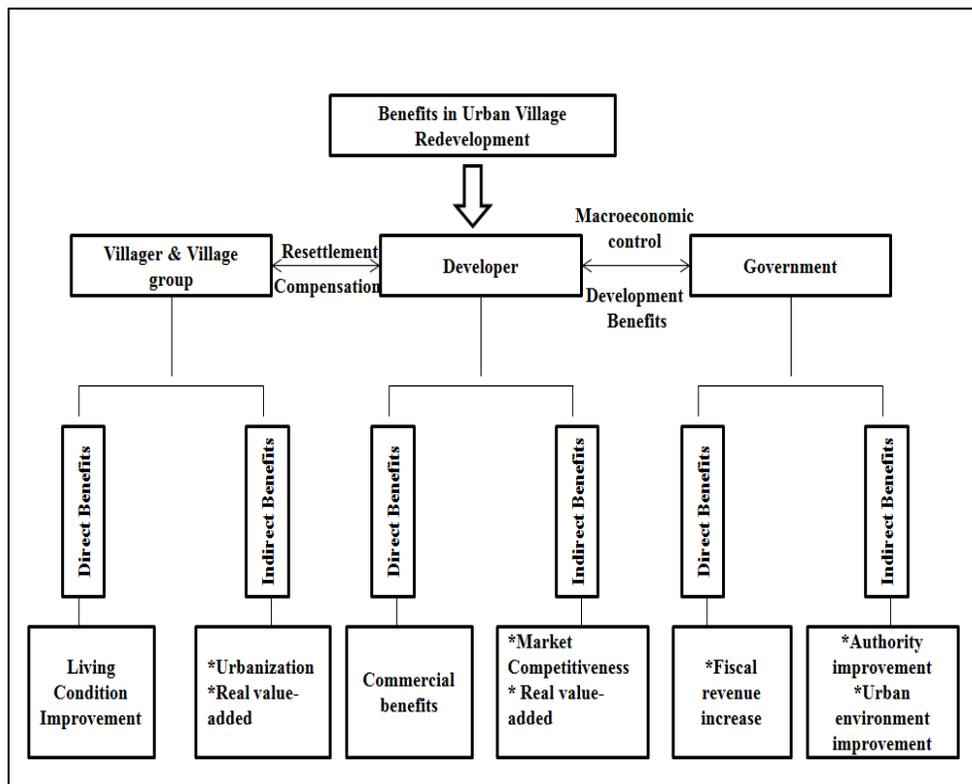


Figure 2-2 Interest relationship among stakeholders
 Source: Yun and Chang (2006)

According to the *Game Theory*, Zhang (2008) recommended a method that the city government rather than developer immediately implement the urban village redevelopment on the basis of villagers' full backing, and it also divided the redevelopment levels into high and low, and divided redevelopment styles into government implementation, developer implementation, and villager group implementation. Yuan (2010) analyzed four redevelopment modes carried out in Zhuhai, Guangzhou, Hangzhou, and Shenzhen, and found that they had the same goals but different methods in the aspects of demolition, compensation, and the subjects of redevelopment; it also classified three types of urban villages: downtown type, urban-fringe type and suburb type, which should be redeveloped in different modes. Hong (2010) argued that urban village redevelopment could be implemented by various modes, and those adapt to the local development might be better ones.

In a way, different redevelopment styles or methods probably have different effects on stakeholders. In the process of redevelopment, city government should consider not only villagers' interests but also migrant workers' interests, for they are both the subjects of a city. The previous researches on the redevelopment of urban village, to a certain extent, raise some redevelopment styles by reviewing cases. However, there are less studies focusing on migrant workers' settlements with the redevelopment of urban villages. Migrant workers have become bonus or burthen of Chinese urbanization, the problems of their migration might be the key research objective while implementing a plan of urban village redevelopment.

2.3 Migrant Workers and Their Choices for Settlements

Migrant workers are the new labor force grown with China's reform and opening-up, industrialization, urbanization and modernization. They are deemed to be the important component of industrial workers. The basic characteristic of the population change in modern world is the transition from farmers to industrial workers and citizens. As stated in Gu, et al. (2007), rural-urban migration was a social phenomenon in a specific historical context of China; Zhang (2004) deemed that migrant workers were low-income groups as they were not well-educated and skilled; Wu (2002) found that they choose to live in the urban villages which provide cheap rental housings in order to save living costs.

Since the beginning of 2000s, some cities such as Beijing, Shanghai, Shenzhen and Guangzhou have been facing the urban problems caused by urban villages. Through evaluation, some urban villages are included in the plan of redevelopment. Generally speaking, local villagers can be arranged around and get compensatory payment from government. But unfortunately, migrant workers have to choose their next settlements as long as the redevelopment plans are implemented as they do not have household registers of the cities where they live. The researches on their choices for settlements might help to understand the driving power of their different choices. In this section, it will first review the theories of migration, and then analyze some literatures analogous to this study.

2.3.1 Theories of Migration

The first famous migration theory is Raven Stein's *Laws of Migration* (E.G. Raven Stein, 1885). As shown in Table 2-1, economic factor is regarded as the major cause, and then comes sex, age, distance, and some spatial characteristics. Specifically, females are regarded to be more migratory than males over short-distance; most of migrants are adults; families rarely migrate out of their places of birth; from spatial level, migrants decrease with distance increased, and the stages of migration are usually based on rural area-small town-large town or city; besides, migration will increase in volume with industries and commerce developed and with transport improved; the major direction of migration is from agricultural areas to the centers of industry and commerce. Stein's laws of migration have shown the general rules, yet some of them need to be further confirmed by empirical analysis of specific cases. In any case, some factors mentioned in these laws might have different extents of effects on migration.

Next is the *Push and Pull Theory* created by Lee (1966). Figure 2-3 shows four factors influencing migration, including the factors associated with the area of origin, the factors associated with the area of destination, the intervening obstacles (distance, culture, etc.), and the personal factors. Lee also made the following hypotheses: 1) migration is selective; 2) migrants responding primarily to plus factors at destination tend to be positively selected; 3) migrants responding primarily to minus factors at origin tend to be negatively selected; 4) where the minus factors are overwhelming to entire population groups, they may not be selected at all; 5) taking all migrants together, selection tends to be bimodal; 6) the degree of

positive selection increases with the difficulty of the intervening obstacle; 7) the heightened propensity to migrate at certain stages of the life cycle is important in the selection of migrants; 8) the characteristics of migrants tend to be intermediate between the characteristics of the population at origin and the population at destination.

As Lee (1966) mentioned, origin and destination have push and pull factors which will affect migrants' choices. Moreover, intervening obstacles, such as distance, culture and so on, can also be taken into consideration. Actually, those factors are mainly external ones associated with regional characteristics. For example, Beijing absorbs many migrants due to more job opportunities and higher salaries, but the rental costs are so high that low-income migrant workers have to live in urban villages for cutting living costs. This process of choices includes three factors, i.e., the pull factor of high income and job opportunities, the push factor of expensive rent in urban area, and the pull factor of cheap rent in urban village. As a result, most migrant workers choose to work in urban areas but live in urban villages.

The intervening obstacle influences migrants' choices from some extents. For instance, a migrant worker lives in urban village, and his working place is far away from home, then it will take at least one hour to go to work. Finally, he leaves for another region near to working place. Here, distance is an intervening obstacle.

Table 2-1 Raven Stein’s Laws of Migration

Classification	Laws
Mechanism	<ul style="list-style-type: none"> -The major causes of migration are economic factors -Urban dwellers are less migratory than rural dwellers
Structure	<ul style="list-style-type: none"> -Females are more migratory than males over short-distance -Most migrants are adults: families rarely migrate out of their country of birth
Spatial Characteristics	<ul style="list-style-type: none"> -The number of migrants decrease as distance increase -Migration occurs in a series of stages: typically from rural to small town, to large town steps or to city -Each main current of migration produces a compensating counter-current. -Migrants going long distances generally go by preference to one of the great centers of commerce or industry -Migration increases in volume as industries and commerce develop and transport improves -The major direction of migration is from the agricultural areas to the centers of industry and commerce

Source: E.G. Raven Stein (1885)

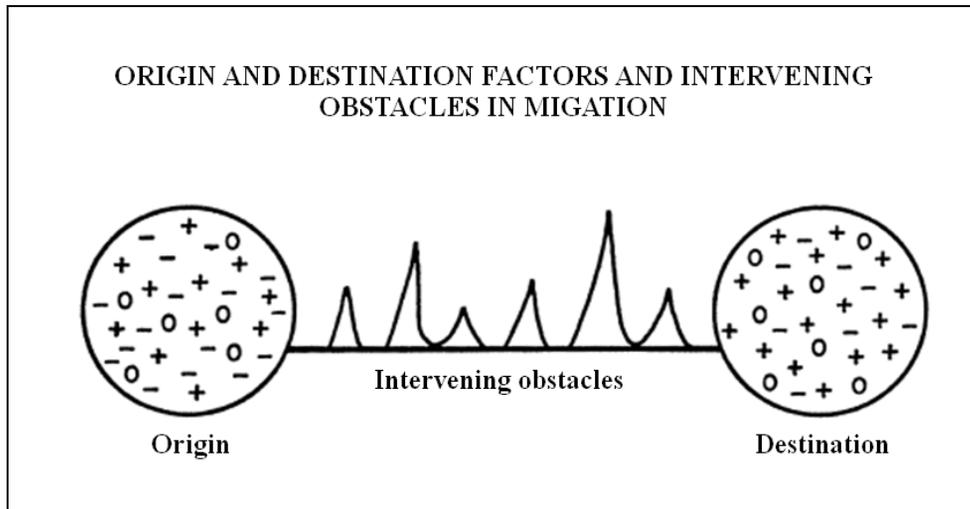


Figure 2-3 Theoretical mechanism of push and pull theory
 Source: Lee (1966)

Todaro's theory mainly shows the following laws: the migration size increase with the rural-urban income gap widened in developing countries; unemployment rate can also affect migrants' choices. This theory is significant for the studies on the migration in China because rural-urban income gap of China is serious, meanwhile, the higher unemployment rate means the probability for migrants to get stable job become smaller. Apparently, income and working stability are important economic factors influencing the choices for migration. (M.P. Todaro, 1969)

Courchene (1970) and Lewis (1954) found the migration rate was proportional to per capita income. Cebula and Vedder (1973) pointed out the volume in migration is positively correlated with per capita income. Neoclassical theory assumes one migrant is the smallest unit in migration, but actually personal decision is connected with a whole family. As a result, new economic theory of migration (Massey, et al., 1993) is introduced

based on neoclassical theory. This theory advocated that personal migration was affected by the expected income and family, which applies to Chinese people of strong family values (Zai and White, 1996). Rogers (1987) developed an age-migration model and finds that the migrants between 20 and 30 years old are more than other age groups. These theories are widely applied to analyzing and explaining the circular migration frequently seen in developing countries (Zhu, 2004).

The studies mentioned above have stated the basic laws of migration. For understanding the causes of migration more deeply, some studies related to the researches on influential factors of migration will be reviewed in the next section.

2.3.2 Factors Influencing Migrant Workers' Choices

Some researches focus on migrants' choices from different perspectives. By the method of statistics analysis, the factors influencing migrant workers' choices for settlements, along with their different extents of effects, are discovered. As shown in Table 2-2, analyzed by *Binary Logistic Regression Model*, Cai and Wang (2008) found the human capital factors, such as age, educational level, the length of time working away from place of origin, and migration cost, had major effects on behavioral migration; monthly income showed the opposite tendency: the higher their monthly income is, the less likely migrant workers are to leave for city. Liu, et.al (2011) examined influential factors of migrant workers' choices for employment destinations by *Multinomial Logistic Regression Model*, and found that individual,

family, and community characteristics were significantly associated with employment destinations; economic factors had a dominant role in selecting employment destinations; migrant network, transportation facilitation, and household registration system were also among the important factors affecting employment destinations. Huang (2011) established a logistic model by the investigation to 180 returning migrant workers of Shanxi province in China, and analyzed their outdoor-work intentions and influential factors. Huang found that age, education level, family life worrying, and income change had significant effects on their intentions of going out to work, yet sex, manner of outdoor-work, and skill training had no significant effects. Wang (2011) used *Binary Logistic Model* to construct a corresponding econometric model and measure the effects of factors on the selection of migration mode. The results showed that educational level, personal ability, social relation, and social security were the major factors influencing their choices for becoming permanent urban residents; human capital and social security construction were of great significant to their income and life quality.

The mentioned researches fail to analyze related policies on migrant workers, thus they might be of the one-sidedness especially in choosing the values of dependent variable. By contrast, the study combines the selection of dependent variable with the policy background, and selects four settlements of migrant workers objectively and comprehensively as the contents of study, and the process of analyzing related polices is in the next section.

Table 2-2 Factors influencing migrant workers' choices

Choices of migration	Significantly influential factors	References
0=willing to give up land 1=not willing to give up land	sex, age, educational level, monthly income, working places, commuting time, social pressure	Cai and Wang (2008)
1=local employment 2=city employment 3=outside province employment	age, skill, income, living place, number of factories around hometown	Liu, et al. (2011)
0= work inside hometown 1=work outside hometown	age, educational level, family life worrying, income change	Huang (2011)
0= still keep rural resident 1=become urban resident	education degree, personal ability, social relation, social security	Wang (2011)

Source: Cai and Wang (2008); Liu, et al. (2011); Huang (2011); Wang (2011)

2.4 Policies referring Migrant Workers' Migration

2.4.1 Policies in Different Periods

In January, 2013, *Migrant Worker Research Group (MWRG)* of the State Council of China issued a report on the development of migrant workers.¹ It relates to various issues of Chinese migrant workers, and evaluates some policies made by Chinese government. Since the reform and opening-up, Chinese government carried out the policies referring migrant workers in five stages (see Table 2-3). The first stage is from 1979 to 1983. Chinese government carried out a policy to restrict the rural-urban migration because the national economy was still in the period of restoration and rectification after the *Cultural Revolution*², when the capacity of the commodity grain and food supply in cities was relatively low. Moreover, during this period, the city employment policy focused on solving the employment problem of urban labor force, thus the state strictly restricted rural-urban migration by the control of recruiting workers from rural areas, strengthening the household registration system, and strengthening the use and management of rural labor employment³.

¹ Migrant Worker Research Group, 2013, "Research on the Development of Chinese Migrant Workers", Beijing: China Human & Resources & Social Security Publishing Group.

² The Great Proletarian Cultural Revolution, commonly known as the Cultural Revolution, was a social-political movement that took place in the People's Republic of China from 1966 to 1976. Set into motion by Mao Zedong, then Chairman of the Communist Party of China, its stated goal was to enforce communism in the country by removing capitalist, traditional and cultural elements from Chinese society, and to impose Maoist orthodoxy within the Party.

³ "Notice on the strict control of rural-urban migration of labor force", State Council of China, October 12th, 1983.

The second stage is from 1984 to 1988. In that period, with a series of reform measures, the national economy had a rapid growth in the mid-term of 1980s, which increased a demand to labor force. In this situation, allowing labor migration was not only the desire of farmers but also the objective and requirements of economic development. For adapting to the changes of social economic situation, Chinese government positively encourage rural-urban migration of labor force by improving rural-urban communication in economy, allowing farmers to operate service industry in cities, supporting and encouraging farmers to operate transportation industry; the employment system in cities allowed the state-owned enterprises to recruit workers from rural areas.⁴ With the promotion of these positive policies, the rural-urban migration had a rapid growth.

The third stage is from 1989 to 1991. From the beginning of 1988, the economic overheating triggered a serious inflation. At that time, the central government made a decision called “improving the economic environment and rectifying the economic order”. During the period of three years’ rectification, China introduced a series of important economic measures including compressing scale of investment in capital construction and strengthening the financial and credit control, causing that many construction projects were rejected, quite a few enterprises were underemployed, and the national economic growth slowed down significantly. In this case, the employment situation was deteriorated; a large number of migrant workers were sacked, resulting in a reverse phenomenon of urban-rural migration. To alleviate the employment pressure in cities, China strengthened the restriction to rural-urban migration of labor force

⁴ “Ten Policies about Activating Chinese Rural Economy”, the CPC Central Committee & State Council, January 1st, 1985.

and called for strictly controlling the *blind migration* of local farmers⁵. This policy received some effects, compared with 1988, the migrant workers remained in cities were drastically decreased, and the largest decline was to around 33.3%. However, the artificial restriction also resulted in a more turbulent rural-urban migration in the early 1990s.

The fourth stage is from 1992 to 2002. With the rural-urban gap widely increased, the rural employment pressure increased, along with the reform of household registration system, a large scale of rural-urban migration was formed. Through labor market, China took positive measures to solve the problems, and “guidance” had become the focus policy in this period.

The fifth stage is from 2003 to now. Since the beginning of the twenty-first century, there have been positive changes in employment environment of rural-urban migration. With the continuous reform of rural-urban management system, the contribution of migrant workers to the economic development has been recognized by the whole society. According to the announcement of *the Third Plenary Session of 18th CPC Central Committee*⁶, Chinese government has proposed to improve the citizenization of migrant workers. The realization of the citizenization is the fundamental way to solve the problems caused by migrant workers. However, the systematical obstacle still exists. In the aspects of system, dual system seriously hindered the citizenization. Although the reform of household registration system has been improved, the substantive progress is very little. What migrant workers need is not only the change of their identities, but also the protection of their

⁵ “Urgent Notice on Strictly Controlling Rural-urban Migration of Labor Force”, General Office of the State Council, March, 1989.

⁶ The Third Plenary Session of the 18th CPC Central Committee was held from Nov.9 to Nov.12, 2013 in Beijing. Third plenums of different stages have been the launch-pad for many of China’s major reforms. (www.news.xinhuanet.com)

rights and interests, and housing and migrant children' education might become the most concerned issues for migrant workers to live and work in cities. Poor living conditions and weak housing affordability seriously affect their living quality, and become one of the biggest obstacles for them to integrate into cities. At a social level, the class discrimination exists in real life, for migrant workers are still seen as special vulnerable group, which might seriously impedes the process of their integrating into cities.

Table 2-3 Different stages of rural-urban transition of labor force

Stages	Periods	Economic background	Policies about rural-urban migration
1 st stage	1979~1983	Economy restoration and rectification	Restriction
2 nd stage	1984~1988	Rapid growth of national economy	Permission
3 rd stage	1989~1991	Slow growth of national economy	Control
4 th stage	1992~2002	Increase of rural-urban gap	Guidance
5 th stage	2003~	Migrant workers' contribution to economic development	Perfection of system

Source: Research Institute of Population and Labor Economics, Chinese Academy of Social Sciences (CASS)

2.4.2 Deficiencies of the Past Policies

The past policies have only considered rural-urban migration in that period but neglected the spatial differentiation caused by the formation and redevelopment of urban villages. As shown in Figure 2-4, the reform and opening-up in 1980s exacerbated the gap between urban and rural areas, causing the rural-urban migrations. The Chinese government found the urban problems caused by migration and carried out the policies focused on rural-urban migration. However, with the rapid urbanization, urban villages were formed in some Chinese cities in the beginning of 1990s, causing a spatial differentiation of two kinds of regions in inner cities, namely, *urban village* and *urban area*; the redevelopment of urban villages were started from the beginning of 2000s, which has caused a new spatial differentiation of three regions in inner cities, and they are *urban village*, *redeveloped urban village*, and *urban area* respectively. However, the policies in that period only focused on the rural-urban migration of migrant workers but neglected their internal migration behavior in cities. Along with migrant workers' original regions, there are four kinds of settlements for migrant workers to choose: *return (original region)*, *another urban village*, *resettlement (redeveloped urban village)*, and *urban area* (see Figure 2-5).

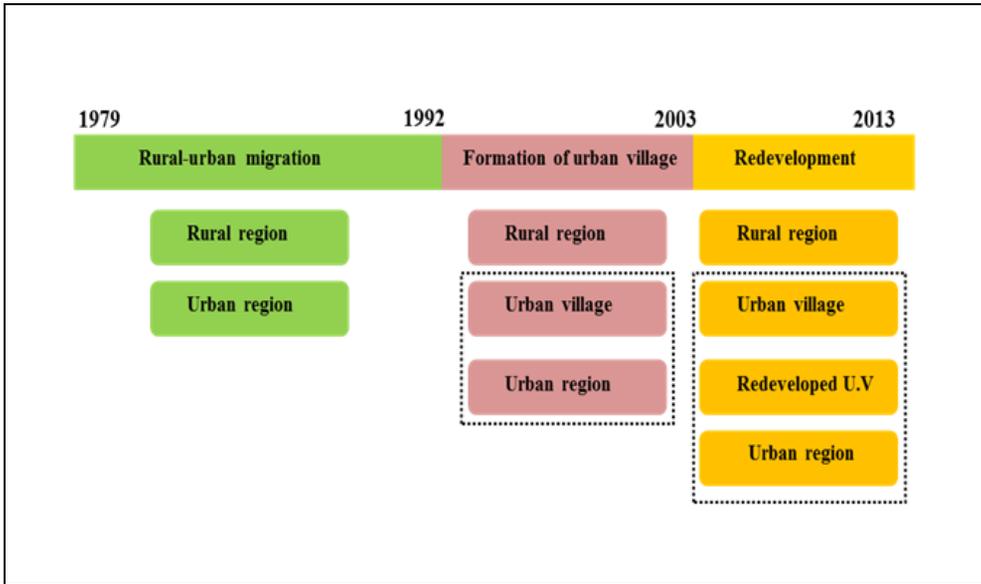


Figure 2-4 Historical process of the spatial differentiation in Chinese cities

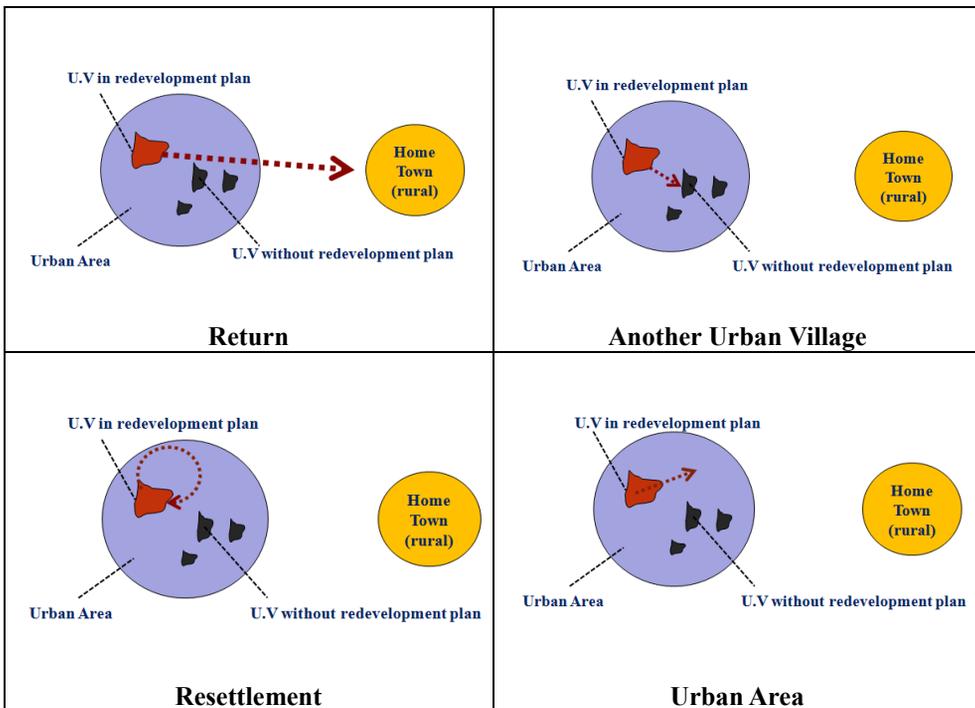


Figure 2-5 Diagrammatic sketch of migrant workers' choices for settlements

The four settlements formed with the formation and redevelopments of urban villages are absolutely different, and they have the characteristics as shown in Table 2-4. They are classified based on their characteristics in social economic system, living cost, and mode of life. In social economic system, migrant workers' original regions and urban villages are both kept in rural level, whereas the redeveloped urban villages keep unanimous with urban management level. From living cost, compared with redeveloped urban village and urban area, living in their hometowns or urban villages will cut their costs. As for the mode of life, migrant workers' hometowns and urban villages have more original villagers, and they usually keep a rural mode of life. Although an urban village is redeveloped, the citizens there still keep an original mode of life.

Through classification, it is easy to understand the reason why most migrant workers incline to live in urban villages, perhaps because they are more familiar with the social economic system and the mode of life in villages. Even though they are arranged in a redeveloped urban village by government, they might still keep their original mode of life. Thus, the formation of urban village not only causes the spatial differentiation in a city, but also results in the differentiation in social economic system, and even in the mode of life.

Table 2-4 Classification based on the characteristics of four settlements

Items	Classification	
Social	Rural level	Urban level
	-Return	-Resettlement
Economic system	-Another urban village	-Urban area
	Low cost	High cost
Living cost	-Return	-Resettlement
	-Another urban village	-Urban area
Mode of life	Rural mode	Urban mode
	-Return	-Urban area
	-Another urban village	-Resettlement

Notes: return=original region where migrant workers used to live
resettlement=redeveloped urban villages

From the angle of city government, different choices of migrant workers for settlements might cause different effects on city development. By field survey, the positive effects of choosing “return” on a city include family reunion for those leave along, the improvement of social stability, and the improvement of agricultural economy and industry. However, a city will lose part of necessary labor force, which will affect urban construction and development.

If most migrant workers decide to move to another urban village, their economic pressure might be temporarily relieved, and the city government’s pressure for arranging them will also be eased. But the negative effects of this choice are that new urban problems might be caused with the increase of migrant workers in other urban villages, and meanwhile, their settlements

are still as instable as where they used to live, and they will similarly face various unequal treatments. In addition, the urban villages they incline to move in will be redeveloped in future, thus the government might have to solve the same problems while making other plans of urban village redevelopment.

Migrant workers' resettlements might avoid the problems caused by return and moving to another urban village, and there are many positive effects, for example, improving urbanization, easing the pressure of urban population, alleviating economic pressure, solving the problem of labor shortage, and realizing social fairness. However, city government needs to pay high costs for the arrangement of migrant workers, social welfare, and management, which can be seen as the follow-up investment of the redevelopment of urban villages.

If a great number of migrant workers move to urban area, perhaps they will be easy to integrate into a city and share the achievement of urban development like other citizens, but the central region of the city will get the population pressure, and it has to pay higher costs for the city management, maintenance, and social welfare. What's more, the real estate market will become instable because the demands of rental houses increase, but the supply cannot be adequate to it, then a series of urban problems will be produced with migrant workers settled in urban area.

As a result, city government needs to make efforts to avoid further urban problems caused by migrant workers' choices for different settlements, and the study will provide evidences for government to make related public polices by analyzing the factors influencing migrant workers' choices for settlements after the redevelopment of urban villages.

2.5 Summary

Reviewing a number of literatures concerned with the concepts of urban villages, redevelopment of urban village, and migrant workers' choices for settlements, it is found that the concept of urban village is produced by the special dual land system and household register system of China. The expansion of Chinese cities causes a large number of landless villagers who finally become landlords of urban villages. These landlords provide their houses to migrant workers with cheap rent, so more and more migrant workers live there although their working places are far away. Some researches pointed out the negative effects of urban villages on urban development insisted on redeveloping those urban villages. By contrast, some researches emphasized the necessity of keeping urban villages. There is a concerned problem after the redevelopment of urban village, namely, the settlements of migrant workers. By reviewing the theories of migration and some related researches, the factors influencing migrating action are extracted. In the rest of this study, the theoretical basis and those certified influential factors might provide important evidence for the following analysis. In addition, the previous policies are found to only focus on rural-urban migration but neglected the migration behavior in different regions of inner cities. By exploring the positive and negative effects of migrant workers' choices on city development, the study insisted that finding the factors influencing their choices for settlements might help to avoid further urban problems caused by their migration.

Chapter 3: Empirical Characteristics of Migrant Workers and Urban Villages

3.1 Characteristics of Migrant Workers

3.1.1 Number of Migrant Workers

Migrant workers can be generally divided into *foreign migrant workers* and *local migrant workers*. The former indicates those who work out of their hometown, and the latter indicates those who work around their hometown.

With the development of Chinese economy, rural labors gradually move to cities. As shown in Figure 3-1, the total number of migrant workers in 2012 is 262.61 million, accounting for about 15% of the total population in China. From 2008 to 2012, its annual average growth rate is 4%, showing a trend of rapid increase of rural-urban migration; the growth rate of foreign migrant workers and local migrant workers are respectively 3.8% and 3.9%; the number of foreign migrant workers is about 1.7 times of local migrant workers. It can be also seen that the number of migrant workers has a rapidly progressive increase, and nearly two thirds of them work out of their hometowns; nearly one third of them work in local regions.

Figure 3-2 shows regional distribution of migrant workers in 2011 and 2012. The migrant workers in eastern China account for the larger proportion than that in the midland and western China (2011:42.7%; 2012: 42.6%), showing that they usually move to the regions with a high level of

economic development; the proportions of local migrant workers in the east in 2011 and 2012 are respectively 61.4% and 60.8%, larger than that in middle and western regions; the proportions of foreign migrant workers in the east, midland, and the west have no significant difference.

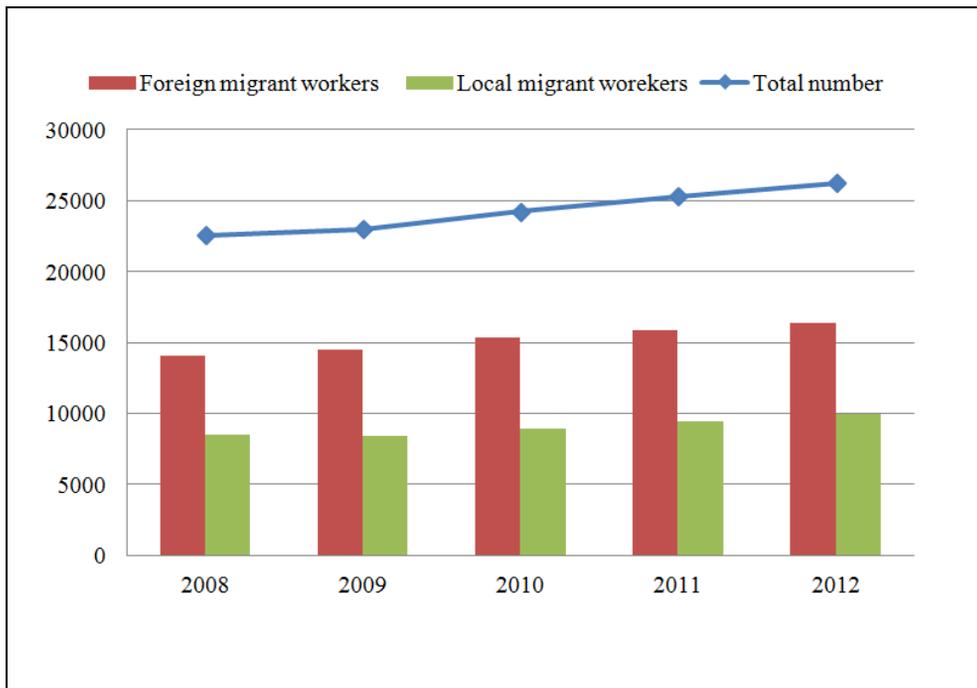


Figure 3-1 Number of migrant workers (10000 persons)
Source: China Statistical Yearbook (2012)

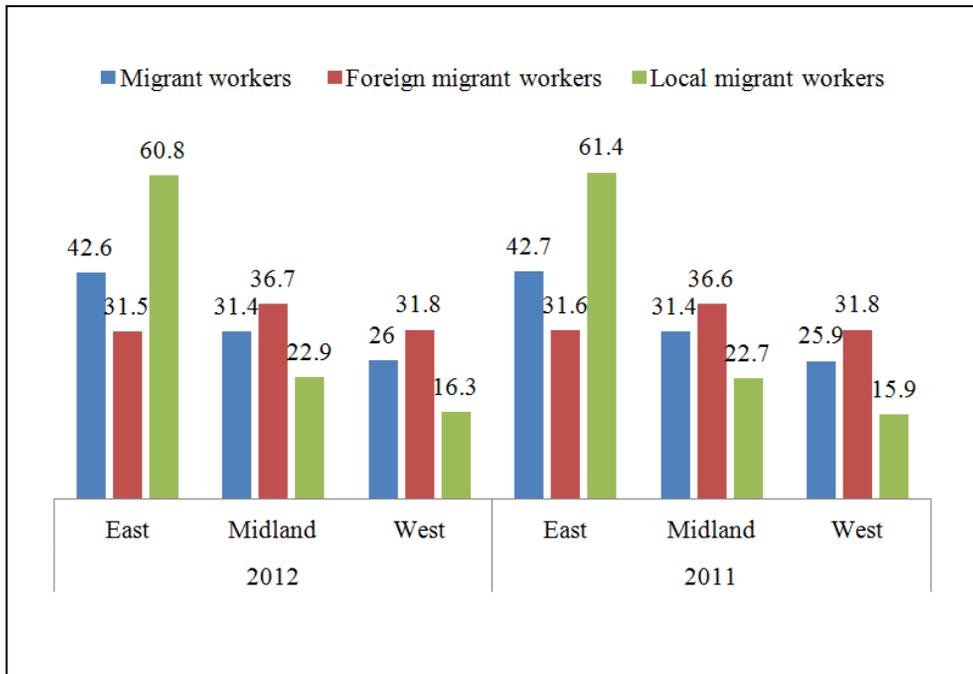


Figure 3-2 Regional distributions of migrant workers (%)
Source: China Statistical Yearbook (2012)

3.1.2 Sex, Age, and Educational Level

According to the survey of National Bureau of Statistics in 2012, the number of male workers accounts for 66.4% and female workers account for 33.6%, it is thus clear that male workers are the main part in the group of migrant workers. As shown in Figure 3-3, the proportion of the migrant workers aged below 40 years old decreased from 70% of 2008 to 59.3% of 2012; their average age increased from 34 years old (2008) to 37 years old (2012), showing that less and less young people incline to become migrant workers. From Figure 3-4, uneducated migrant workers account for the smallest proportion, 1.5%; those educated with junior middle school level

account for the largest proportion, 60.5%; those educated with elementary school level and senior middle school level account for 14.3% and 13.3% respectively; those educated with polytechnic school level and college level or above account for respectively 4.7% and 5.7%, showing a generally low educational level of migrant workers. Compared with the older migrant workers, those aged below 30 years old are educated in higher level relatively.

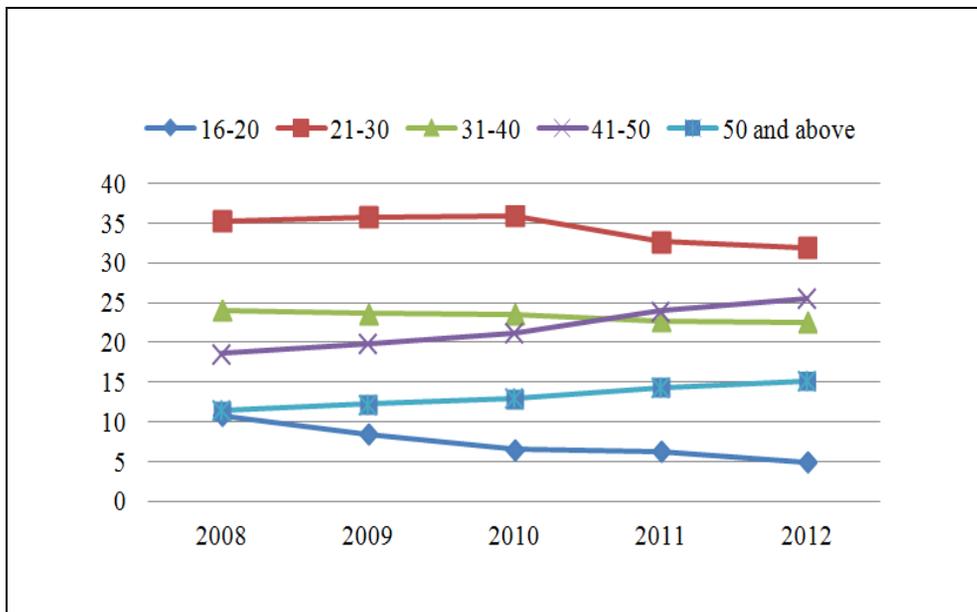


Figure 3-3 Age structure of migrant workers (%)
 Source: China Statistical Yearbook (2012)

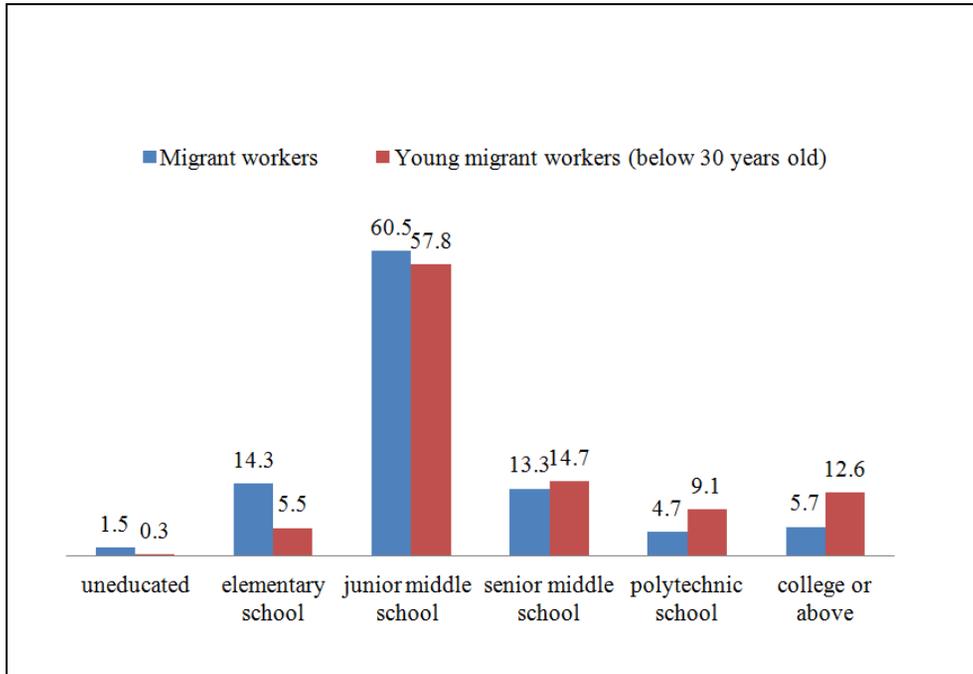


Figure 3-4 Educational levels of migrant workers (%)
Source: China Statistical Yearbook (2012)

3.1.3 Occupation, Monthly Income, and Residential Mode

The general occupations that migrant workers work for include *manufacture, construction, transport (storage or post), wholesale (or retail), accommodation catering, and service*. As shown in Figure 3-5, from 2008 to 2012, the proportions of those worked for manufacture industry are above 35%. By comparison, the proportions of those worked for the other five industries account for no more than 20% in the last five years. The proportions of working for manufacture industry have been keeping a stable trend from 2008 to 2012; the proportion of working for construction industry increased by nearly 5%, from less than 15% in 2008 to around 20%

in 2012. Obviously, the construction industry might need more migrant workers with the development of real estate industry.

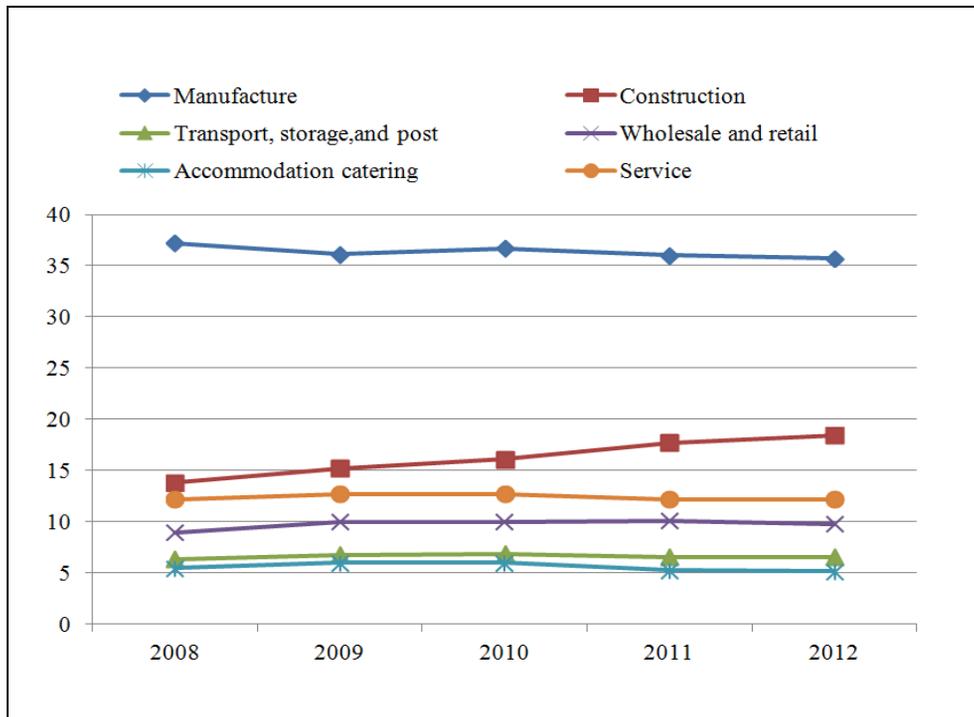


Figure 3-5 Occupational situations of migrant workers (%)
Source: China Statistical Yearbook (2012)

Figure 3-6 shows the average monthly income of migrant workers in different regions from 2008 to 2012. In the end of 2012, their average monthly income is 2,290 Yuan, increased by 11.8% compared with that in 2011. The average monthly income of those worked in eastern China is 2,286 Yuan in 2012, increased by 11.4% compared with that in 2011; that in midland of China is 2,257 Yuan in 2012, increased by 12.5%; that in the west Chinese regions is 2,226 Yuan in 2012, increased by 11.8%. It shows that there is no significant income gap among different regions in the same

period, and there is an increase in monthly income from 2008 to 2012. However, as most migrant workers live and work in cities, their disposable incomes are relatively not enough due to high living costs.

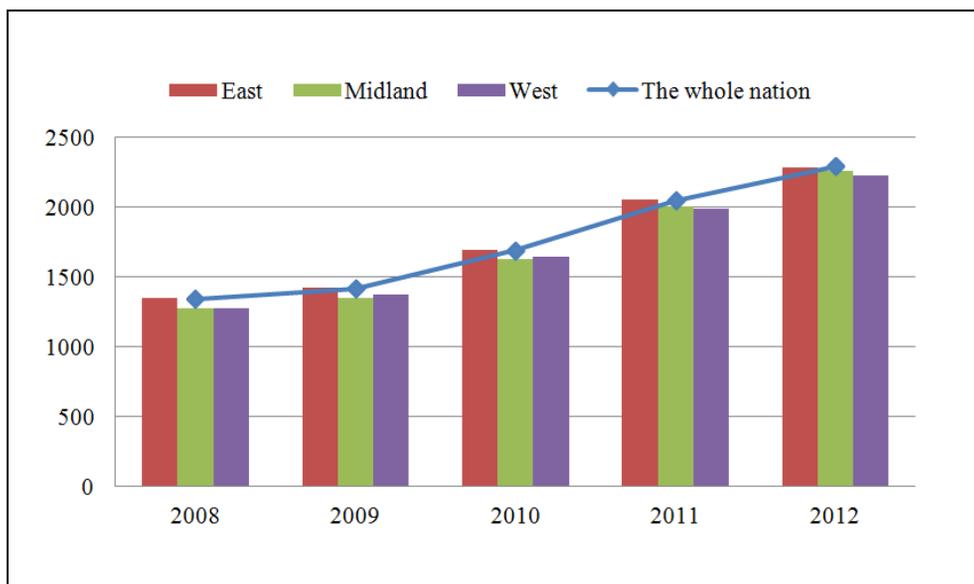


Figure 3-6 Average monthly income (Yuan) (2008-2012)
Source: China Statistical Yearbook (2012)

Figure 3-7 shows their residential situations. They most live in the dormitories located in their working places, and the proportions of those living in dormitories decreased from above 50% in 2010 to below 50% in 2012; the proportions of other residential modes are respectively below 20% from 2008 to 2012; those buying houses in cities account for the smallest proportion of all, decreased from 0.9% in 2008 to 0.6% in 2012, which shows that most of migrant workers cannot afford buying their own houses in cities. Some migrant workers also incline to rent houses by themselves or with others, the proportions of renting houses with others increased by 3%

from 2008 to 2012; the proportions of renting houses alone decreased from 18.8% in 2008 to 13.8% in 2012, demonstrating that many migrant workers are willing to rent houses with others so as to cut their rental costs. Meanwhile, local migrant workers usually choose to work in city and live in their hometowns due to location advantages.

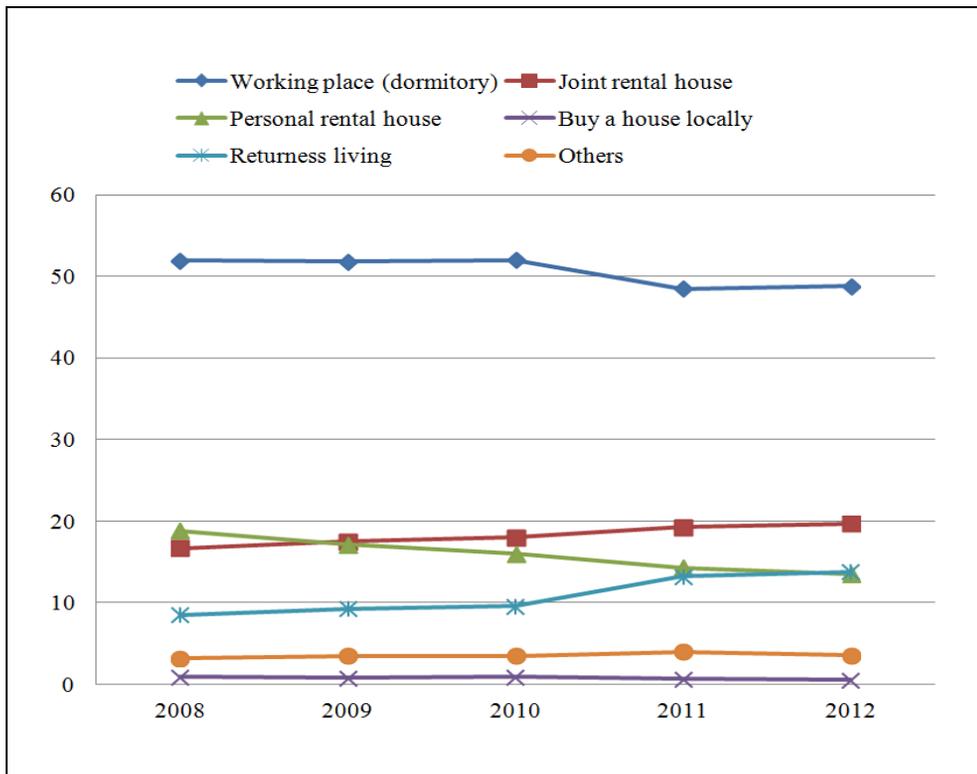


Figure 3-7 Residential situations of migrant workers (%)
Source: China Statistical Yearbook (2012)

3.1.4 Special Contributions of Migrant Workers

According to the research of *MWRG*, migrant workers have made a special contribution to China's economic and social development. They have been an important force supporting China's industrial development by providing an abundant low-cost workforce to labor-intensive industries, which ensures that cities can be competitive in the environment of fierce market competition. Moreover, migrant workers have enabled China to develop rapidly into a "world plant".

According to *the sixth census of Chinese population (2010)*⁷, migrant workers accounted for 58% of all employees in the secondary industry, 52% in the tertiary sector, 68% in the manufacturing fields, and 80% in the construction industry. Undoubtedly, they have become a significant part of the industrial workforce in China. In terms of the urban construction and prosperity, Chinese migrant workers also become a vigorous force. They have been positively participating in the construction of modern cities, improving the living and working environment of urban residents. In addition, they have helped to realize the market-orientated mechanism of the free choice of jobs and the competitive employment.

⁷ Major Data on 2010 Population Census of China, China Social Sciences Press, 2011.

3.2 Redevelopment of Urban Villages

3.2.1 Situation of Urban Villages

China's urbanization level has a continuous increase with the economic and social development. The rate of urbanization has increased from 21% of 1982 to nearly 50% of 2011 and is expected to exceed 50% by 2015 (China Statistic Year Book, 2012). As shown in Figure 3-8, the urbanization rates (70%~90%) of Beijing, Shanghai, and Tianjin are relatively higher than other regions, almost reaching the level of developed countries.

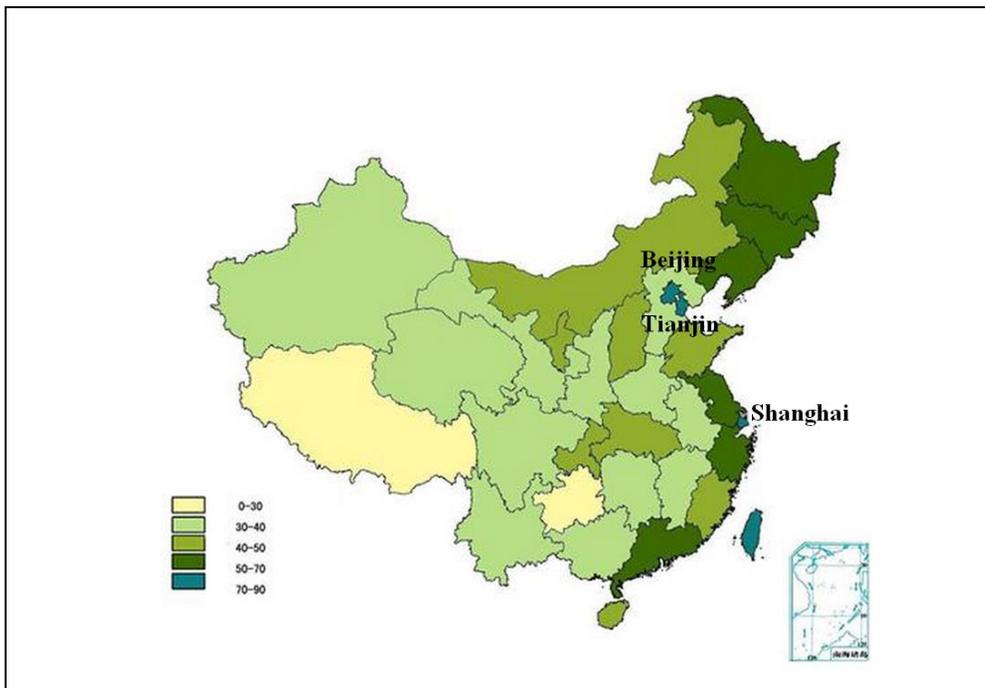


Figure 3-8 Urbanization rate of different Chinese regions (2011)

Source: China Statistic Yearbook (2012)(modified by author)

Beijing, as the capital city, has inevitably absorbed a number of migrants working and living there. There are 16 districts in Beijing municipality, and most of migrants are living in Chaoyang, Haidian, Fengtai, Shijingshan, Changping, and Daxing (see Figure 3-9 and Figure 3-10).

The number of migrants in the six districts is more than that of household population. According to the statistic data of 2011, Haidian district has more migrants (1,100,000) than the other five districts, and then comes Chaoyang (1,040,000), Fengtai (460,000), Changping (160,000), Shijingshan (50,000), and Daxing (5,000).

However, the number of household population in Chaoyang district is only 310,000, accounting for the most proportion. Obviously, the number of migrants is far greater than household population. The large proportion of migrants causes many problems, and the continuous existence of urban villages is one of them.

On the basis of survey from *Beijing municipal institute for economic and social development*, in 2002, 332 urban villages existed in eight districts and had around 300,000 migrants; in 2004, the number of urban villages was down to 231, but there were 700,000~800,000 migrants living there. Redeveloped during three years before the 2008 Beijing Olympic Games, the number of urban villages in the central regions of Beijing was gradually reduced to 85.

Since 2008, Beijing has increased the redevelopment of urban villages distributed in the central and urban-fringe areas concerned with the six districts shown in Figure 3-10, and there were still about 227 urban villages and 2,800,000 migrants. Figure 3-11 shows the distribution of urban villages in 2009, they are mostly located outside the central regions.

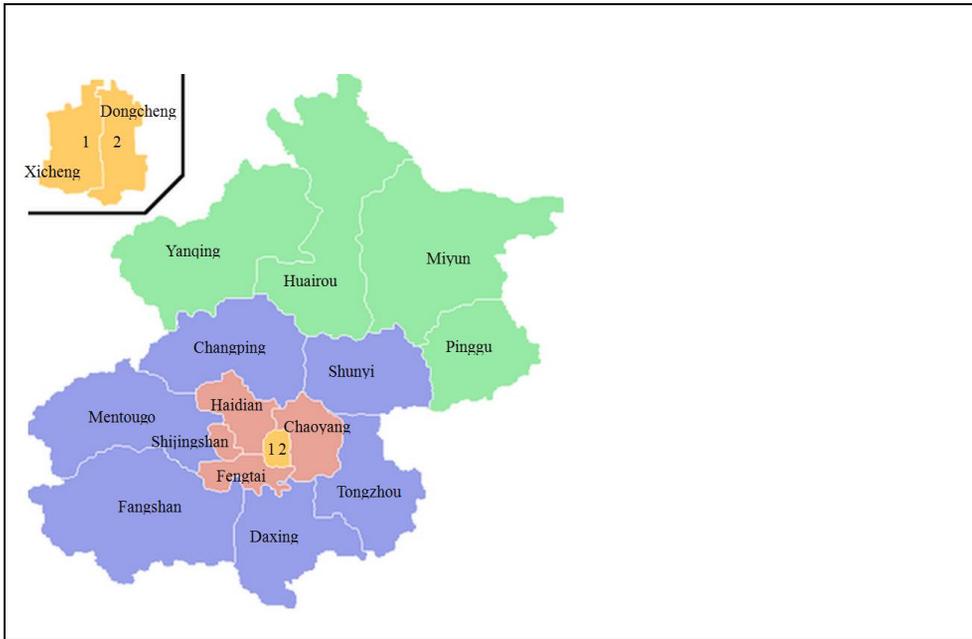


Figure 3-9 Districts of Beijing Municipality

Source: The Second Land Survey of Beijing, conducted by the Beijing Municipal Land Authority in 2011 (modified by author)

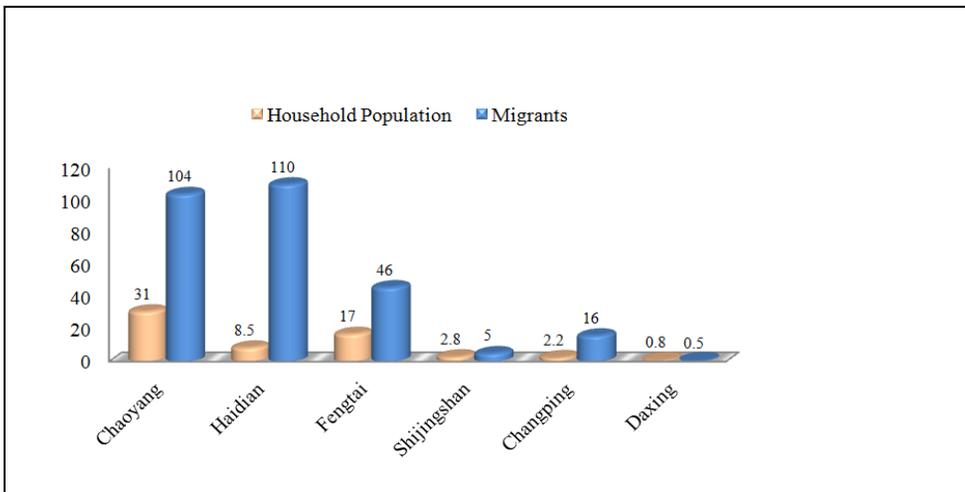


Figure 3-10 Number of household population and migrants in six main districts of Beijing (2011) (10000 persons)

Source: The Second Land Survey of Beijing, conducted by the Beijing Municipal Land Authority in 2011 (slightly modified)

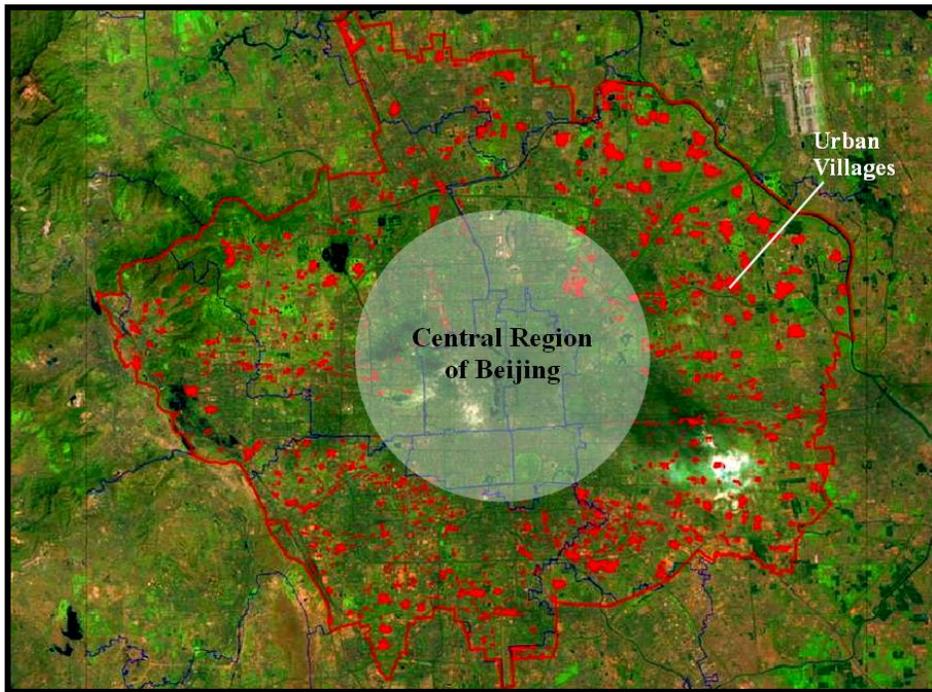


Figure 3-11 Distribution of urban villages in Beijing (2009)
Source: Chaoyang District Planning Bureau (slightly modified)

The continuously increasing migrants cause many problems which hinder the sustainable urbanization. Surveying on six urban villages, a lot of problems are found, for instance, the lack of necessary public infrastructure, disorder streets, bad living condition, illegal buildings, social safety, and so on. As shown in Figure 3-12, the street in an urban village is dirty and disorderly, and a few of migrant workers were sitting beside the road for being employed; although there are some convenience stores selling kinds of necessities of life, the unsatisfactory sanitation might cause safety risks; nearly all surveyed urban villages are surrounded with cement walls so that the outer citizens cannot see the internal situation; furthermore, some

villagers increase their building density privately for both renting their houses to migrant workers and getting more compensation from government or developers, which might bring troubles to the redevelopment of urban villages. Therefore, the government should not only make a better redevelopment plan concerned with the improvement of living environment but also stop some illegal acts of local villagers in order to implement the redevelopment plan successfully.

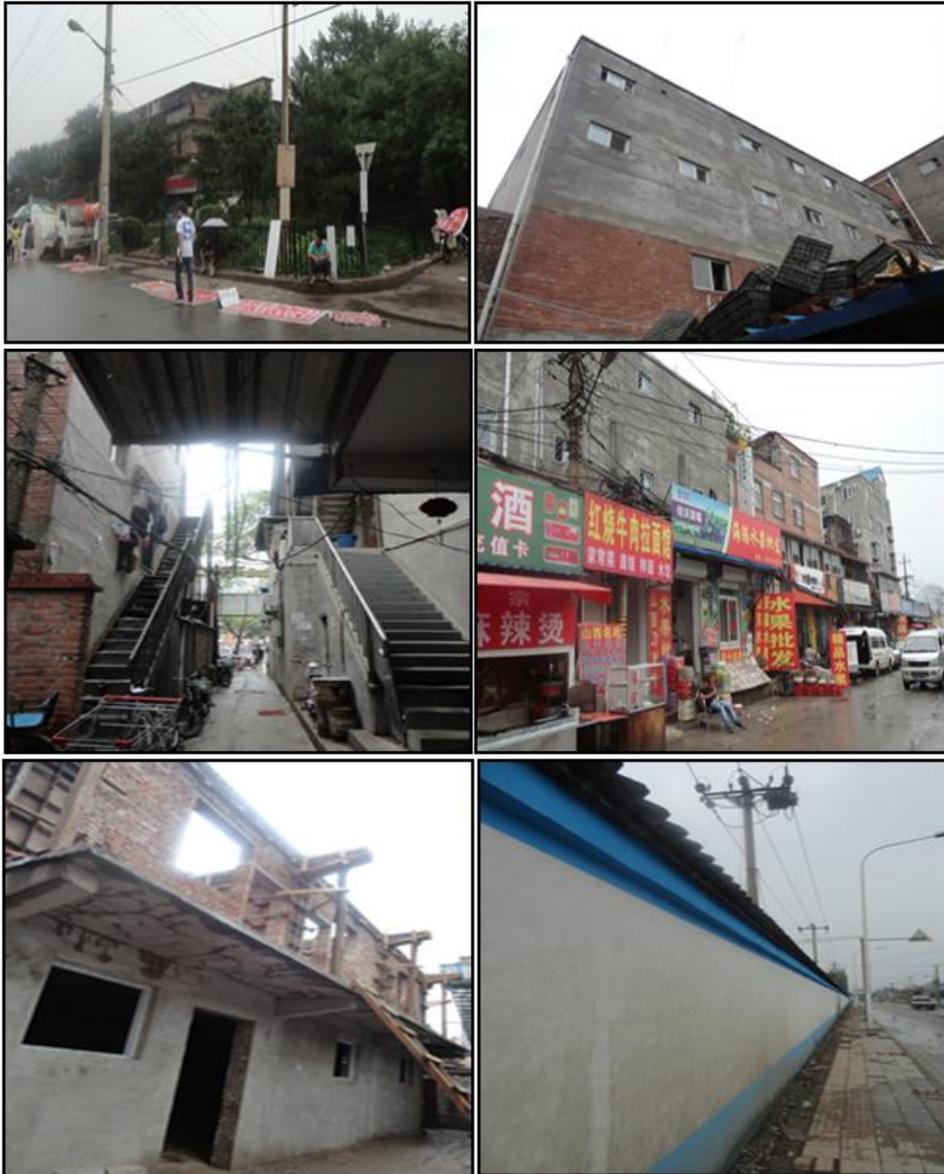


Figure 3-12 Photos of urban villages in Beijing
Source: Taken by the author

3.2.2 Redevelopment

In order to deal with the problems of urban villages, Beijing government has carried out a series of plans focused on redeveloping the fifty urban villages distributed in nine districts since 2010. As shown in Figure 3-13, 35 urban villages are located in urban area and the 15 of them are located in suburbs.

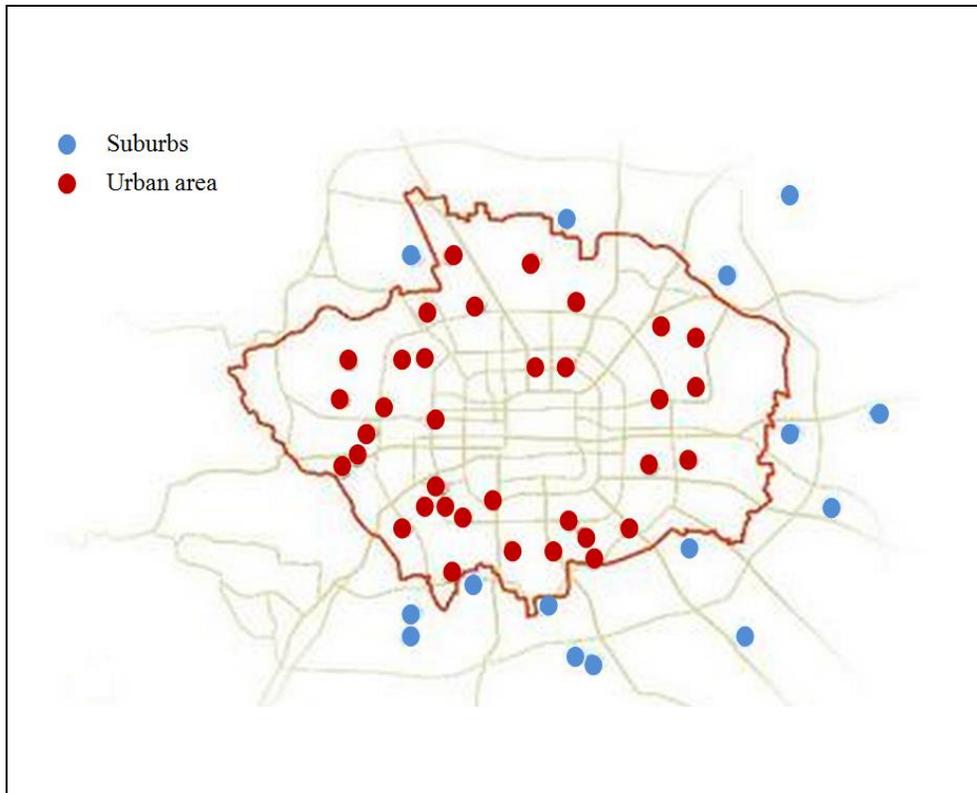


Figure 3-13 Distribution of fifty urban villages in redevelopment plan (2010)
Source: Chaoyang Planning Bureau (slightly modified)

Based on the redevelopment plans, about 232 thousands villagers will be relocated in new apartments, and about 120 thousands labors will be employed in industrial zoon covering 3.3 square kilometers. The fifty urban villages planned to be redeveloped generally have superior traffic location and a large number of migrant workers, and also, they have caused more serious problems than those not included in the plans. Beijing government expected to finish the process of redevelopment in the next three to five years from 2010. However, it is not as easy in real action as expected, and most of the urban villages are still kept just in plan rather than real implementation till 2013.

There are two major problems hindering the process. First, it is difficult to reach compensation agreements with villagers; second, there are no unified places to settle down a large number of migrant workers after redevelopment so that they probably move into urban area, resulting in more problems related to heavy burden of population. From a long-term point of view, the latter issue should deserve more attention, and the reasons are as follows. First, the choice of living in urban village shows that those migrant workers cannot afford the living costs, especially the rental costs in urban area. So after redevelopment, they perhaps choose other urban villages to live in, which will add complications to those urban villages. Second, some migrant workers probably choose to return home because they lose their settlements with relatively cheap rent, thus if a number of migrant workers do like that, the city is to be short of labor force, which adversely affect Beijing's economic development and urban construction.

Up to now, none of the cities that have the experienced urban village redevelopment has a rational mode of redevelopment, and Beijing is not an exception so that the process of redevelopment is slow. Generally, the

stakeholders are considered while redeveloping urban villages. It is recognized that government, developer, village group, as well as migrant workers are four main stakeholders, and balancing their interests in the process of urban village redevelopment seems to be very important, for the best mode of redevelopment might be to maximize their benefits. Beijing government carried out three modes: government implementation, developer implementation, and villager group implementation. There is no doubt that the implementation of developer and villager group need the support on policies from the government.

Unfortunately, migrant workers, as the group of non-register or informal residents, have not been considered to maximize their benefits, which makes them being at the bottom of the interest chain. Therefore, the settlement problems of migrant workers should be paid special attention along with which choices they will make while getting the announcement from government, for their choices might even influence the urban development.

3.3 Field Survey

To explore the factors influencing migrant workers' choices for settlements, as well as the extents of effects, the study has made a field survey on 300 migrant workers living in six urban villages. This section introduces six surveyed urban villages, the typical intentions of respondents, and the contents of survey.

3.3.1 Introduction of Surveyed Urban Villages

According to the characteristics of the distribution of urban villages in Beijing, the study lays emphasis on 300 migrant workers living in six urban villages, they are respectively Mingguang (M.G), Shiliuzhuang (S.L.Z), Guanzhuang (G.Z), Yamenkou (Y.M.K), E'fang (E.F), and Zhongtan (Z.T), located in six different districts (see Figure 3-14).

As shown in Table 3-1, the redevelopment plans of G.Z, Y.M.K, E.F, and Z.T were made in 2010, and those of M.G and S.L.Z were made in 2011. The redevelopments directly implemented by government include M.G and G.Z, those implemented by developer consist of S.L.Z and Y.M.K, and the redevelopments of E.F and Z.T are directly implemented by local villager groups. For redevelopment levels, M.G, S.L.Z, and Z.T are redeveloped in a high level; and the low-level redevelopment concern G.Z, Y.M.K, and E.F.

The six urban villages are divided into three regional types: down town-type, urban fringe-type, and suburb-type. As shown in Figure 3-14 and Table 3-1, M.G and S.L.Z are down town-type urban villages as they are both located near to the central region of Beijing and have less migrant workers than the other four urban villages. G.Z and Y.M.K are located in the regions of urban fringe, and they have more migrant workers than others within two reasons: first, the rental costs are cheaper; second, the commuting distance for migrant workers might be shorter because these regions are near to urban area. E.F and Z.T are located relatively so far away from urban area that the migrant workers employed in construction field have to take longer time, thus the two urban villages have less migrant workers oppositely.

Table 3-1 Surveyed urban villages and their characteristics

Urban villages	Districts	Plan	Regional type	Implementation style	Level
M.G	Haidian	2011	Down town	Government	High
S.L.Z	Fengtai	2011	Down town	Developer	High
G.Z	Chaoyang	2010	Urban fringe	Government	Low
Y.M.K	Shijingshan	2010	Urban fringe	Developer	Low
E.F	Daxing	2010	Suburb	Villager	Low
Z.T	Changping	2010	Suburb	Villager	High

Source: Surveyed by author

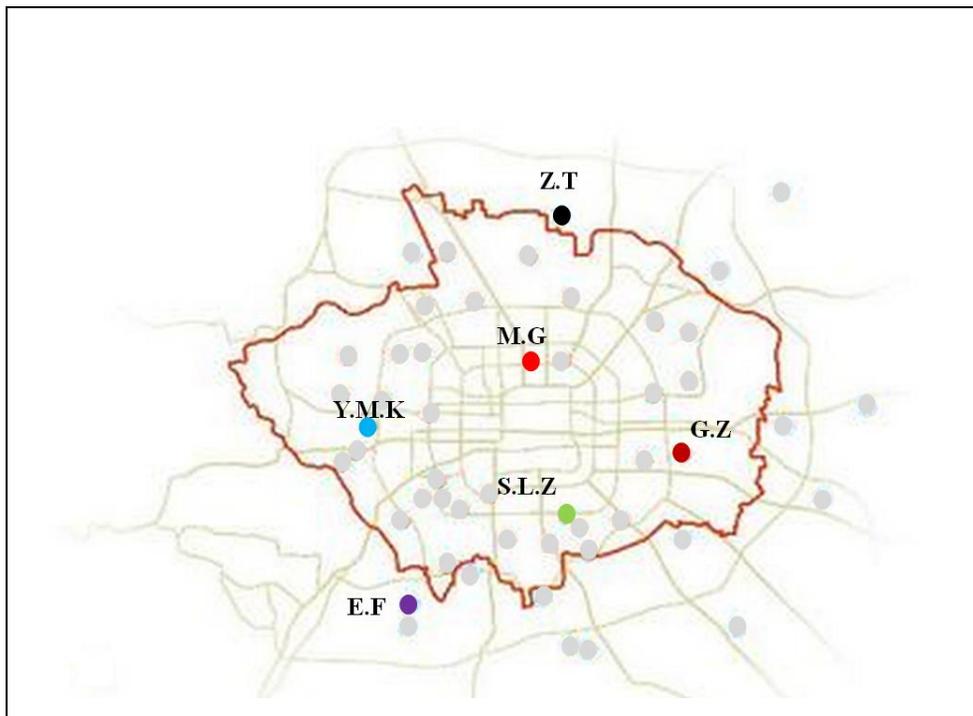


Figure 3-14 Distribution of six urban villages

Source: Chaoyang Planning Bureau (slightly modified)

M.G village, as one of most important fifty urban villages, is located in the central region of Haidian district in Beijing. There are four big markets around it, thus a large number of migrant workers are centralized and rent houses in it, causing some problems such as environment deterioration, construction confusion, worse social order, and so on. The redevelopment plan of M.G was carried out in 2011. According to it, the government directly implements the redevelopment plan without any developers involved. Also, considering its geographical location, a high level redevelopment plan was made to improve urban environment of this region.

S.L.Z village is much bigger and farther away from the central region than M.G village. It is located between 3rd and 4th southern beltways in Fengtai district of Beijing. According to statistical data from Fengtai district (2012), there are around 3,000 local villagers, 4,000 citizens, and 15,000 migrant workers living in it. A railway station is located beside S.L.Z village, which offers convenient traffic to those living there but work in other regions. The plan of redevelopment was carried out in 2011, and it will be finished by developers in a high level with the general regulation of Beijing government. Except the housings built for arranging local villagers, most of new buildings are planned to be commercial. Therefore, both of the housing price and housing rent might be increased after redevelopment.

G.Z village is a representative one located in the urban fringe of south eastern Beijing. It is close to the suburb area and much bigger than those located around central region. The redevelopment of G.Z village has been planned with a perfect planning map as shown in Figure3-15. In order to solve the problems concerned with the arrangement and compensation, local government directly involved in the plan with a low level redevelopment, instead of collecting funds from real estate developers. From the planning

map, amount of lands are vacated for the use of building infrastructures in order to provide convenient transport and improve environment. A subway line No.7 (red line) has been planned along the boundary of this urban village for improving its traffic condition. A piece of land located in the south of the village is planned for arranging local villagers; in the north, local government planned an industry region. After redevelopment, a new management system will also be built.

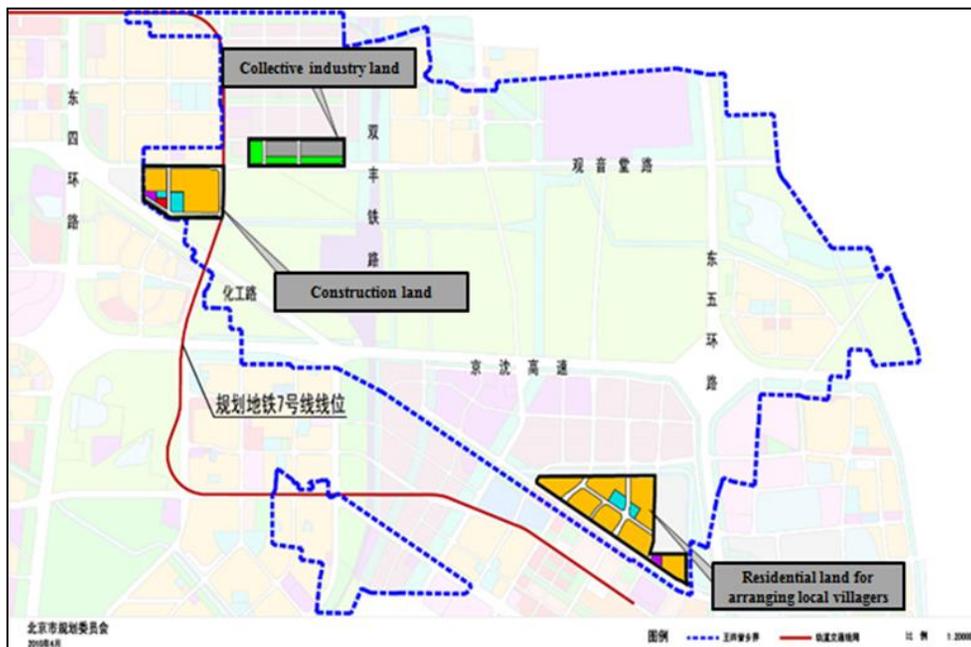


Figure 3-15 Planning map of G.Z village redevelopment (2010)
Source: Beijing Municipal Commission of Urban Planning

Y.M.K village, located in the south of Shijingshan district of Beijing, is one of the most important villages in urban fringe regions where many migrant workers live. To solve the problems caused by migrant workers, the government decided to redevelop it with developers participated in 2010 and made a planning map as shown in Figure 3-16. Two big pieces of lands are planned for arranging the local villagers, and the other two pieces are for general construction use; the subway line No.11 (red line) is planned running through the village. Obviously, the traffic condition will be greatly improved after redevelopment. Meanwhile, a new management system which differs from rural society will also be built, and then more and more villagers will become citizens. The government has carried out a low level redevelopment as it is far away from central region of Beijing.

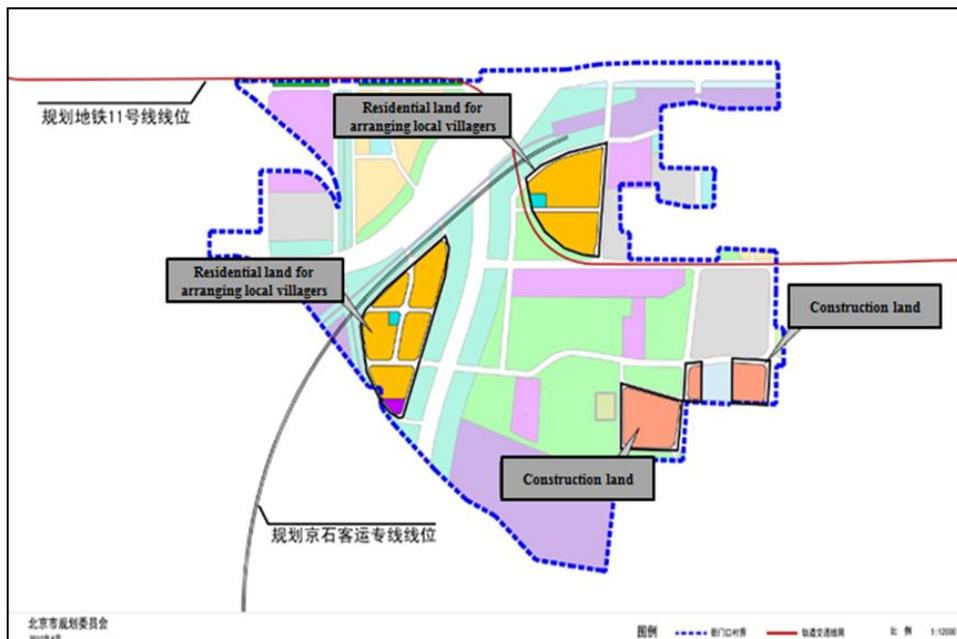


Figure 3-16 Planning map of Y.M.K village redevelopment (2010)
Source: Beijing Municipal Commission of Urban Planning

E.F village is absolutely located in suburb and outside the main areas of Beijing, but it is also planned to be redeveloped because there are relatively many migrant workers. The main problems of E.F village are social safety and illegal construction. Daxing district carried out a redevelopment plan in 2010, focusing on solving those problems, and the redevelopment will not be finished only by local government. Villager collective are required to participate in it. Through negotiation, housing renewal and environment improvement will be carried out, and the funds for redevelopment are most provided by government; local villagers only need to pay a little for the plan; the redevelopment level is lower than other regions relatively. After redevelopment, E.F village will keep the old management system for agricultural production.

Z.T village is located in the south of Changping district of Beijing. It is one of the most important urban villages planned to be redeveloped. Although it is far away from central region of Beijing, the subway line No.13 and No.5 cross it, providing convenient traffic condition, thus the number of migrant workers living in Z.T village is large. The redevelopment plan was carried out by local government in 2010, according to which, it will be redeveloped with low level, and villager collective will participate in this redevelopment plan. Differing from other urban villages, the planning of Z.T involves the arrangement of labors including a lot of migrant workers. As shown in Figure 3-17, the planned residential lands for both local villagers and labors are located in the middle of Z.T village. The yellow pieces of lands are planned for the resettlements of local villagers, and the red ones are planned for renting to migrant workers. The rental prices here will be kept lower than average market prices.

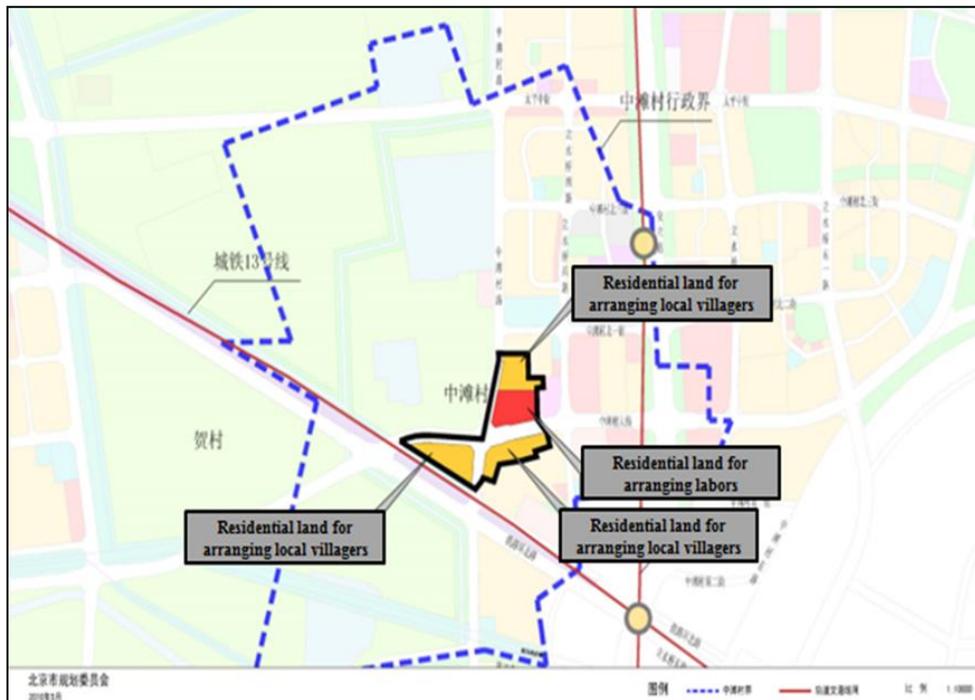


Figure 3-17 Planning map of Z.T village redevelopment (2010)
 Source: Beijing Municipal Commission of Urban Planning

3.3.2 Typical Intentions of Respondents

The study interviews 300 migrant workers living in six selected urban villages. All of them live in rental houses, alone or with others. Their living conditions are very poor that some of them do not want investigators to enter their private spaces. As shown in Figure 3-18, their living spaces are not big enough to do other things except sleeping, and the mode of joint-rental living are usual in surveyed urban villages.

Moreover, the study also surveys on their intentions of migration after the redevelopment of urban villages. By interview, some of them have got

the information concerned with the redevelopment of urban villages, but some of them have not heard of it. Mr. Liu has been in Beijing for a decade, and he is now working in a construction site. When asked where he will move for the next settlement, his answer was recorded as follows:

“I have heard of the information about redevelopment. I would like to return home because I have been here for nearly ten years without my family”, Mr. Liu said, “I like living in Beijing but my job is continuously unstable, and I have no friends here so that I usually feel lonely”. “I have found a job in my hometown”, he added, “although the salary is not as so much as that in Beijing, I can be reunited with my wife and children.”

Miss Fang is a college graduate and working in a company, unlike Mr. Liu’s intention, she instead wanted to continuously stay in Beijing when asked the same question.

“I love the city life and I will never leave here, but my rental house will be redeveloped, so I have to move to another urban village rather than resettlement due to the cheap rent”, she explained, “I hold the rural household registration, thus my salary is far less than those with Beijing household registration. I will work hard for getting a Beijing household registration, and then I can live with more dignity”.

Wang came to Beijing alone when he was only 16 years old. He is working for a restaurant close to his rental house.

“I like here”, Wang said, “my restaurant is very close to my rental house, and I have heard that the urban village will be redeveloped, but my boss will provide a living room with cheap rent for me. Consequently, I would like to resettle here after the redevelopment is finished, for my job is stable, and my working place is close”.

Mr. Xu is a high-income migrant worker relatively because he was trained so that he has the skill of repairing electrical appliances. Now, He is working in an electrical shop. When asked where he will move after the redevelopment of urban village, he made the following answers.

“I am waiting for the redevelopment”, he said, “I have been here for one and a half years. I paid for two year’s rent, thus I will move to urban area as long as the rent is due.” “I hate living here”, Xu added, “the environment is very poor, and the only advantage is the cheap rent. I really want to change for a better living environment even if it will be a little expensive.”

The mentioned four respondents are representative interviewees. From their answers, the redevelopment of urban village is an external factor causing their making decisions of migration, and it is found that their different intentions of migration might be strongly based on their personal characteristics and situations.

Therefore, it can be expected that different factors, personal or external, probably have different effects on migrant workers’ choices for settlements with the redevelopment of urban villages. In order to find the answers to the research questions, the study designs the contents of survey introduced in the following section.



Figure 3-18 Photos of rental houses
Source: Taken by author

3.3.3 Contents of Survey

According to the previous analysis, migrant workers' choices include four kinds with the redevelopment of urban village they live in. The first choice is "return", namely, leaving Beijing for their hometown; the second choice is "another urban village", which means the migrant workers choose to move to the urban villages without any redevelopment plans; the third one is "resettlement", namely, part of migrant workers may be willing to resettle again in the redeveloped urban villages, and the last one is "urban area".

There are many factors influencing migrant workers' four choices for settlements. According to previous researches and filed survey, eleven factors which might be most influential are selected as the contents of survey. They are divided into personal factors and external factors. Personal factors indicate those of personal attributes, including "age", "sex", "marital status", "educational level", and "family structure". External factors indicate those will not be changed by individual intentions but might influence individual choices, and they consist of "commuting time", "rental affordability" (monthly income/monthly rental cost), "working stability", "social belongingness", "redevelopment style", and "redevelopment level". The factors "redevelopment style" and "redevelopment level" are surveyed by data collection, and the other factors are surveyed by questionnaire (see Table 3-2).

Table 3-2 Contents of filed survey

Contents	Questionnaire		Data collection
	Choices for settlements		Redevelopment style
	Sex	Working stability	
	Age	Family structure	
	Marital status	Commuting time	Redevelopment level
	Educational level	Monthly income	
	Social belongingness	Monthly rental cost	

3.4 Summary

This chapter has introduced the situation of Chinese migrant workers, the status of the urban villages in Beijing, and the background of implementing redevelopment. It designed 12 survey items to investigate the real situation of six urban villages of Beijing, collected 300 copies of questionnaire through interviewing the migrant workers living in six urban villages, and enumerated the four interviewees' words when asked where they will move after the redevelopment of urban villages.

It is found that the urban villages of Beijing have more migrants than local villagers, which causes a series of problems, including deterioration of living condition, social safety, lack of infrastructure, illegal construction of housing, and so on. With the redevelopment plan carried out in 2010, many migrant workers living in urban villages have to make choices for their next settlements.

They generally make four choices for settlements: return, another urban village, resettlement, and urban area. However, which factors influence their choices are worth researching. By collecting 300 copies of questionnaire, the study will analyze their characteristics by descriptive statistics and frequency output, using Multinomial Logistic Regression to analyze the factors influencing their choices for settlements in the next Chapter.

Chapter 4: Analysis of the Factors Influencing Migrant Workers' Choices for Settlements

4.1 Variable Definition and Expectation

This subsection mainly introduces the definition and expectation of selected variables. As shown in Table 4-1, The dependent variable is “choices for settlements”, and the independent variables consist of “sex”, “marital status”, “age”, “family structure”, “educational level”, “working stability”, “commuting time”, “social belongingness”, “rental affordability”, “redevelopment style”, and “redevelopment level”.

The reasons for choosing these independent variables are explained as follows. It is observed that the four choices of migrant workers are in the context of urban village redevelopment. Generally speaking, when the plan of redevelopment is carried out, the information will be sent to all villagers by whom migrant workers can also get some. However, it is very difficult for migrant workers to make any decisions because of many restrictive factors.

“Sex”, “marital status”, “age”, “family structure”, and “educational level” concern individual characteristics. According to *National Bureau of Statistics (2012)*, male workers are the main part in the group of migrant workers, and this phenomenon depends on what jobs can be chosen by most migrant workers. Statistic data also shows that more than 50% of migrant workers in China are working for the industries concerned with construction

and manufacture in 2012, and these jobs are completely physical, which means that male workers are more suitable for these jobs than female workers. Therefore, the nature of jobs might determine that it is much easier for male workers to move to a city to work than female workers. Similarly, with the change of external factors, male workers might be more adaptive than female workers. Therefore, “sex” is an important factor influencing migrant workers’ different choices for settlements. Raven Stein (1885) proved that females were more migratory than males in short-distance migration. For the four choices in this study, short-distance migration indicates “another urban village”, “resettlement”, and “urban area”, but “return” can be seen as the long-distance migration. Thus it can be expected that compared with “return”, female workers are more willing to choose “another urban village”, “resettlement”, and “urban area” than male workers.

“Marital status” is another important factor influencing their choices for settlements. The pull factor for married migrant workers to choose “return” might be their families, so if married workers work alone in city, it is not difficult to expect that they probably choose to return home with the change of external environment. By contrast, if their families live with them together in cities, the probability of their choosing “return” might be decreased. Unmarried migrant workers are relatively younger than married ones if there is no exceptional case, and they perhaps want to get married as soon as possible. Thus, unstable living place caused by urban village redevelopment might strengthen that thought so that some unmarried migrant workers choose “return”. Accordingly, unmarried migrant workers might be easier to choose “return” rather than the other three settlements because they live alone in a city. Obviously, “marital status” might influence their choices for settlements. It can be expected that compared with “urban

area”, unmarried migrant workers perhaps have more probability than married ones to choose “return”, but the other two choices “another urban village” and “resettlement” can only be expected through statistical analysis.

“Age” is thought to be influential to migrant workers’ choices for settlements. From Rogers (1987)’s findings, the migrants between 20 and 30 years old are more than other age groups. The *National Bureau of Statistics* also shows that those aged between 20 and 30 years old account for largest proportion of all age groups. For migrant workers, they are generally working in factories or construction sites, thus young migrant workers might be more adaptable to the urban living and working than older ones. From 2008 to 2012, the proportion of those aged between 16 and 30 years old decreased, whereas the proportion of those aged above 40 years old increased, showing that the young migrant workers being willing to work in cities become less. With the age changed, the migration intention of migrant workers might also be changed. For example, older migrant workers perhaps incline to choose “return” when they face the change of external environment. Therefore, “age” is found to be an important personal factor influencing migrant workers’ choices for settlements. It can be expected that compared with “urban area”, with age increase, the probability of choosing “return” might increase.

“Family structure” includes two values: “alone (0)” and “with family (1)”. It represents the family structure status of migrant workers living in urban villages. Generally speaking, those live alone are probably more migratory than those live with families. In addition, Zhao (2002) has proved that the migrant workers live with families incline to stay in the city rather than “return”. Therefore, “family structure” might influence migrant workers’ choices for settlements. It can be expected that compared with

“urban area”, the migrant workers live alone have larger probability to choose “return” than those live with families. Yet, the expectation for them to choose “another urban village” or “resettlement” needs to be accurately made by statistical analysis.

“Educational level” probably influences migrant workers’ choices for settlements. Generally, migrant workers are educated in low levels so that their abilities of being trained are weaker than those educated with high levels (MWRG’s research). Therefore, most of them engage in hard but low-income work. The migrant workers with higher educational levels have more opportunities to master skills than those with low educational levels. Predictably, with the change of external environment, those educated in low levels probably incline to leave a city for their hometowns, so this factor is selected as independent variable. It can be expected that compared with “urban area”, those educated below high school level incline to choose “return”, “another urban village”, and “resettlement” than those with high school level or above.

“Working stability”, “commuting time”, “social belongingness”, “rental affordability”, “redevelopment style”, and “redevelopment level” are seen as the external factors which might influence migrant workers’ choices. The definition of “working stability” is based on the frequency of migrant workers’ job-hopping, and the values of this factor are defined as “unstable (0)” and “stable (1)”. Unstable job indicates that of no labor agreement with employers. In this case, migrant workers perhaps lose their jobs at any time. By comparison, the jobs with legitimate labor agreement are seen to be stable because migrant workers usually sign on for at least more than one year. “Working stability”, from some extents, is vitally important for migrant workers to make a living. Consequently, those with stable jobs

prefer to live in a city rather than “return”. Thus, this factor is selected by the study as one of independent variables, and it can be expected that compared with “urban area”, the migrant workers with unstable jobs might be more willing to choose “return”, “another urban village”, and “resettlement” than those with stable jobs.

Cai and Wang (2008) have proved that “commuting time” is a key factor influencing migrant workers’ choices for leave their hometowns for city or not. The surveyed urban villages are located in different regions, including those close to the city centre of Beijing and those far away from central region. Migrant workers working near their living places will take shorter time to go to work than those living far away from their working places. Longer commuting time generally signifies more traffic and time costs. With the redevelopment of urban villages, those with long commuting time might incline to move to the region closer to their working places. In addition, “commuting time” reflects the situation of their commuting manner and the distance between their working and living places. So, this factor is selected as one of independent variables, and it can be expected that compared with “urban area”, the shorter the commuting time is, the larger the probability of choosing “resettlement” is, the probability of choosing “return” or “another urban village” cannot be expected until the statistic results are concluded.

“Social belongingness” refers to the problems of social psychology. The unfair treatment to migrant workers in a city will cause a lack of social belongingness (Shan, 2006). This factor will be defined based on their senses of belonging to where they are living, including two values: “weak (0)” and “strong (1)”. Those with relatively weak social belongingness might incline to settle in the regions of the similar characteristics with their

hometowns. “Social belongingness”, on the other hand, reflects the tolerance of the urban society. Actually, migrant workers are discriminated and treated unfairly in most Chinese cities, thus their social belongingness is relatively weak. From the aspect of society, social belongingness is selected as an important independent variable which might influence their choices for settlements, and compared with “urban area”, the migrant workers with weak social belongingness are probably willing to choose “return”, “another urban village”, and “resettlement” than those with strong social belongingness.

Personal migration is affected by the expected economic factors (Zai and White, 1996). “Rental affordability” is an economic factor based on “income” and “rental cost”. In this study, the value of “rental affordability” is defined as the ratio of “monthly income” over “monthly rental cost”. For migrant workers’ choices, “rental affordability” might strongly affect their expectations to the future economic ability. Thus, different extends of rental affordability might affect migrant workers’ choices for settlements. Compared with “urban area”, it can be expected that those with strong rental affordability have smaller probability of choosing “return”, “another urban village”, and “resettlement” than those with weak rental affordability.

By field survey, “redevelopment style” and “redevelopment level” concern the urban village redevelopment. Different styles and levels of redevelopment result in different living environment and rental changes so as to influence migrant workers’ decisions. Thus, it is necessary to synthetically consider them along with other factors. The effects of the two factors can be expected only by statistical test.

Table 4-1 Definition and expectation of variables

Categories	Variables	Definitions	Expected Signs
Dependent variable (Y)	Choices for settlements	1=return 2= another urban village 3= resettlement 4=urban area**	
Independent Variables (X)	Sex	0=male 1=female***	-
	Marital status	0=unmarried 1=married***	+
	Age*		+
	Family structure	0=alone 1=with family***	+
	Educational level	0=below high school 1=high school or above***	+
	Working stability	0=unstable 1=stable***	+
	Commuting time*		uncertain
	Social belongingness	0=weak 1=strong***	+
	Rental affordability*	monthly income/rental cost	-
	Redevelopment style	1=government implementation 2=developer implementation 3=villager implementation***	uncertain
	Redevelopment level	0=low 1=high***	uncertain

* Numerical variables

** Reference category of dependent variable

*** Reference categories of independent variables

4.2 Characteristics of Variables

The survey is made through both interview and questionnaire, thus the distributed 300 copies of questionnaire were all retrieved without any blank option. This subsection introduces the descriptive statistics and frequencies of collected data.

Table 4-2 shows the descriptive statistics of collected data. In these surveyed items, “age”, “commuting time”, “monthly income” and “monthly rental cost” are numerical variables, and the others are categorical variables. The ages of interviewed migrant workers are from 18 to 61 years old, which generally conform to the basic age group of migrant workers. The mean value of their ages is 33.8 and the deviation degree of data value from mean value is not high (std. deviation=9.913).

According to the questionnaire, without considering the ways of commuting, the longest time for respondents to go to work is one hour, and the shortest one is only two minutes; the mean value of commuting time is 28.82 minutes, and the std. deviation is 13.54, which shows a group of relative dispersion data.

The economic variable “rental affordability” is produced through the ratio of “monthly income” and “monthly rental cost”. As shown in Table 4-2, the “monthly income” and “rental cost” of those respondents have significant gaps. It is found that the highest monthly income is 8,500 Yuan, and the lowest one is 2,380 Yuan, differing by more than 2,000 Yuan from mean value (4,692.62 Yuan); the difference value between them is 6,120 Yuan. For “monthly rental cost”, the difference value between the maximum (1,100 Yuan) and the minimum (300 Yuan) is 800 Yuan; the mean value of

“monthly rental cost” differ by more than 400 Yuan from the highest monthly rental cost of those respondents. The value of “rental affordability” is calculated by “monthly income” divided by “monthly rental income”, and its maximum and minimum are respectively 20.00 and 4.33, and their range is 15.67, showing a large gap.

Table 4-2 Descriptive statistics

Items	N	Range	Minimum	Maximum	Mean	Std. Deviation
choices for settlements	300	3	1	4	2.57	1.138
sex	300	1	0	1	.48	.501
age*	300	43	18	61	33.81	9.913
marital status	300	1	0	1	.71	.453
educational level	300	1	0	1	.42	.494
working stability	300	1	0	1	.62	.487
family structure	300	1	0	1	.62	.487
commuting time*	300	58	2	60	28.82	13.540
social belongingness	300	1	0	1	.27	.443
monthly income*	300	6120	2380	8500	4692.62	1406.801
monthly rental costs*	300	800	300	1100	600.47	177.583
rental affordability*	300	15.67	4.33	20.00	8.1644	2.52103
redevelopment style	300	2	1	3	2.00	.818
redevelopment level	300	1	0	1	.50	.501
valid N (listwise)	300					

*Numerical items

The frequencies of collected data are shown in Figure 4-1. The numerical variables “age”, “commuting time”, “monthly income”, “monthly rental cost” and “rental affordability” are transferred to categorical variables in order to observe the characteristics of frequencies in their specific ranges.

The results show that the frequencies of the choices for settlements do not differ obviously from each other; the frequencies of male and female respondents are respectively 155 and 145; those who has got married (214) are more than those who are unmarried (86); 175 migrant workers are educated below high school level and the other 125 are educated in high school level or above; over half of respondents have relatively stable jobs (185), and the other 115 migrant workers have not made labor arrangements with their employers; there are 185 interviewees living in Beijing with their families, and the other 115 interviewees live alone; up to 220 migrant workers feel weak when asking for their senses of belonging to the city, and only 80 interviewees have relatively strong social belongingness; there are 117 interviewees aged between 20 and 29 years old, accounting for the largest proportion, then comes “30~39 years old” (89 interviewees), “40~49 years old” (60 interviewees), “50 years old and above” (12 interviewees), and the number of those aged under 20 years old is only 13; there are 128 respondents whose commuting times are from 15 to 29 minutes, accounting for the largest proportion, then comes “30 to 44 minutes” (86 interviewees), “45 minutes and above” (60 interviewees), and there are only 26 interviewees taking under 15 minutes to go to work; 190 respondents’ monthly incomes are from 3,000 to 4,999 Yuan, and the number of those whose monthly incomes are from 5,000 to 6,999 Yuan is 64, in contrast, those of monthly income below 3,000 Yuan or no less than 7,000 Yuan account for the smallest proportion; for their monthly rental cost, only 26

respondents pay less than 400 Yuan per month for rental houses; nearly a half of interviewees have to spend from about 400 Yuan to no more than 600 Yuan on rental houses, and the other 129 interviewees' rental costs are no less than 600 Yuan. The values of "rental affordability" are calculated from monthly income and monthly rental cost, and the number of those with less than 8 or from 8 to 15.9 is 146 (maximum frequency). In contrast, the number of those with 16 and above is 8 (minimum frequency), showing that most interviewees are in low levels of rental affordability. Table 4-3 shows the frequencies and percents of observed values based on each surveyed urban village.

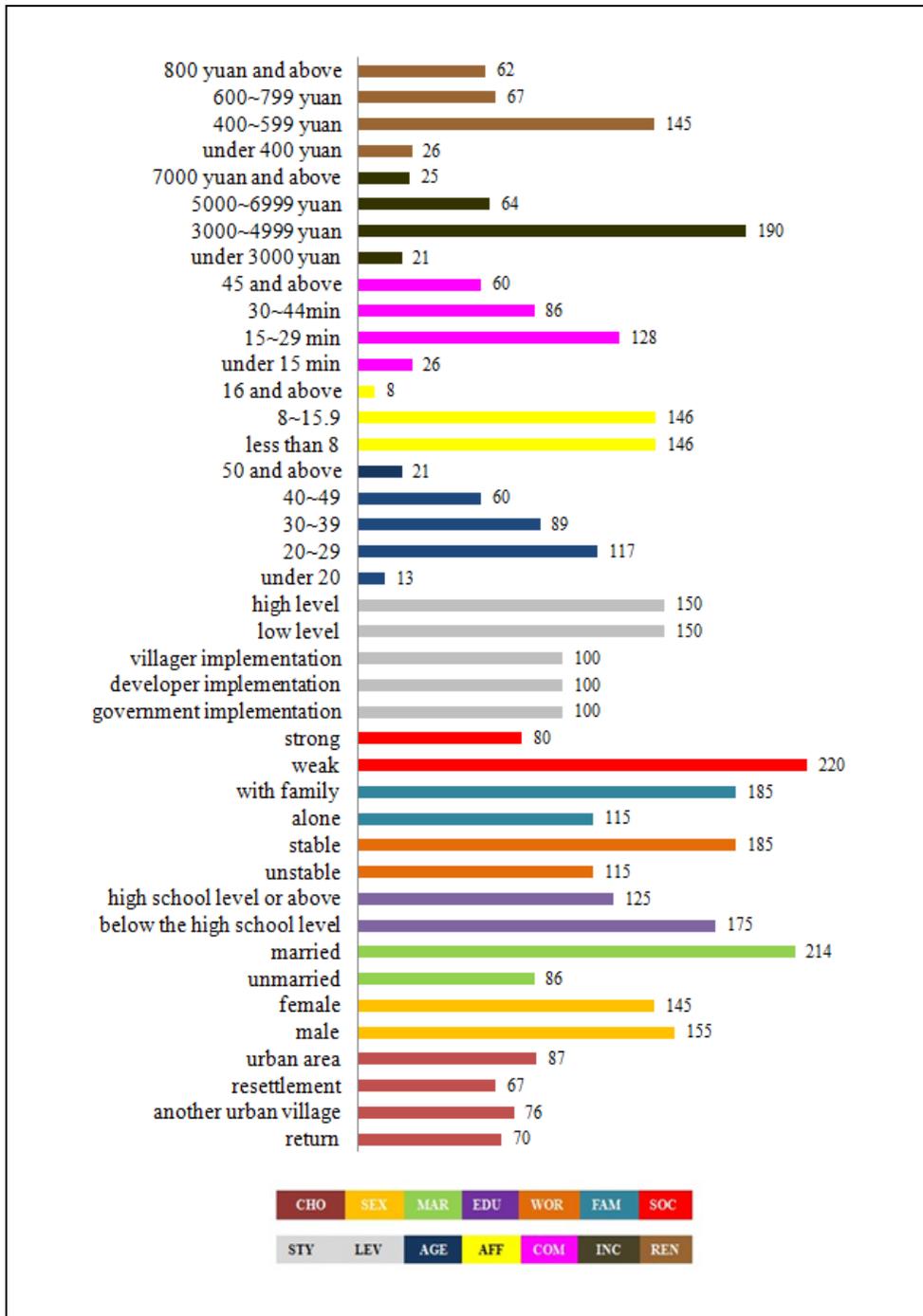


Figure 4-1 Frequencies of surveyed data

Table 4-3 Frequencies and percents of observed values based on each urban village

	Variables (qualitative)	Frequency						Total	Percent
		E.F (50)	G.Z (50)	M.G (50)	S.L.Z (50)	Y.M.K (50)	Z.T (50)		
STY	government		50	50				100	33.3
	developer				50	50		100	33.3
	villager	50					50	100	33.3
LEV	low level	50	50			50		150	50.0
	high level			50	50		50	150	50.0
CHO	return	8	9	16	15	9	13	70	23.3
	another urban village	8	14	13	17	14	10	76	25.3
	resettlement	14	14	8	7	13	11	67	22.3
	urban area	20	13	13	11	14	16	87	29.0
SEX	male	27	25	32	26	25	20	155	51.7
	female	23	25	18	24	25	30	145	48.3
MAR	unmarried	11	12	17	18	13	15	86	28.7
	married	39	38	33	32	37	35	214	71.3
EDU	below the high school level	27	33	32	30	26	27	175	58.3
	high school level or above	23	17	18	20	24	23	125	41.7
WOR	unstable	14	20	22	25	16	18	115	38.3
	stable	36	30	28	25	34	32	185	61.7
FAM	alone	17	17	23	25	18	15	115	38.3
	with family	33	33	27	25	32	35	185	61.7
SOC	weak	34	38	42	43	33	30	220	73.3
	strong	16	12	8	7	17	20	80	26.7
AGE	under 20	2	2	3	3	1	2	13	4.3
	20~29	19	21	19	20	19	19	117	39.0
	30~39	17	14	16	12	16	14	89	29.7
	40~49	10	9	6	11	11	13	60	20.0
	50 and above	2	4	6	4	3	2	21	7.0
COM	under 15 min	2	6	5	6	2	5	26	8.7
	15~29 min	16	17	25	22	26	22	128	42.7
	30~44min	13	17	15	14	14	13	86	28.7
	45 and above	19	10	5	8	8	10	60	20.0
INC (Yuan)	under 3000	1	3	2	6	6	3	21	7.0
	3000~4999	34	34	32	32	27	31	190	63.3
	5000~6999	12	7	13	9	12	11	64	21.3
	7000 and above	3	6	3	3	5	5	25	8.3
REN (Yuan)	under 400	9	3	2	6	4	2	26	8.7
	400~599	22	25	23	27	27	21	145	48.3
	600~799	10	15	10	9	16	7	67	22.3
	800 and above	9	7	15	8	3	20	62	20.7

4.3 Model of Multinomial Logistic Regression

As the extension of *Binary Logistic Regression Model*, *Multinomial Logistic Regression (MLR)* allows for more than two categories of the dependent variable. It is generally used to predict the probability of category membership on a dependent variable based on multiple independent variables. MLR model is suitable for analyzing the effects of independent variables on the dependent variable with multinomial values. The calculation method of MLR model is shown as follows.

At first, if the dependent variables have J categories, the “ j category” can be defined as shown in formula (1)-(3).

$$\ln \left[\frac{\text{Prob}(y = j)}{\text{Prob}(y = J)} \right] = \sum_{k=1}^K \beta_{jk} x_k \quad (1)$$

$$\log \left[\frac{\text{Prob}(y = j)}{\text{Prob}(y = J)} \right] = \alpha_j + \beta_{j1} x_1 + \beta_{j2} x_2 + \dots = U_j \quad (2)$$

$$P(y = j) = \frac{e^{U_j}}{1 + \sum_{j=1}^{J-1} e^{U_j}} \quad (3)$$

Where

$J = 1, 2, 3, \dots, J$ (reference category)

$j = 1, 2, 3, \dots, j$ (observed category)

$x_k = x_1, x_2, \dots$ (independent variables)

α_j : constant term of observed category j

$\beta_{jk} = \beta_{j1}, \beta_{j2}, \dots$ (coefficients of independent variables)

Formula (2) is the expansion term of formula (1). It is the basic model of *MLR*. Formula (3) is used to calculate the occurrence probability of category j . For this study, if the reference category is “4=urban area”, its constants are all zero, and the model of *MLR* is shown in formula (4)-(6).

$$\log \left[\frac{P(y = 1)}{P(y = 4)} \right] = \alpha_1 + \beta_{1-1}x_1 + \beta_{1-2}x_2 + \cdots \beta_{1-12}x_{12} = U_1 \quad (4)$$

$$\log \left[\frac{P(y = 2)}{P(y = 4)} \right] = \alpha_2 + \beta_{2-1}x_1 + \beta_{2-2}x_2 + \cdots \beta_{2-12}x_{12} = U_2 \quad (5)$$

$$\log \left[\frac{P(y = 3)}{P(y = 4)} \right] = \alpha_3 + \beta_{3-1}x_1 + \beta_{3-2}x_2 + \cdots \beta_{3-12}x_{12} = U_3 \quad (6)$$

According to formula (2)-(6), the probabilities of four categories “return (1)”, “another urban village (2)”, “resettlement (3)”, and “urban area (4)” can be calculated in formula (7)-(10).

$$P(y = 1) = \frac{e^{U_1}}{1 + e^{U_1} + e^{U_2} + e^{U_3}} \quad (7)$$

$$P(y = 2) = \frac{e^{U_2}}{1 + e^{U_1} + e^{U_2} + e^{U_3}} \quad (8)$$

$$P(y = 3) = \frac{e^{U_3}}{1 + e^{U_1} + e^{U_2} + e^{U_3}} \quad (9)$$

$$P(y = 4) = \frac{1}{1 + e^{U_1} + e^{U_2} + e^{U_3}} \quad (10)$$

4.4 Results of Statistical Analysis

In this section, the study uses *MLR* method to analyze the factors influencing migrant workers' choices for settlements, as well as how they affect their choices. The study makes analysis in the following steps: 1) correlation analysis between variables; 2) multicollinearity test; 3) analysis of *MLR*; 4) test for robust logistic regression.

4.4.1 Correlation Analysis between Variables

Correlation refers to the strength of the relationship between two variables. Generally, a high correlation means two or more variables have a strong relationship with each other, a low correlation means the variables are hardly related. The correlation coefficients range from -1.00 to +1.00, and the value “-1.00” means a perfect negative correlation, by contrast, the value “+1.00” represents a perfect positive correlation. A value of 0.00 can be seen to be no correlation between the tested variables. According to the characteristics of selected variables, the study uses the method of Spearman to test the nonparametric correlations between variables. The results are shown in Table 4-4.

By testing the correlations between each independent variable and dependent variable, it is found that the independent variables “age” and “marriage status” have significantly negative correlations with the dependent variable “choices for settlements” at 0.01 level; “redevelopment level” and “choices for settlements” have significantly negative correlations

at 0.05 level; “educational level”, “working stability”, “commuting time”, “social belongingness”, and “rental affordability” have significantly positive correlations with “choices for settlement” at 0.01 level. Obviously, compared with “working stability” and “commuting time”, “educational level”, “social belongingness” and “rental affordability” have relatively stronger correlations with dependent variable “choices for settlement”; “sex”, “family structure” and “redevelopment style” have respectively no statistically significant correlations with dependent variable. By testing the correlations between independent variables, it is found that there are significantly positive correlations between “age” and “marriage status”, “marriage status” and “family structure”, “educational level”, and “social belongingness”, but their correlations are not strong enough.

Table 4-4 Test for correlations between variables

	CHO	SEX	AGE	MAR	EDU	WOR	FAM	COM	SOC	AFF	STY	LEV
CHO	1.000	.014	-.178**	-.156**	.583**	.352**	.068	.224**	.561**	.499**	.097	-.136*
SEX		1.000	-.191**	-.036	-.046	-.129*	.049	-.076	-.131*	-.130*	.082	-.007
AGE			1.000	.678**	.000	.218**	.303**	-.108	.084	-.014	.043	-.005
MAR				1.000	-.047	.182**	.546**	-.107	-.001	-.071	.027	-.103
EDU					1.000	.291**	.041	.209**	.576**	.392**	.091	-.020
WOR						1.000	.168**	.086	.336**	.152**	.084	-.103
FAM							1.000	-.103	.026	-.109	.067	-.075
COM								1.000	.057	.220**	.092	-.123*
SOC									1.000	.345**	.148*	-.075
AFF										1.000	.058	-.104
STY											1.000	.000
LEV												1.000

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

4.4.2 Test of Multicollinearity

According to Wichers (1975), in a regression equation, if the multicollinearity exists in independent variables, there will be a problem of the information overlaps between independent variables. If this problem is serious enough, the whole regression results will be affected. Multicollinearity is tested based on the standard of *Tolerance (TOL)* and *Variance Inflation Factor (VIF)*. *TOL* is defined as shown in formula (11).

$$TOL = 1 - R_i^2 \quad (11)$$

Where, R_i^2 is the goodness of fit produced by making regression between any one independent variable X_i ($i=1, 2, \dots, 11$) and the other 10 independent variables. The value of *TOL* is between 0 and 1, and the larger the value is, the weaker the multicollinearity between independent variables is. Generally, multicollinearity is thought to exist between tested variables only if $TOL < 0.2$.

VIF is expressed as shown in formula (12).

$$VIF = \frac{1}{TOL} = \frac{1}{1 - R_i^2} \quad (12)$$

Compared with *TOL*, the smaller value of *VIF* means the smaller probability of multicollinearity between independent variables. Table 4-5 shows the results of the test for multicollinearity. The least value of *TOL* is 0.442 and the crest value of *VIF* is 2.263, thus it is proved no problem of multicollinearity between the variables.

Table 4-5 Table of the test for multicollinearity

Independent variables	Collinearity Statistics	
	<i>TOL</i>	<i>VIF</i>
sex	.900	1.112
age	.552	1.812
marital status	.442	2.263
educational level	.585	1.709
working stability	.808	1.238
family structure	.663	1.507
commuting Time	.868	1.152
social belongingness	.593	1.687
rental affordability	.753	1.327
redevelopment Style	.949	1.054
redevelopment Level	.938	1.067

4.4.3 Test for MLR Model

By using SPSS 20.0, all 12 variables, including one dependent variable and 11 independent variables, are selected into the MLR model, and the result is shown as follows. Table 4-6 shows the model fitting information. It is found that Chi-square value is 316.016 (P=0.000), proving a fit model.

Table 4-7 denotes the result of the test for *Likelihood Ratio*. It is used for testing the effects of each independent variable on the whole equation. The result shows that the independent variables “age”, “commuting time”, “rental affordability”, “sex”, “marriage status”, “educational level”, “working stability”, “family structure”, “social belongingness”, and “redevelopment level” have statistically significant effects on the equation because their values of *sig.* are less than 0.05. Nevertheless, the factor “redevelopment style” is found to have no statistically significant effects on the equation as the value of *sig.* is more than 0.05.

Table 4-6 Model Fitting Information

Model	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	834.712	845.823	828.712			
Final	592.199	736.646	514.199	314.513	36	.000

Table 4-7 Likelihood Ratio Test

Effect	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC of Reduced Model	BIC of Reduced Model	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	592.199	736.646	514.199 ^a	.000	0	.
AGE	598.911	732.247	526.911	12.712	3	.005
COM	601.155	734.492	529.155	14.956	3	.002
AFF	636.801	770.138	564.801	50.602	3	.000
SEX	595.495	728.832	523.495	9.296	3	.026
MAR	597.587	730.923	525.587	11.388	3	.010
EDU	601.714	735.050	529.714	15.515	3	.001
WOR	605.466	738.803	533.466	19.267	3	.000
FAM	608.222	741.558	536.222	22.023	3	.000
SOC	626.446	759.782	554.446	40.247	3	.000
STY	588.009	710.234	522.009	7.810	6	.252
LEV	595.252	728.588	523.252	9.053	3	.029

4.4.4 Results of MLR Analysis

Considering the real situation, the six groups of models with mutual reference categories are designed as shown in Figure 4-2 (duplicate groups removed), and they are respectively “urban area & return”, “urban area & another urban village”, “urban area & resettlement”, “return & another urban village”, “return & resettlement”, and “resettlement & another urban village”.

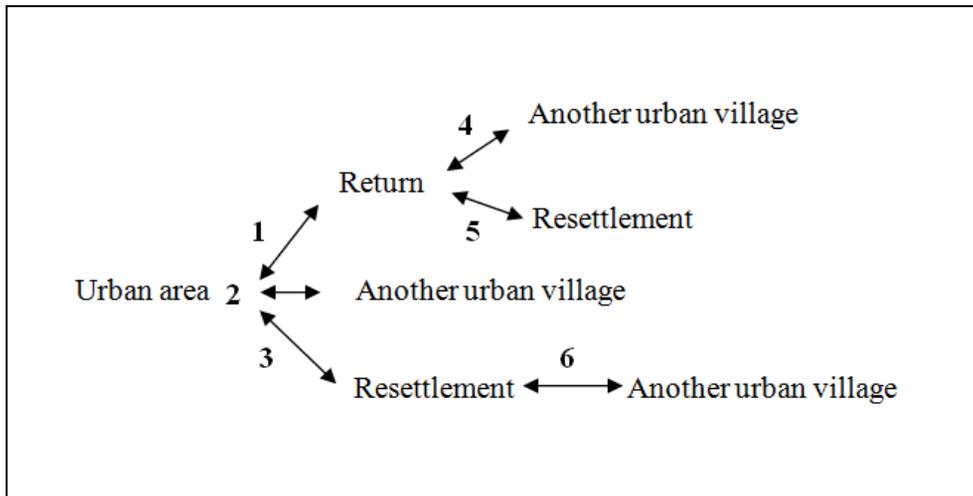


Figure 4-2 Six models of mutual reference categories

Firstly, the study analyzes the factors influencing migrant workers' choices for "return" while choosing "urban area" as reference category. The results are shown in Table 4-8.

The independent variable "age" has significantly positive effects on migrant workers' choices for "return" rather than "urban village". The probability of choosing "return" rise with migrant workers' ages increase. With each year's raise in age, the probability of their being willing to choose "return" increases by 13.2%; the effect of "commuting time" on migrants' choices for "return" is not statistically significant; the probability of being willing to choose "return" decreases with the value of "rental affordability" increases, and one value's increase in rental affordability is found to cause a decrease of 64.6% in the probability of choosing "return" rather than "urban area"; male workers are more willing to choose "return" than female workers compared with "urban area", and the probability for male workers to do so is 4.048 times of that of female workers; unmarried migrant

workers are less willing to leave urban area than married ones, and the probability for unmarried workers to choose “return” is only 0.15 times of that for married workers; the probability for those educated below high school level to choose “return” is 8.514 times of that for those with high school level or above; “working stability” has strong effects on migrant workers’ choices for “return” rather than “urban area”, and those with unstable jobs have larger probability to choose “return” than those with stable ones, and the odds value is 9.324; the migrant workers live alone have larger probability to choose “return” rather than “urban area” than those live with families, and the odds value is 9.324; “social belongingness” seems to play a key role in influencing migrants’ choices for “return”, and those with weak social belongingness have considerable larger probability to choose “return” than those with strong social belongingness, and the value of odds is 150.124; the independent variables “redevelopment style” and “redevelopment level” has no statistically significant effects on migrant workers’ choices for “return” rather than “urban area”.

Table 4-8 Results of MLR analysis (urban area & return)

choices for settlements ^a		B	Std. Error	Wald	df	Sig.	Exp(B)
Return	Intercept	-2.431	2.328	1.090	1	.296	
	AGE	.124	.039	10.043	1	.002	1.132**
	COM	-.038	.022	2.992	1	.084	.963
	AFF	-1.037	.175	35.295	1	.000	.354**
	SEX (0)	1.398	.587	5.683	1	.017	4.048*
	SEX (1)	0 ^b	.	.	0	.	.
	MAR(0)	-1.894	.940	4.058	1	.044	.150*
	MAR(1)	0 ^b	.	.	0	.	.
	EDU (0)	2.142	.672	10.153	1	.001	8.514**
	EDU (1)	0 ^b	.	.	0	.	.
	WOR(0)	2.233	.613	13.258	1	.000	9.324**
	WOR(1)	0 ^b	.	.	0	.	.
	FAM(0)	2.242	.700	10.253	1	.001	9.409**
	FAM(1)	0 ^b	.	.	0	.	.
	SOC (0)	5.011	1.415	12.536	1	.000	150.124**
	SOC (1)	0 ^b	.	.	0	.	.
	STY (1)	-.850	.683	1.548	1	.213	.427
STY (2)	.525	.675	.603	1	.437	1.690	
STY (3)	0 ^b	.	.	0	.	.	
LEV (0)	-.776	.548	2.003	1	.157	.460	
LEV (1)	0 ^b	.	.	0	.	.	

a. The reference category is: urban area.

b. This parameter is set to zero because it is redundant

** result of estimates is significant at 0.01 level

*result of estimates is significant at 0.05 level

Secondly, the study analyzes the factors influencing migrant workers' choices for "another urban village" while choosing "urban area" as reference category, and the results are shown in Table 4-9.

The independent variables "age", "marriage status", "family structure", "redevelopment style" and "redevelopment level" have no statically significant effects on migrant workers' choices on "another urban village" rather than "urban area"; "commuting time" has slight effects on their choices for "another urban village", and with one minute's increase in

commuting time, the probability of their being willing to choose “another urban village” reduces by 3.7%; “rental affordability” has respectively strong effects on their choices for “another urban village”, and the stronger their rental affordability is, the smaller the probability for them to choose “another urban village” rather than “urban area” is, and with one value’s increase in rental affordability, the probability of being willing to choose “another urban village” decreases by 35%; the probability for male workers to choose “another urban village” rather than “urban village” is about 4 times of that of female workers; those educated below high school level are willing to choose “another urban village” rather than “urban village” than those with high school level or above, and the probability of the former is about 6 times of that of the latter; the probability for those with unstable jobs to choose “another urban village” is about 3 times of that of those with stable jobs; the effects of “social belongingness” on their choices for “another urban village” are significant, and the probability for those with weak social belongingness to do so is about 47 times of that of those with strong social belongingness; “redevelopment style” and “redevelopment level” have no statistically significant effects on migrant workers’ choices for “another urban village” rather than “urban area”.

Table 4-9 Results of MLR analysis (urban area & another urban village)

choices for settlements ^a		B	Std. Error	Wald	df	Sig.	Exp(B)
Another urban village	Intercept	-2.812	1.869	2.265	1	.132	
	AGE	.066	.035	3.503	1	.061	1.068
	COM	-.037	.019	3.911	1	.048	.963*
	AFF	-.431	.118	13.341	1	.000	.650**
	SEX (0)	1.425	.503	8.026	1	.005	4.158**
	SEX (1)	0 ^b	.	.	0	.	.
	MAR(0)	.334	.793	.177	1	.674	1.396
	MAR(1)	0 ^b	.	.	0	.	.
	EDU (0)	1.810	.522	12.015	1	.001	6.113**
	EDU (1)	0 ^b	.	.	0	.	.
	WOR(0)	1.075	.521	4.261	1	.039	2.929*
	WOR(1)	0 ^b	.	.	0	.	.
	FAM(0)	.351	.630	.310	1	.578	1.420
	FAM(1)	0 ^b	.	.	0	.	.
	SOC (0)	3.845	.874	19.337	1	.000	46.736**
	SOC (1)	0 ^b	.	.	0	.	.
	STY (1)	-.310	.579	.287	1	.592	.733
	STY (2)	.857	.559	2.350	1	.125	2.357
	STY (3)	0 ^b	.	.	0	.	.
	LEV (0)	-.148	.471	.098	1	.754	.863
LEV (1)	0 ^b	.	.	0	.	.	

a. The reference category is: urban area.

b. This parameter is set to zero because it is redundant

** result of estimates is significant at 0.01 level

*result of estimates is significant at 0.05 level

Thirdly, the study analyzes the factors influencing migrant workers' choices for "resettlement" with "urban area" as reference category, and the results are shown in Table 4-10. Only three independent variables, respectively "commuting time", "rental affordability", and "social belongingness", have statistically significant effects on migrant workers' choices for "resettlement" rather than "urban area"; with one minute's increase in commuting time, the probability for them to choose "resettlement" decreases by 5.9%; with each value's increase in rental

affordability, the probability for them to choose “resettlement” decreases by 21%; those with weak social belongingness are more willing to choose “resettlement” than those with strong social belongingness, and the probability of the former is about 3 times of the latter.

Table 4-10 Results of MLR analysis (urban area & resettlement)

choices for settlements ^a		B	Std. Error	Wald	df	Sig.	Exp(B)
Resettlement	Intercept	1.286	1.523	.713	1	.398	
	AGE	.027	.030	.823	1	.364	1.028
	COM	-.061	.017	13.150	1	.000	.941**
	AFF	-.236	.094	6.356	1	.012	.790*
	SEX (0)	.559	.424	1.735	1	.188	1.749
	SEX (1)	0 ^b	.	.	0	.	.
	MAR(0)	.118	.684	.030	1	.863	1.125
	MAR(1)	0 ^b	.	.	0	.	.
	EDU (0)	.770	.459	2.818	1	.093	2.160
	EDU (1)	0 ^b	.	.	0	.	.
	WOR(0)	.169	.489	.120	1	.729	1.184
	WOR(1)	0 ^b	.	.	0	.	.
	FAM(0)	-.104	.569	.033	1	.855	.901
	FAM(1)	0 ^b	.	.	0	.	.
	SOC (0)	1.172	.492	5.675	1	.017	3.229*
	SOC (1)	0 ^b	.	.	0	.	.
	STY (1)	-.098	.477	.043	1	.837	.906
	STY (2)	.098	.473	.043	1	.836	1.103
	STY (3)	0 ^b	.	.	0	.	.
	LEV (0)	.596	.409	2.126	1	.145	1.815
LEV (1)	0 ^b	.	.	0	.	.	

a. The reference category is: urban area.

b. This parameter is set to zero because it is redundant

** result of estimates is significant at 0.01 level

*result of estimates is significant at 0.05 level

Fourthly, the study analyzes the factors influencing migrant workers' choices for "another urban village" while choosing "return" as reference category, and the results are shown in Table 4-11. It is found that the independent factors "age", "rental affordability", "marriage status", "working stability" and "family structure" have statically significant effects on their choices for "another urban village" rather than "return"; with each year's increase in age, the probability of being willing to choose "another urban village" rather than "return" decreases by 5.7%; with each value's increase in "rental affordability", the probability of being willing to do so increases by 83.3%; the probability for unmarried workers to choose "another urban village" rather than "return" is about 9 times of that of married workers; those with unstable jobs are less willing to choose "another urban village" rather than "return" than those with stable jobs, and the odds value is 0.314; those live alone are less willing to choose "urban village" rather than "return" than those lives with families, and the probability for the former to do so is 0.3 times of the latter.

Table 4-11 Results of MLR analysis (return & another urban village)

choices for settlements ^a		B	Std. Error	Wald	df	Sig.	Exp(B)
Another urban village	Intercept	-.381	1.997	.036	1	.849	
	AGE	-.058	.027	4.856	1	.028	.943*
	COM	.001	.017	.001	1	.969	1.001
	AFF	.606	.149	16.547	1	.000	1.833**
	SEX (0)	.027	.436	.004	1	.951	1.027
	SEX (1)	0 ^b	.	.	0	.	.
	MAR(0)	2.228	.711	9.828	1	.002	9.278**
	MAR(1)	0 ^b	.	.	0	.	.
	EDU (0)	-.331	.589	.316	1	.574	.718
	EDU (1)	0 ^b	.	.	0	.	.
	WOR(0)	-1.158	.450	6.611	1	.010	.314**
	WOR(1)	0 ^b	.	.	0	.	.
	FAM(0)	-1.891	.508	13.850	1	.000	.151**
	FAM(1)	0 ^b	.	.	0	.	.
	SOC (0)	-1.167	1.484	.618	1	.432	.311
	SOC (1)	0 ^b	.	.	0	.	.
	STY (1)	.540	.541	.996	1	.318	1.716
	STY (2)	.333	.537	.383	1	.536	1.395
	STY (3)	0 ^b	.	.	0	.	.
	LEV (0)	.628	.411	2.337	1	.126	1.874
LEV (1)	0 ^b	.	.	0	.	.	

a. The reference category is: return.

b. This parameter is set to zero because it is redundant

** result of estimates is significant at 0.01 level

*result of estimates is significant at 0.05 level

Fifthly, the study analyzes the factors influencing migrant workers' choices for "resettlement" with "return" as reference category, and the results are shown in Table 4-12.

The independent variables "commuting time", "sex" and "redevelopment style" have no statistically significant effects on their choices for "resettlement" rather than "return"; with each year's increase in age, the probability of being willing to choose "resettlement" rather than "return" decreases by 9.2%; with each value's increase in rental

affordability, the probability of being willing to choose “resettlement” rather than “return” increases by 1.23 times; unmarried workers are more willing to choose “resettlement” than married workers, and the probability for the former to do so is about 7.5 times of that of the latter; those educated below high school level are less willing to do so than those with high school level or above, and the odds value is 0.254; those with unstable jobs are less willing to choose “resettlement” than those with stable jobs, and the probability for the former to do so is 0.127 times of that for the latter; those live alone have less affordability to choose “resettlement” rather than “return” than those live with families, and the odds value is 0.096; those with weak social belongingness are less willing to choose “resettlement” rather than “return” than those with strong social belongingness, and the probability for the former to do so is 0.022 times of that for the latter; it is found that “redevelopment level” has statistically significant effects on their choices for “resettlement” rather than “return”, and the result shows that the migrant workers lives in the region with low redevelopment level are more willing to choose “resettlement” than those lives in the region of high redevelopment level, and the odds value is 3.944.

Table 4-12 Results of MLR analysis (return & resettlement)

choices for settlements ^a		B	Std. Error	Wald	df	Sig.	Exp(B)
Resettlement	Intercept	3.717	2.078	3.198	1	.074	
	AGE	-.097	.032	8.896	1	.003	.908**
	COM	-.023	.019	1.435	1	.231	.977
	AFF	.801	.164	23.865	1	.000	2.229**
	SEX (0)	-.839	.515	2.661	1	.103	.432
	SEX (1)	0 ^b	.	.	0	.	.
	MAR(0)	2.012	.842	5.716	1	.017	7.477*
	MAR(1)	0 ^b	.	.	0	.	.
	EDU (0)	-1.372	.622	4.858	1	.028	.254*
	EDU (1)	0 ^b	.	.	0	.	.
	WOR(0)	-2.063	.534	14.916	1	.000	.127**
	WOR(1)	0 ^b	.	.	0	.	.
	FAM(0)	-2.346	.610	14.779	1	.000	.096**
	FAM(1)	0 ^b	.	.	0	.	.
	SOC (0)	-3.839	1.383	7.711	1	.005	.022**
	SOC (1)	0 ^b	.	.	0	.	.
	STY (1)	.752	.607	1.536	1	.215	2.121
	STY (2)	-.426	.612	.485	1	.486	.653
	STY (3)	0 ^b	.	.	0	.	.
	LEV (0)	1.372	.483	8.070	1	.005	3.944**
LEV (1)	0 ^b	.	.	0	.	.	

a. The reference category is: return.

b. This parameter is set to zero because it is redundant

** result of estimates is significant at 0.01 level

*result of estimates is significant at 0.05 level

Finally, the study analyzes the last group “resettlement & another urban village”, and “resettlement” is chosen as reference category. As shown in Table 4-13, only the independent factors “sex”, “educational level”, “working stability”, and “social belongingness” have statistically significant effects on migrant workers’ choices; male migrant workers are more willing to choose “another urban village” than female workers, and the probability for male workers to do so is about 2.4 times of that for female workers; the migrant workers educated below high school level are more willing to choose “another urban village” rather than “resettlement” than those with

high school level or above, and the probability for the former to do so is about 3 times of that for the later; those with unstable jobs are more willing to choose “another urban village” than those with stable jobs, and the odds value is 2.473; those having weak senses of belonging to the city are more willing to choose “another urban village” rather than “resettlement” than those with strong senses, and the probability for the former to do so is about 14.5 times of that for the latter.

Table 4-13 Results of MLR analysis (resettlement & another urban village)

choices for settlements ^a		B	Std. Error	Wald	df	Sig.	Exp(B)
Another urban village	Intercept	-4.098	1.592	6.627	1	.010	
	AGE	.038	.028	1.866	1	.172	1.039
	COM	.024	.016	2.223	1	.136	1.024
	AFF	-.196	.106	3.426	1	.064	.822
	SEX (0)	.866	.427	4.114	1	.043	2.378*
	SEX (1)	0 ^b	.	.	0	.	.
	MAR(0)	.216	.689	.098	1	.754	1.241
	MAR(1)	0 ^b	.	.	0	.	.
	EDU (0)	1.040	.470	4.891	1	.027	2.830*
	EDU (1)	0 ^b	.	.	0	.	.
	WOR(0)	.905	.437	4.292	1	.038	2.473*
	WOR(1)	0 ^b	.	.	0	.	.
	FAM(0)	.455	.538	.716	1	.398	1.576
	FAM(1)	0 ^b	.	.	0	.	.
	SOC (0)	2.672	.847	9.953	1	.002	14.476**
	SOC (1)	0 ^b	.	.	0	.	.
	STY (1)	-.212	.500	.180	1	.671	.809
	STY (2)	.759	.492	2.385	1	.122	2.137
	STY (3)	0 ^b	.	.	0	.	.
	LEV (0)	-.744	.402	3.423	1	.064	.475
LEV (1)	0 ^b	.	.	0	.	.	

a. The reference category is: resettlement.

b. This parameter is set to zero because it is redundant

** result of estimates is significant at 0.01 level

*result of estimates is significant at 0.05 level

To explore the overall regular patterns of independent factors' influential levels based on different groups, the study makes a new table to show the regression results based on six reference groups (see Table 4-14). The independent factor "age" only has statistically significant effects on migrant workers' choices on "return" or not, and the probabilities for them to choose "return" rather than "urban area", to choose "return" rather than "resettlement", and to choose "return" rather than "another urban village" respectively increases by 13.2%, 9.2%, and 5.7% with each year's increase in their ages. For migrant workers, the characteristics between "return" and "urban area" have larger difference, for example, if a migrant worker chooses "urban area" as the next settlement, he or she might has more pressure in economy and living than choosing "return", thus older migrant workers incline to choose "return" to avoid the stress from the city. However, compared with "urban area", the pressures from "another urban village" or "resettlement" are much smaller.

It is clear that "commuting time" has no statistically significant effects on their choices for "return" or not. By contrast, it only affects their choices among "urban area", "another urban village" and "resettlement", probably because the distances of these settlements are not far from each other in a city. On the other hand, it is proved that "commuting time" has effects only on short-distance migration. Specifically, with each minute's increase in commuting time, the probabilities of choosing "another urban village" and "resettlement" rather than "urban area" decrease by 3.7% and 5.9% respectively. Those taking longer time to go to work are more willing to choose "urban area". "Rental affordability" has wide effects on migrant workers' choices. As an economic factor, it reflects the basic economic situation of migrant workers. In the group that defines "urban area" as

reference category, the probabilities of choosing “return”, “another urban village” and “resettlement” decrease respectively by 64.6%, 35% and 21% with each value’s increase in rental affordability. Defining “return” as reference category, it is found that with each value’s increase in rental affordability, the probabilities of choosing “another urban village” and “resettlement” increases by 83.3% and 122.9% respectively, showing that it is much easier for those with strong rental affordability to choose the settlements with relatively higher rent.

“Sex” has statistically significant effects on their choices for “return” and “another urban village” when defining “urban area” as reference category, as well as on choices for “another urban village” when defining “resettlement” as reference. Compared with female workers, male workers are willing to choose “return” or “another urban village” rather than “urban area” or “resettlement”. Compared with married migrant workers, unmarried workers are more willing to choose “another urban village” (odds=9.278), “resettlement” (odds=7.477), and “urban area” (odds=6.645) rather than “return”, showing that unmarried workers incline to stay in the city.

Those educated below high school level are more willing to choose “return” (odds=8.514) and “another urban village” (odds=6.113) when the reference category is “urban area”; they are more willing to choose “return” (odds=3.941) and “another urban village” (odds=2.830) rather than “resettlement”. Probably the migrant workers with relatively lower educational level are more difficult to get employment training than well educated ones, and thus the probability for the former to lose their jobs is larger than that for the latter, and the probability for the former to choose the settlement with relatively cheap rent or choose “return” is larger than that for the latter as well.

Those with unstable jobs are willing to choose “return”, “another urban village” rather than “resettlement” and “urban area” than those with stable jobs, probably because unstable jobs increase the probability for them to lose the courage and determination to continuously live in original urban villages, much less the “urban area”. “Family structure” only affects their choices for “return” or not. The results show that the probabilities for those living alone to choose “return” rather than “another urban village”, “resettlement” and “urban area” are respectively about 6.2, 10.4 and 9.4 times of those living with families. The study also tests the cross impacts of “marital status” and “family structure” (see Table 4-15), and finds that those have got married but live alone in a city are more willing to choose “return” probably because their families live in their hometowns.

“Social belongingness” has the strongest effects on migrant workers’ choices on “return” rather than “urban area”, and those with relatively weak senses of belonging to the city are more willing to choose “return” than those with strong social belongingness (odds=150.124), and then comes “another urban village” (odds=46.736) and “resettlement” (3.229), proving that their hometowns will provide them with strongest sense to belong to the society; although “another urban village” is also located in urban area, the living condition and style are the same with that rural area, and thus the probability for them to choose it is also large; “resettlement” means living in a redeveloped urban village, however, most residents used to be villagers, therefore, there is also a few probability for them to do so. When “return” is defined as reference category, “social belongingness” has no statistically significant effects on their choosing “another urban village” because urban villages and their hometowns have nearly the same living manner or living environment, and the gap between their characteristics is not significant.

Those with weak social belongingness are more willing to choose “return” rather than “resettlement” (odds=46.499) than those with strong social belongingness, and they are also more willing to choose “another urban village” rather than “resettlement” than those with strong social belongingness (odds=14.476).

“Redevelopment style” has entirely no statistically significant effects on migrant workers’ choices for settlements. No matter who implements the redevelopment of urban villages, migrant workers might get less information concerned with the redevelopment implementation than villagers, thus their choices will not be affected by it without knowing detailed information. The independent variable “redevelopment level” has no wide effects except on “resettlement” rather than “return”. The probability for the migrant workers living in the region with low redevelopment level to choose “resettlement” rather than “return” is about 4 times of that for those living in the region with high redevelopment level, for different redevelopment levels might determine the changes of housing rents, deeply affecting migrant workers’ choices. Low-level redevelopment causes that their expectations of rent increase are not too high to afford it. In this case, they might be more willing to choose “resettlement” rather than “return”. As for the groups “resettlement & another urban village” and “resettlement & urban area”, low-level redevelopment in an urban village might not differ greatly from other urban villages except the living environment, thus “redevelopment level” has no statistically significant effects on choosing “resettlement” rather than “another urban village”, meanwhile, migrant workers usually need more living costs if they choose “urban area” rather than “resettlement”, and hence the probability for them to make decisions of resettling is larger.

Table 4-14 Results of Multinomial Logistic Regression on six reference groups

variables	Urban area ^a						Return ^a				Resettlement ^a	
	Return		Another urban village		Resettlement		Another urban village		Resettlement		Another urban village	
	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)
AGE	.124	1.132**	.066	1.068	.027	1.028	-.058	.943*	-.097	.908**	.038	1.039
COM	-.038	.963	-.037	.963*	-.061	.941**	.001	1.001	-.023	.977	.024	1.024
AFF	-1.037	.354**	-.431	.650**	-.236	.790*	.606	1.833**	.801	2.229**	-.196	.822
[SEX=0]	1.398	4.048*	1.425	4.158**	.559	1.749	.027	1.027	-.839	.432	.866	2.378*
[SEX=1]	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.
[MAR=0]	-1.894	.150*	.334	1.396	.118	1.125	2.228	9.278**	2.012	7.477*	.216	1.241
[MAR=1]	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.
[EDU=0]	2.142	8.514**	1.810	6.113**	.770	2.160	-.331	.718	-1.372	.254*	1.040	2.830*
[EDU=1]	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.
[WOR=0]	2.233	9.324**	1.075	2.929*	.169	1.184	-1.158	.314**	-2.063	.127**	.905	2.473*
[WOR=1]	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.
[FAM=0]	2.242	9.409**	.351	1.420	-.104	.901	-1.891	.151**	-2.346	.096**	.455	1.576
[FAM=1]	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.
[SOC=0]	5.011	150.124**	3.845	46.736**	1.172	3.229*	-1.167	.311	-3.839	.022**	2.672	14.476**
[SOC=1]	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.
[STY=1]	-.850	.427	-.310	.733	-.098	.906	.540	1.716	.752	2.121	-.212	.809
[STY=2]	.525	1.690	.857	2.357	.098	1.103	.333	1.395	-.426	.653	.759	2.137
[STY=3]	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.
[LEV=0]	-.776	.460	-.148	.863	.596	1.815	.628	1.874	1.372	3.944**	-.744	.475
[LEV=1]	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.	0 ^b	.

^a reference category ** significant at 0.01 level *significant at 0.05 level

Table 4-15 Results of cross-impact analysis

Cross-impact factors	Urban area ^a					
	Return		Another urban village		Resettlement	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
[MAR=0] *[FAM=0]	.218	1.243	.731	2.078	.066	1.068
[MAR=0] *[FAM=1]	-.930	.395	-.145	.865	-.070	.933
[MAR=1] *[FAM=0]	2.120	8.332*	-.235	.790	-.386	.680
[MAR=1] *[FAM=1]	0 ^b	.	0 ^b	.	0 ^b	.

^a reference category *significant at 0.05 level

4.4.5 Robustness Test

For testing the robustness of the multinomial logistic regression, the study changes the dependent variable into two categories by combining “value 1” (return) and “value 2”(another urban village), as well as “value 3” (resettlement) and “value 4” (urban area) respectively, producing two new values, namely, value 1= “low-rent region” and value 2=“high-rent region”. By *Binary Logistical Regression*, the results are shown in Table 4-16. It is found that the results of the *Test for Robustness* are generally in accordance with the results of *Multinomial Logistic Regression*, which further proves the credibility of the *MLR model*.

Table 4-16 Results of robustness test

	B	S.E.	Wald	df	Sig.	Exp(B)
AGE	-.064	.025	6.327	1	.012	.938*
COM	.001	.013	.007	1	.935	1.001
AFF	.401	.091	19.468	1	.000	1.493**
SEX	.967	.375	6.637	1	.010	2.631**
MAR	-.365	.599	.372	1	.542	.694
EDU	1.324	.388	11.667	1	.001	3.757**
WOR	1.221	.365	11.153	1	.001	3.389**
FAM	1.022	.448	5.199	1	.023	2.779*
SOC	3.472	.741	21.978	1	.000	32.189**
STY	-.226	.223	1.030	1	.310	.798
LEV	-.742	.351	4.470	1	.034	.476*
Constant	-2.823	1.106	6.509	1	.011	.059*

* significant at 0.05 level

**significant at 0.01 level

4.5 Main Findings

4.5.1 Rules of Migration

The rules of migration are found as shown in Table 4-17. “Age” only affects migrant workers choices for whether return or not, and with the age increases, the probability of choosing “return” increases. The effects of “age” on migrant workers’ choices between “another urban village”, “resettlement” and “urban area” have no statistically significant difference.

“Commuting time” only affects short-distance migration. With its increase, the probability of choosing to leave for “urban area” increases, but the effects of it on their choices for “resettlement” and “another urban village” have no statistically significant difference.

“Rental affordability” widely affects their choices on settlements. With its value increase, the probability of choosing “urban area” increase and is larger than that of the other three choices; the probability of choosing “return” decrease with the value of “rental affordability” increase and is smaller than the that of other three choices; the effects of it on their choices between “another urban village” and “resettlement” have no statistically significant difference, and the probabilities of the two choices are larger than “return” but smaller than “urban area”.

“Sex” is proved to be influential to migrant workers’ choices for settlements. Compared with female workers, the probability for male workers to choose “return” and “another urban village” has no statistically significant difference but larger than “resettlement” and “urban area”; the probability for male workers to choose “resettlement” is larger than “urban area”.

“Marital status” only affects migrant workers’ choices for “return” or not. Compared with married migrant workers, unmarried ones has lager probability to stay in the city (“another urban village”, “resettlement”, and “urban area”). However, the effects of the independent variable on their choices for “another urban village”, “resettlement”, and “urban area” have no statistically significant difference.

“Educational level” is proved to affect their choices for “the area with rural characteristics” (“return” and “another urban village”) and “the area with urban characteristics” (“resettlement” and “urban area”). Compared

with those educated above high school level, those educated below high school level have larger probability to choose “return” or “another urban village” than “resettlement” or “urban area”. The effects of “educational level” on their choices for “return” and “another urban village” has no statistically significant difference, so do those for “resettlement” and “urban area”.

“Working stability” is found to widely affect their choices for settlements. Compared with those with stable jobs, the probability for those with unstable ones to choose “return” is the largest of all, and then comes “another urban village”, “resettlement” and “urban area”. The effects of “working stability” on their choices for “resettlement” and “urban area” have no statistically significant difference.

“Family structure” only affects their choices for “return” or not. Compared with those live with families, those live alone have larger probability to choose “return” than the other three choices. The effects of this independent variable on their choices for “another urban village”, “resettlement”, and “urban area” have no statistically significant difference.

“Social belongingness” has strong and wide effects on their choices for settlements. Compared with those feel strong social belongingness, those feel weak social belongingness have the largest probability to choose the area with rural characteristics (“return” and “another urban village”), then comes “resettlement” and “urban area”. The effects of “social belongingness” on their choices for “return” and “another urban village” have no statistically significant difference.

“Redevelopment style” is proved not influential to their choices for settlements. It only affects their choices for “return” or “resettlement”. Compared with those live in the urban villages with high level

redevelopment, those live in low-level-redevelopment urban villages incline to choose “resettlement” rather than “return”; the effects of the independent variable on their choices for “resettlement”, “another urban village” and “urban area” have no statistically significant difference.

Table 4-17 The overall rules of the effects of independent variables on migrant workers’ choices for settlements

Independent variables	Characteristics of dependent variable
Age (↑)	Return>U.V=Resettlement=U.A
Commuting time (↑)	Return (X) U.V=Resettlement<U.A
Rental affordability(↑)	Return<U.V=Resettlement<U.A
Sex (male/female*)	Return=U.V>Resettlement>U.A
Marital status (unmarried/married*)	Return<U.V=Resettlement=U.A
Educational level (low/high*)	Return=U.V>Resettlement=U.A
Working stability (unstable/stable*)	Return>U.V>Resettlement=U.A
Family structure (alone/ with family*)	Return>U.V=Resettlement=U.A
Social belongingness (weak/strong*)	Return=U.V>Resettlement>U.A
Redevelopment style	Return=U.V=Resettlement=U.A
Redevelopment level(low/high*)	Return <Resettlement U.V=Resettlement=U.A

*Reference category

4.5.2 Maximum Probabilities of Choosing Different Settlements

According to formula (7)-(10), the maximum probabilities of four choices are calculated and shown in Table 4-18. The maximum probabilities of “return”, “another urban village”, “resettlement”, and “urban area” are respectively 98.8%, 84.0%, 66.3%, and 93.5%. The migrant workers have the following characteristics.

Male workers, aged more than 50 years old, married and educated below high school level, having unstable jobs, living alone, with weak social belongingness, whose rental affordability is less than 8, and living in the urban village with high level redevelopment, have the maximum probability to choose “return”.

Male workers, aged from 20 to 29 years old, unmarried and educated below high school level, having unstable jobs, living with families, with weak social belongingness, whose rental affordability is less than 8, and living in the urban village with high-level redevelopment, have the maximum probability to choose “another urban village” as the next settlement.

Male workers, aged from 20 to 29 years old, married and educated above high school level, having stable jobs, living with families, with strong social belongingness, taking about 15 to 29 minutes in commuting, whose rental affordability is between 8 and 16, and living in the urban village with low level redevelopment, have the maximum probability to choose “resettlement”.

Female workers, aged from 20 to 29 years old, unmarried and educated above high school level, having stable jobs, living with families, with strong social belongingness, taking more than 45 minutes in commuting, whose rental affordability is more than 16, and living in the urban village with high level redevelopment, have the maximum probability to choose “urban area” as the next settlement.

Table 4-18 Maximum probabilities of four choices

Choices for settlements	Maximum probability	Characteristics of migrant workers
Return	98.8%	SEX=male; MAR=married; EDU=below high school level; WOR=unstable; FAM=alone; SOC=weak; COM=(any); AGE>50; AFF<8; LEV=high
Another urban village	84.0%	SEX=male; MAR=unmarried; EDU=below high school level; WOR=unstable; FAM=with family; SOC=weak; COM=(any); AGE=20~29; AFF<8; LEV=high
Resettlement	66.3%	SEX=male; MAR=unmarried; EDU=above high school level; WOR=stable; FAM=with family; SOC=strong; COM< 30; AGE=20~29; 8<AFF<16; LEV=low
Urban area	93.5%	SEX=female; MAR=unmarried; EDU=above high school level; WOR=stable; FAM=with family; SOC=strong; COM>45; AGE=20~29; AFF>16; LEV=high

4.5.3 Controllable Factors by Regulating Policies

In September, 2012, Migrant Worker Research Group (MWRG) made a research on migrant workers' intentions for living in cities, and the results show that nearly 62% of respondents are willing to live in cities and never leave, proving that most migrant workers prefer city lives if condition permits. But unfortunately, many factors, including personal or external ones, hinder their choices based on their real intentions, causing that some migrant workers have to leave a city for their hometown or move to another urban village. This limitation will hinder the development of Chinese urbanization and citizenization. Based on the former analysis, the study finds that among ten independent variables ("redevelopment style is not statistically significant"), seven variables can be regulated through carrying out related policies, and they are respectively "family structure", "educational level", "working stability", "social belongingness", "commuting time", "rental affordability", and "redevelopment level". These independent variables have different extents of effects on migrant workers' choices for settlements, thus it might be feasible for city government to regulate these variables through carrying out related policies to induce migrant workers' choices toward a sustainable development. As shown in Table 4-19, each variable corresponds to a policy field, and through carrying out these policies in different methods, the values of selected variables might be changed so as to influence the probability for them to choose their next settlements.

Table 4-19 Controllable variables and related policy fields

Controllable variables	Related policy fields
Family structure (alone/ with family)	-Education of migrant children - Social security
Educational level (low/high)	- Education of rural regions - Assignment of educational resources
Working stability (unstable/stable)	- Protection of labor right - Occupation training
Social belongingness (weak/strong)	- Social welfare - Social security - Community organization
Commuting time	- Traffic environment - Housing
Rental affordability	- Construction of low-rent houses - Income security
Redevelopment level	- Multiparty cooperation - Redevelopment policies

Notes: on the basis of the police research of MWRG

4.6 Summary

In this chapter, the study has defined and explained the selected variables, and meanwhile expected the sign of each independent variable and introduced the characteristics of variables based on previous researches and filed survey. After introducing the producing process of the odds models and probability models by *MLR* method, the study analyzed the results of *MLR*. It first made a correlation analysis between 12 variables and stated their correlations and characteristics. By the test for multicollinearity, the selected variables are found with no multicollinearity between them. The model of *MLR* then also successfully passed the test for model fitting. For the test of likelihood ratio, only the independent variable “redevelopment style” was found to be not statistically significant.

The study explored six groups of models based on three different reference categories “urban area”, “return”, and “resettlement”. The results have shown that each of independent variables, except “redevelopment style”, has different extents of effects on dependent variable. Passing the test of robustness, the study got some findings, including the rules of migration, the maximum probabilities of choosing different settlements, the migrant workers’ characteristics that make their probabilities of choices maximized, as well as the controllable variables by regulating policies. From some extents, these findings might provide some evidences for city government to make some policies aiming at inducing migrant workers’ choices toward a sustainable development.

Chapter 5: Conclusion

5.1 Summary

This study focused on migrant workers' choices for settlements with the redevelopment of urban villages, for the issues referring migrant worker and urban villages have been very hot recently in the fields of urban study in China. By reviewing some previous researches and policies, it is found that the formation and redevelopment of urban villages caused spatial differentiation inside cities, but the previous studies and policies neglected migrant workers' migrating behaviors among those regions inside cities. Thus, the study proposes the necessity of focusing on the internal migration behaviors inside cities, for their choices for different settlements might affect city development, positively or negatively. Based on this, the study made a survey on migrant workers living in the urban villages planned to be redeveloped in Beijing. By analyzing the collected data, the study found that the factors "age", "commuting time", "rental affordability", "sex", "marital status", "educational level", "working stability", "family structure", "social belongingness", and "redevelopment level" have statistically significant effects on migrant workers' choices for settlements. Meanwhile, the study found some migration rules of migrant workers with the redevelopment of urban villages, the characteristics of migrant workers who made different choices for settlements, and the controllable factors by regulating policies, which might objectively provide some evidences for government to make and implement their policies to induce migrant workers' choices toward a sustainable development.

5.2 Recommendations

Basing on the main findings, the study proposes the necessity of inducing migrant workers' choices for settlements toward a sustainable development in order for solving the negative effects caused by the migration of migrant workers, and thus the study gives the following recommendations.

The study recommends the city government to induce migrant workers' choices to resettle in redeveloped urban villages, avoid a large number of migrant workers' returning home or moving to other urban villages, which might avoid the production of new problems caused by their migration to other urban villages, as well as ease the population pressure for urban area.

To fulfill that, some controllable factors should be regulated based on the characteristics of migrant workers' intentions to choose "resettlement". Therefore, the study recommends a policy to ensure migrant children's rights of being educated in a city so that their children can move to a city with them together. Besides, migrant workers' educational levels also need to be improved by perfecting the policy of *nine-year free education* in rural areas. In this way, the probability for their choosing "return" will decrease, which perhaps reduce the probability of the loss of labor force. The study also recommends improving the stability of migrant workers' jobs by protecting their labor rights and providing occupational training so that the probability of their choosing "return" and "another urban village" will be decreased if their working stability is improved. Next, perfecting the system of social welfare and social security might help to increase their senses of belonging to the city where they live; building their own community

organization should also be considered for providing various activities to migrant workers, in addition, providing housing security for migrant workers by building some low-rent houses in redeveloped urban villages might ensure their resettling in redeveloped urban villages without any worries. At last, it is necessary for city government to perfect the traffic environment in redeveloped urban villages, stabilize the rental prices of redeveloped urban villages, and take suitable redevelopment level adapted to local condition of urban villages. The mentioned policy recommendations might help to regulate those controllable variables and induce migrant workers' choices toward a sustainable development.

5.3 Implications

The study has the following implications. First, it has focused on one of the hottest issues in the field of urban study in China, namely, the problems of migrant workers and urban villages. To solve the problems caused by rural-urban migration, Chinese government implemented series policies in the last three decades, whereas, they only focused on migrant workers' rural-urban migration but neglected the internal migration in large Chinese cities. The study indicated that the formation and redevelopment of urban villages in Chinese cities have caused a spatial differentiation inside cities, thus it is found that migrant workers' settlements of inner cities have different regional characteristics.

Second, the previous studies only focus on migrant workers' choices for "return" or not but neglect the effects of their internal migrating

behaviors, namely, the migration among “urban village”, “redeveloped urban village”, and “urban area”. The study found that different choices of migrant workers for settlements would affect urban development. It indicated the necessity of inducing their choices for settlements toward a sustainable development.

At last, the study made the connectivity between the analytical results of influential factors and realistic policies, and objectively proposed some policies which might induce migrant workers’ choices for resettlement toward a sustainable development by regulating some controllable factors.

5.4 Limitations

The limitations of this study consist of two aspects. First, the investigation sample needs to be widened, for it only focused on migrant workers’ choices but ignored the general migrants’ choices. Second, it should be a long-term investigation and study on migrant workers’ choices for settlements with the redevelopment of urban villages. Thus, if condition permits, the time interval for investigation should be widened in order to master the whole characteristics of their choices based on different periods.

The issues of migrant workers and urban villages will be social focuses continuously because of the rapid urbanization of China. Thus it is necessary to make a further study on it in order for remedying the shortage of this research. It is predicted that solving the housing problems of Chinese migrant workers might solve the negative effects caused by their migration. Therefore, compared with the issue of migration, how to improve migrant workers’ housing security will probably become more important and interesting fields in the future studies.

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APPENDIX

Questionnaire

Dear residents,

This questionnaire aims at collecting the necessary data for the former researches used in a doctoral dissertation. We hope you can cooperate with us for a real and objective survey results. The questionnaire and data collection will be the important basis of my dissertation, and its outcome might provide reference for government to solve the residential problems of migrant workers. The questionnaire will be implemented anonymously, and the collected data will be used only for academy. We are looking forward to receiving your completed questionnaire and thank you for your cooperation.

• Affiliation	Graduate School of Environmental Studies, Seoul National University
• Usage of Survey	For Dissertation
• Purposes	-Understanding the effects of urban village redevelopment on migrant workers' choices for settlements -Finding the influential factors that cause the different choices of migrant workers for settlements -Providing objective data for government to induce their choices for settlements toward a sustainable development
• Manner of Survey	Questionnaire & Data Collection
• Number	300 Copies

Choices for settlements	<input type="checkbox"/> return <input type="checkbox"/> another urban village <input type="checkbox"/> resettlement <input type="checkbox"/> urban area	
Gender	<input type="checkbox"/> female <input type="checkbox"/> male	
Age	() -year-old	
Marital status	<input type="checkbox"/> unmarried <input type="checkbox"/> married	
Educational level	<input type="checkbox"/> uneducated <input type="checkbox"/> primary school <input type="checkbox"/> junior middle school <input type="checkbox"/> high school or above (no graduation included)	
Working stability	<input type="checkbox"/> unstable (with labor contract) <input type="checkbox"/> stable (without labor contract)	
Family structure	<input type="checkbox"/> live alone <input type="checkbox"/> live with family	
Commuting time	about () minutes	
Social belongingness	<input type="checkbox"/> weak (weak sense of belonging to the city) <input type="checkbox"/> strong (strong sense of belonging to the city)	
Rental affordability (I/M)	monthly income	() Yuan
	monthly rental cost	() Yuan
Redevelopment style	<input type="checkbox"/> developer implementation <input type="checkbox"/> government implementation <input type="checkbox"/> villager implementation	
Redevelopment level	<input type="checkbox"/> low <input type="checkbox"/> high	

中文摘要

博士論文題目： 中國城中村改造背景下農民工移居地的選擇

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改革開放以來，中國出現了城市化及人口流動現象，農民工是該流動大軍中的主力。作為低收入群體，他們為了改善生活條件，前往城市打工，推進了中國勞動力市場的發展，在中國經濟轉型過程中扮演了重要角色。農民工多數來自相對落後的農村地區，前往像北京、上海、深圳、廣州這樣的發達城市謀生。作為中國的政治、經濟、文化中心，北京是最重要的農民工輸入地之一。為了節約租金，農民工通常聚居在北京的城中村。久而久之，城中村出現了環境惡化、公共與社會治安混亂、違規建築林立等諸多問題。為了消除這些問題對城市造成的不良影響，北京市政府實施了一系列城中村改造計劃，這迫使農民工不得不思索他們未來的居處。

本文以此為背景，旨在研究農民工移居地選擇的問題，重點分析影響他們選擇不同移居地的主要因素，以及這些因素的影響程度和內在規律。為探索上述問題，作者選取北京市六個待改造城中村為特定研究區域，採訪了暫居在那裡的三百名農民工，並針對上述研究問題

對他們進行了問卷調查。在分析方法上，本文採用多變量邏輯回歸模型（Multinomial Logistic Regression Model）對問卷所收集的變量進行回歸分析。分析結果顯示：除了“改造方式”這個變量外，其他變量對農民工移居地選擇有不同程度的影響。其中，“租房能力”、“社會歸屬感”、“工作穩定性”以及“教育水平”對其有廣而深的影響；“通勤時間”只影響農民工在城市內部區域的遷徙，對農民工返鄉與否沒有顯著影響；“改造水平”會影響農民工是否選擇定居在改造後的城中村，但影響程度相對較弱；一些個人因素，如“年齡”、“性別”、“婚姻狀況”和“家庭結構”，對農民工是否返鄉有很大影響。本文認為，城中村的形成與改造，使城市內部空間分化為不同區域，農民工向不同區域的遷移，特別是在城市內部的遷移，會影響城市的發展。因此，作者在文章最後提出合理引導農民工移居地選擇的必要性。作者認為，通過制定相關政策，引導農民工重返改造後的城中村居住，可能會解決由其他選擇所導致的負面影響。結合本文的回歸分析結果，通過對一些影響因素的調空可以實現對農民工移居地選擇的引導。最後，本文提出一系列政策性建議，涉及農民工及其子女教育、社會保障與社會福利、農民工職業培訓、廉租房建設以及農民工社區組織建設等。

關鍵詞：快速城市化；城中村；農民工；城中村改造；移居地選擇

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Ning Chai

February, 2014

致 謝 語

“十年寒窗無人問，一舉成名天下知”。高明寫在《琵琶記》中的這句話雖膾炙人口，卻難表我此時心情。此時此刻，我的心情是：“十年寒窗情滿溢，尚未成名需奮起，遙望萬里書山路，迎風拔棘踏苦屐”。隨著這篇關於農民工移居地选择的博士論文落筆，我的“十年寒窗”也將告一段落，迎接我的是嶄新的開始、充滿誘惑的機遇，以及令人興奮的挑戰。回顧海外求學這六年，可以用幸福來形容，這種幸福基於對自我的不斷認知、不斷提升、與不斷追求。這六年，在我迷茫無助、彷徨無依的時候，是我的父母用親情的力量促我前行，這種親情熱如火、柔如棉、暖如驕陽一縷、甘如落蜜的花瓣。感謝雙親，從我呱呱墮地到博士畢業，對我的培養、支助、關懷與愛護。沒有他們，也就沒有我學業有成的今天，我會珍惜來之不易的成就，用畢生所學，回饋社會，以慰雙親之愿。博士第三年，是人生的關鍵，也就是這一年，我認識了妻子毛純，并在今年九月二十日一起走進了婚姻殿堂，感謝岳父岳母將寶貝獨生女兒託付於我，我將履行一個丈夫和女婿的職責與使命。人生之大幸事，無非有四：洞房花燭夜、金榜題名時、久旱逢甘霖、他鄉遇故知。由於上蒼的眷顧，這一年，我完成了兩件人生大事，也正是因為妻子的陪伴與鼓勵，我得以順利拿到學位。海外的生活，讓我經歷了很多，這五年，帶領我走進學術殿堂，指引我前行，并給予我莫大幫助的，當數我的兩位值得尊敬的恩師：韩国首尔市立大學的吳東薰教授、韓國首尔國立大學的崔莫重教授。吳教授是我的碩士生導師，在入讀首尔市立大學期間，給我提供了全額獎學金，并在學術上對我大力支持，給我提供到海外參加學術交流的機會，使我的眼界更為開闊，為我的人生積累了資財；崔教授是我的博士生導師，入讀首尔國立大學以來，在學術上對我悉心指導，在生活上對我細緻關懷。尤其是這篇博士學位論文，得到了他細心地指導與幫助，論文的成果，凝聚了導師的心血與汗水。除了吳、崔二位恩師，兼任西南財經大學與韓國建國大學教授的樊綱治老師，對我的論文提出了有價值的建議，雖然結識樊教授的時間不長，卻有幸得到他非常專業的指導，為此深表謝意。另外，作為我的審查委員長和副委員長，首尔國立大學的李榮城、金經民兩位青年教授，對我的論文也提供了力所能及的幫助。讀書被很多人認為是苦差事，然而，一人讀書可謂“苦修”，多人一起讀書可謂“共修”。很榮幸，這幾年我遇到了一些與我“共修”的死黨，我與他們同筑理想、相互勉勵。談笑間，取長補短；爭論中，各抒己見。濤哥，本名張濤，滿族，首尔市立大學工學博士，主攻數據挖掘與人工智能方向，是對我最有影響力的死黨，影響因子不可估量。我們有相似的價值觀、處世態度、規劃模式，這讓濤哥與我親密無

間，在我的心目中，尊其為兄長，雖只長我兩歲，但卻是我永遠學習的楷模、立志的榜樣。順成，本名李順成，漢族人，首尔國立大學城市規劃學博士，碩士與博士與我同為一校，可謂我相處最久的同窗死黨。順城性格沉穩，對朋友真誠灑脫，是我最珍重的摯交。小何，本名何貴甲，滿族，韓國崇實大學工學博士，其注重細節、了解朋友，是最講義氣死黨。我們曾同住一寢，生活細節面面俱到。老趙，本名趙全林，漢族，首尔市立大學工學碩士，他沉穩內斂不苟言笑，為人處世落落大方，是很難得的死黨。斌弟，本名王斌，漢族人，韓國成均館大學經濟學學士，大氣而高端、低調有內涵，死當中他年齡最小，但成熟度甚高，其前途不可限量，是最有潛力的死黨。韓學峰，朝鮮族，首尔國立大學材料學博士，他年紀雖青，卻才高八斗、學富五車，時常與我探討時事要聞，分享彼此觀點，使我受益匪淺，是與我最談得來的死黨。李晶（女），朝鮮族，首尔國立大學藥學博士，為人誠懇，處事講究，作為我在韓國最要好的異性朋友，時常在我困難之時給予幫助，是我異性朋友中最值得深交的死黨。除此之外，還有很多朋友在我人生的征途中，給過我很大的幫助，在這裡一併感謝，他們是我最最寶貴財富，感謝他們陪我度過異國的春夏秋冬，感謝他們與我体会生活的五味雜陳。今年九月，在湖南科技大學建築與城鄉規劃學院院長吳越教授、城市規劃系主任余翰武教授的支持下，我有幸獲得實習機會，正是因為這次實習，使得導師對我的能力進一步認可，並獲准我如期畢業，再次對兩位老師表示誠摯的感謝。在這次實習過程中，我第一次站在大學講臺，見到了一群年輕的面孔，他們是城規二零二零屆一班與二班的五十三位九零後大學生，與他們相處了八週，使我收穫頗多，他們努力適應我的講課模式，努力配合我的講課節奏，在期末課題發表中認真準備，讓我看到了莘莘學子在未來的某一天奮發有為的願景。取得博士學位，意味著從這天起，我將獨立探索、獨立研究、獨立實踐；意味著從這天起，要更深層次地發掘那些丞待解決的問題；意味著在大學里，要努力將自己所學，毫不保留地傳授給每位求知若渴的天子驕子；意味著在社會上，要勇於承擔責任，積極履行義務，用自己潛心的研究成果來回贈社會；意味著在學術界，要本著誠實、守信、嚴謹、務實的態度，腳踏實地搞專研，專心致志做學問。我將懷著一顆感恩的心，集天地萬物之氣，聚三山五岳之力，用有限的青春書寫和諧盛世之華美篇章！

柴 凝

二零一三年十二月于
首尔國立大學冠岳校区