



# Land conversion and urban settlement intentions of the rural population in China: A case study of suburban Nanjing



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## ABSTRACT

Rapid urban expansion in China has created a large population of landless farmers. Because these landless farmers are under-compensated for land acquisition and discriminated against by urban institutions, many of them face tremendous difficulties in their urban lives. Consequently, rural citizens generally resist land acquisition and conversion to urban residency. However, given the recent improvements in land compensation standards, the educational qualifications of the rural population and urban employment opportunities, the situation is likely to change. Based on a 2014 survey conducted in Nanjing's suburban Jiangning District, this paper examines the land conversion and settlement intentions of rural citizens under the new circumstances. Both in-depth interviews with local villagers and regression models suggest that relinquishing farmland and housing land and settling in the city are distinct decisions determined by dissimilar factors. The findings suggest that a compensation scheme that integrates rural land requisition and resettlement allocation barely meets the requirements of the affected villagers, which explains the observed resistance of rural citizens to land conversion and urban settlement.

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## 1. Introduction

Rapid urban expansion in China has converted excessive rural land into urban use, creating a huge pool of landless farmers. Deprived of the means of livelihood in the countryside, the landless farmers are forced to resort to urban jobs. Because compensation standards for rural land are generally low and urban social and economic barriers faced by rural migrants are high, most migrants find themselves in a disadvantaged situation in urban society. The increasing numbers of landless farmers have aggravated problems, such as unemployment, urban poverty and social inequality, which severely hinder China from sustainable development and achieving a 'harmonious society'. These concerns have led to the recent national campaign for a 'people-centred' urbanization introduced by the central government (SCC, 2014).

Meanwhile, food security and farmland preservation have been placed high on the policy agenda, leading to rigid control over arable land. In 2012, the 18th National Congress of the Communist

Party of China (2012) highlighted three guidelines regarding land use—'development', 'red lines' and 'rights protection', which aim to enable a more sustainable mode of development that balances land development, the preservation of adequate arable land and the protection of farmers' rights to rural land. In this new context, policies that promote excessive land conversion are reviewed, and compensation rates for rural land are raised substantially (Hui, Bao, & Zhang, 2013). Especially in more affluent regions, generous compensation schemes for rural land are introduced to encourage farmers to relinquish their rural land to accommodate urban expansion (Xu, Ma and Chen, 2011).

In the more industrialized and urbanized coastal China, rural residents usually earn a large proportion of their income from non-agricultural activities and properties (Hao, Sliuzas & Geertman, 2011; Long, Zou, & Liu, 2009). For those part-time farmers, rural landholdings function more as assets than a means of livelihood. In particular, farmers of the younger generation are more inclined towards non-agricultural jobs and an urban lifestyle compared to their older counterparts (Yue, Li, Feldman, & Du, 2010). Different stages in the life cycle also affect the way rural citizens value their rural land and consider settling in the city. Existing research has emphasized the migration and urban settlement decisions of rural

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citizens. However, existing studies that explore the intentions of rural residents with regard to both land conversion and urban settlement, especially in the new context, are limited. Although the current institution treats the rural-to-urban conversion of the rural population (*nong zhuan fei*) with an integrated scheme that requisitions rural land and converts residency status, the process involves a variety of decisions including farmland expropriation, housing land requisition or relocation and the conversion of residency, all faced by affected rural citizens. Due to the specific circumstances associated with individual households, the decisions are considered separately according to factors such as land availability and individual requirements and preferences. The decisions consequently deserve separate examination.

Based on a recent survey in the suburban Jiangning District in Nanjing, this paper explores the factors that drive the intentions of rural citizens with regard to both land conversion and urban settlement. We examine the intention to relinquish rural land and change residency instead of migrating because the former leads to permanent migration to and settling in the city by rural citizens and to potential changes in rural land use and ownership. Both processes have tremendous implications for China's ongoing urbanization. Moreover, the empirical analysis focuses on a region that has been undergoing rapid urbanization and development. The findings can yield important implications for designing responsive policies to facilitate dramatic urban transformations of both rural communities and land in places where urban expansion is the most rapid and pervasive.

After this introduction, section two reviews land conversion and settlement intentions in China. Section three describes the study area and data. Section four reports the results of the empirical analysis. Section five concludes with the main findings and policy implications.

## 2. Land conversion and urban settlement

In China, collective ownership over rural land is tied to the rural residency of farmer households. When a household's place of residency changes from rural to urban, their rights to rural land are surrendered simultaneously. Consequently, land conversion is a prerequisite for permanent urban residency and significantly influences the process of urbanization. Decisions regarding land conversion and urban settlement resemble rural–urban migration in other contexts. However, they are also subject to China's distinctive land institution and household registration system.

Existing research has explained human migration in various manners. At the macro-level, regional development disparity is usually considered a major reason for migration. At the micro-level, neo-classical theory regards migrants as rational individuals who make migration decisions based on a trade-off between costs and benefits (De Haas, 2010), whereas the new economics of labour migration considers migration a household decision rather than an individual choice (Stark, 1991). For rural–urban migration, attributes of both the rural origin and the urban destination are at play (Nelson, 1976). The rural-side benefits include landholdings, agricultural employment and the quality of rural life, whereas the urban-side benefits include employment opportunities in the city, wage levels, urban lifestyle, social environment and security concerns. Oftentimes the decision to migrate is determined by a lower economic development level in the origin and better employment opportunities, a higher salary and better quality of life in the destination (Khoo, Hugo, & McDonald, 2008).

In China, approximately 270 million rural migrants currently work in non-agricultural sectors, and the majority of them live in urban areas (NBS, 2015). Although they are considered members of the 'floating population', a large proportion of them will eventually

settle in urban areas and become genuine urbanites. This prospect has aroused scholarly attention on issues including 'permanent migration' and 'urban settlement' (e.g., Hao & Tang, 2015; Li & Siu, 1997; Sun & Fan, 2011; Tang & Feng, 2012, 2015; Yang, 2000; Zhu, 2007; Zhu & Chen, 2010). For rural migrants to make a decision on permanent migration or urban settlement, institutional constraints associated with China's *hukou* system<sup>1</sup> are a key determinant (Li & Siu, 1997). Because social welfare is provided only in the place of *hukou* registration, rural migrants without a local urban *hukou* are excluded from urban welfare and face various forms of institutional discrimination in the city (e.g., Liu, He, & Wu, 2008; Solinger, 1999; Zhang & Wang, 2010). The lack of a local urban *hukou* thus strongly discourages rural migrants to permanently migrate to and settle in the city (e.g., Hu, Xu, & Chen, 2011; Sun & Fan, 2011; Zhu & Chen, 2010).

In reality, however, few rural migrants are willing to convert their *hukou* from rural to urban because an urban *hukou* can only be obtained at the expense of surrendering rural landholdings (Hao & Tang, 2015; Zhu, 2007). For one thing, farmers are often under-compensated for rural land, leading to their resistance to land requisition. For another, after relinquishing rural land, farmers lose their rural income and countryside homes, putting themselves in an extremely vulnerable situation. In addition, their lack of professional education and training opportunities hamper them from obtaining more sophisticated professional jobs and social security benefits associated with such jobs. These factors present major hindrances for rural people to completely surrender their properties and benefits in the countryside and permanently settle in the city (He, Liu, Webster & Wu, 2009). Instead, most rural migrants prefer to work and live in the city while retaining their rural *hukou* and the associated rights to rural land (Roberts, 2002).

More recently, new guidelines introduced by the Communist Party of China (CCCPC, 2012) requires local governments to ensure higher compensation for rural land. This is especially the case in the more affluent regions in the eastern and southern coastal provinces, where lands are more valuable and local governments are more resourceful. Additionally, because these regions are more industrialized, local farmers usually obtain a larger proportion of their income from non-agricultural sectors and thus are less dependent on rural land. These new circumstances are likely to result in different decisions in land conversion and permanent migration for farmers in comparison with their previous situations or in comparison with their counterparts in less affluent regions.

According to China's 1986 Land Administration Law (LAL) and its amendment in 1998, a compensation scheme typically includes compensation for acquired land, resettlement of displaced farmers, and compensation for destroyed properties, including buildings and crops (Lin & Ho, 2005). In 1998, the ceiling of total compensation was raised to thirty times the average annual agricultural revenue generated from the acquired land in three consecutive years prior to the acquisition (CPC, 1998). However, in the face of the boom of the property market beginning in the late 1990s, the sluggish improvements in compensation standards have boosted the opportunity costs of land conversion, leading to strong resistance to land acquisition and frequent conflicts over rural land (Ding, 2007; Tian & Ma, 2009). In 2013, the upper limit of total compensation was removed, and new national guidelines have urged local authorities to introduce more generous compensation schemes, such as provisions for subsidized housing, social insurance and job training programmes (e.g., Xu, Ma, et al., 2011).

Recent studies have placed much attention on the plight of

<sup>1</sup> The *hukou* system is the household registration system of China, which strictly distinguishes urban citizens from rural citizens (see Chan, 2009).

landless farmers (Guo, 2001; He et al., 2009; Hui et al., 2013; Sargeson, 2013). To maximize revenue, local governments tend to overlook the basic economic and social interests of farmers (Bernstein & Lu, 2000; Lu, 1997). At the village level, the ownership of rural land remains vaguely defined (Ho, 2001), and village cadres are often in charge of the collective rights and interests over rural land (Cai, 2003). Consequently, land acquisitions often do not fully acknowledge the interests of local villagers, which generates social tensions among the villagers, the village cadres and the local government (He et al., 2009). Due to under-compensation, many farmers end up worse off after land acquisition (Sargeson, 2013). For example, in Yunan Province, the pursuit of economic revenue by some local governments has jeopardized the livelihood and welfare of the farmers (Guo, 2001). In Jiangsu Province, most of expropriated farmers were unsatisfied with their living conditions after land acquisition (Ji & Qian, 2011). In Shanghai, land acquisition has significantly reshaped the socioeconomic and cultural characteristics of the rural communities (Xu, Tang, & Chan, 2011).

In 2010, to curb the excessive expansion of urban areas and protect arable land, the central government introduced the 'increase/decrease balance' (*zeng jian ping heng*) land-use policy. According to this policy, equilibrium should be maintained between an increase of urban construction land and the decrease of rural construction land so that the quantity of arable land can be retained (Long, Li, Liu, Woods, & Zou, 2012; MLR, 2008). Consequently, rural construction land, especially the rural housing plots of farmers, has become a target in the land consolidation process to enable urban expansion and revenue generation. For land development purposes, when a piece of agricultural land is converted to urban use, the government needs to reclaim the same amount of rural construction land to meet the increase/decrease equilibrium.

In both land acquisition and consolidation, local governments determine the detailed policies. Compensation rates are closely related to local economic development levels and government finance, leading to varied compensation schemes. The type and level of compensation directly impact whether rural residents are willing to relinquish their land. For those who have migrated and are living in the city, the urban livelihood and wellbeing also affect their decisions (Zhu, 2007). It is hypothesized that the decision of such rural migrants to surrender rural land to pursue permanent urban settlement is related to both the standard of living in the city and the level of compensation they can obtain for rural land. In different contexts, the decision varies significantly due to different circumstances in both the rural origin and the host city. The following analysis examines such decisions regarding both land conversion and urban settlement using a case study of the Jiangning District in Nanjing.

### 3. Empirical analysis

#### 3.1. Jiangning district, Nanjing

Nanjing is the capital city of Jiangsu Province, one of the most affluent and developed provinces in China (Fig. 1). In 2013, the city administered an area of 6587 km<sup>2</sup> and was home to a population of 8.19 million. Rapid economic development has been propelled by a huge influx of rural migrant labourers and the expansion of urban land. From 2003 to 2013, the built-up urban area increased from 484 km<sup>2</sup> to 713 km<sup>2</sup> (JPBS, 2014; NBS, 2004), and the population grew by more than two million people. As the city absorbed rural migrants from rural areas of other regions, local farmers have relinquished their rural land to give way to rapid urban expansion. In the same decade, the amount of farmland declined from 2505 km<sup>2</sup> in 2003 to 2375 km<sup>2</sup> in 2013 and the local rural population decreased from 2.23 to 2.04 million (NMBLR, 2014; NMBS,

2004, 2014).

Nanjing consists of six urban districts and seven suburban districts. Among them, eight districts have peri-urban rural land. In 2013, 2.04 million inhabitants held local rural residency, which accounted for 24.9% of the total population. Because of the abundance of urban employment opportunities, a large proportion of the rural population was engaged in non-agricultural jobs. Moreover, because most of the non-agricultural rural population could find jobs in the urban districts of Nanjing or local towns, only a small proportion of the local rural population has migrated to other cities.

Jiangning is a large suburban district located to the south of the Nanjing city proper (Fig. 1). In 2013, Jiangning accommodated approximately 688,000 urban residents and 490,000 rural residents. Among the rural population, only 12.6% (or 61,600) worked as farmers; the majority of the working population were industrial and tertiary sector workers (NMBS, 2014). Over the decade prior to 2013, nearly 60,000 rural residents changed their *hukou* into urban and surrendered rural land, and 67,500 farmers either stopped farming or switched to non-agricultural employment (NMBS, 2004). In 2013 alone, approximately 13,000 landless former farmers were compensated with new apartment units and resettled in Jiangning (LRBJ, 2014).

Jiangning has experienced rapid conversion and development of rural land. The local government, as the sole land supplier in the primary urban land market, acquires rural land from local farmers through the 'increase/decrease balance' mechanism. In the survey year, the compensation scheme followed the 2011 policy titled 'The Acquisition, Compensation and Resettlement Method in Jiangning District' (PGJD, 2011). According to the policy, the total compensation includes land zonal compensation, compensation for young crops and attachment on land and compensation for removed housing. Except for the compensations given to rural collectives, individual villager is mainly compensated with urban social insurance (from land division compensation) and monetary compensation or apartment units at a subsidized rate in a local centralized resettlement site (from compensation for removed housing). The policy is similar with the 'two displacements (farmland is compensated with urban social insurance, and a rural housing plot is compensated with monetary compensation or apartment units)' compensation method in some other cities in Yangtze River Delta.

According to the policy of Jiangning District, the rate of monetary compensation ranges from 2400 RMB/m<sup>2</sup> to 3000 RMB/m<sup>2</sup> according to the type of the house that is compensated and the zonal division of the house plot. A house with less than 240 m<sup>2</sup> in floor space could be compensated with a number of apartment units of various sizes (60 m<sup>2</sup>, 90 m<sup>2</sup> and 120 m<sup>2</sup>) totalling the size of the original house at a subsidized price. The price ranges from 2700 RMB/m<sup>2</sup> to 3600 RMB/m<sup>2</sup> depending on the type and location of the designated apartment units. For larger houses, the portion of floor space exceeding 240 m<sup>2</sup> is compensated with a lump sum of money. The compensation scheme has been significantly improved in the last decade. According to the 2003 scheme, rural land was compensated with a resettlement apartment size of 30 m<sup>2</sup> per person or monetary compensation of 15,000 RMB per person as well as basic urban social insurance.

#### 3.2. Survey and data

In 2014, a household survey was conducted in a selection of nine villages in Jiangning District. According to city development plans, the nine villages are located in the areas that are most likely to be encroached upon by the expansion of the main urban area of Nanjing or the Jiangning local town in the near future (see Fig. 1).

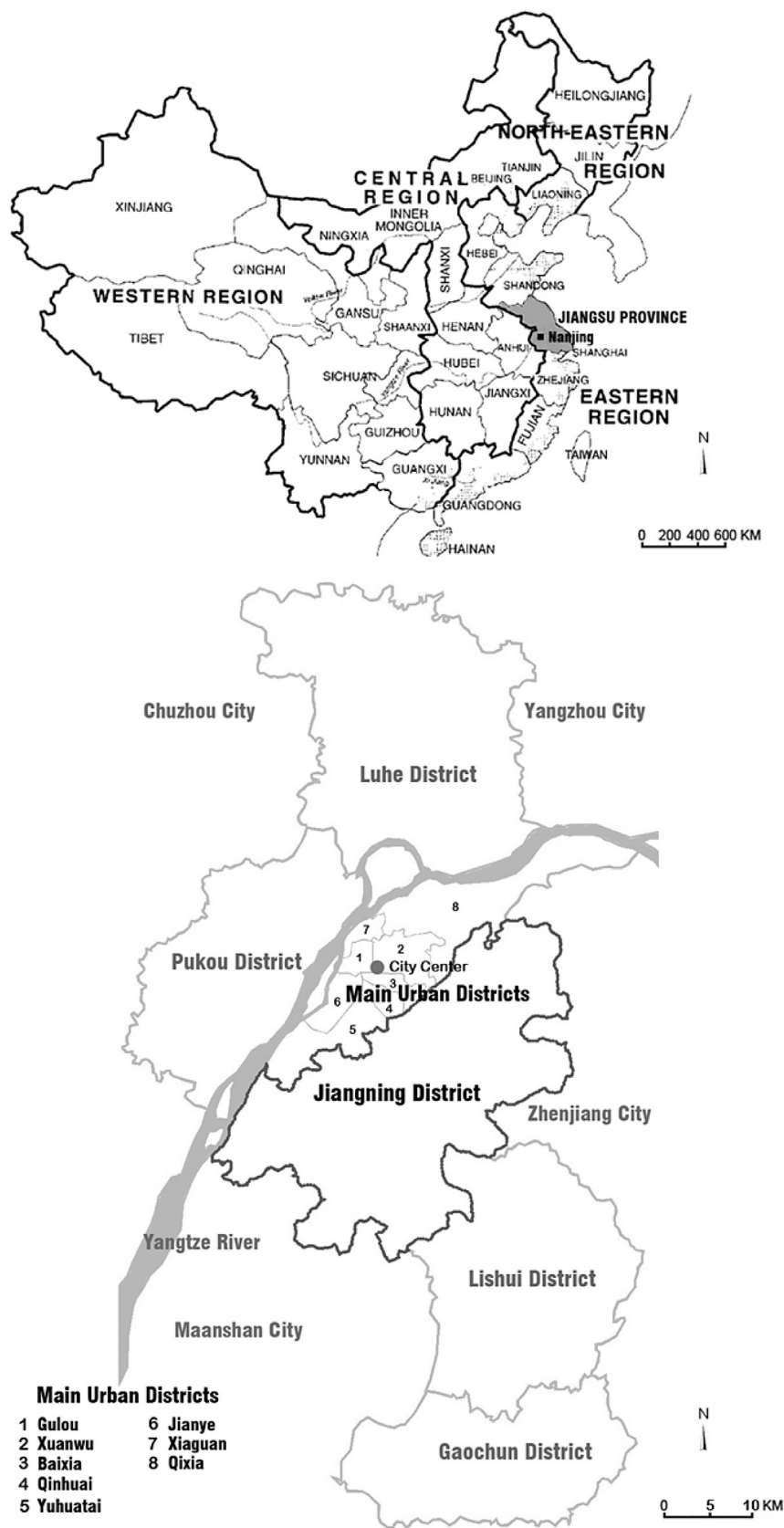


Fig. 1. Nanjing in China (top) and Jiangning district in Nanjing (bottom).

Questionnaires were administered to a random sample of households in the nine villages to examine the working and living conditions of the local residents and their intentions regarding land conversion and urban settlement. A sample of 404 valid responses was collected. Table 1 provides descriptive statistics of the sample. To make the question simpler and more direct, the expression of 'two replacements' is used in the questionnaire.

According to general cohort divisions (Yue et al., 2010), the respondents fall into three groups: the new generation of villagers who were born after 1980 (aged 16–34), villagers aged 35–55 (female)/35–60 (male) and the old generation, who were 55 (female)/60 (male) or older. As shown in Table 1, the respondents tend to be middle-aged, low-educated males. Only 11.1% of respondents are fully employed in agriculture, whereas 28.5% are retired farmers; 16.6% are part-time farmers and 43.8% of the respondents work in non-agricultural sectors. For each household, the average size of farmland and housing space was 4.0 *mu* (2666.7 m<sup>2</sup>) and 227.6 m<sup>2</sup>, respectively.

Regarding rural landholdings, 80.2% of respondents are willing to lease their farmland. However, 64.1% of respondents prefer to relinquish farmland for urban social insurance, 55.7% of respondents are willing to replace their rural housing with apartment units in a centralized settlement site. Most respondents expect to face difficulties after losing rural land; however, most respondents also expect a better living environment, a more convenient life and better transportation in urban resettlement sites. Nevertheless, only 14.6% of respondents expect an improvement in employment opportunities, and less than half of respondents expect a better lifestyle. The majority of correspondents expect inconveniences in making social contacts with relatives and friends. Concerning the settlement location, 41.8% of respondents are inclined to live in rural areas, and 42.3% prefer to live in a local town, whereas others

want to live in the urban area of Nanjing or other cities.

#### 4. Land conversion and urban settlement intentions

To explore the determinants of villagers' decisions regarding land conversion and urban settlement intention, this research examines the three relevant decisions separately. The three decisions are 1) the willingness of rural citizens to surrender farmland for urban social insurance, 2) the willingness of rural citizens to surrender rural housing land for urban apartments and 3) the intention to settle permanently in urban areas. Although the current compensation scheme does not allow rural citizens to make each of the decisions separately, our analysis aims to explicitly discern the factors associated with each of the three distinct decisions.

##### 4.1. Intention of converting farmland

In rural China, farmland has played an important role for farmers as a means of livelihood and social security. However, according to the survey, few rural residents in Jiangning District are engaged in farming. This is especially the case for the younger generation. In practice, most local villagers lease their land to migrant farmers from relatively poor regions. Of those who lease their farmland (324 respondents), 83.0% claimed that they '[do] not want to engage in agriculture'. This is partly due to low agricultural income and the availability of more profitable non-agricultural employment. Meanwhile, most elderly villagers we interviewed claimed that they could not endure the toilsome farm work and would rather lease their farmland for rental income. The rural endowment insurance introduced in 2009 also relieved villagers' dependence on farmland. In Jiangning District, the annual farmland rental fees varied from RMB 400 to RMB 600 per *mu* (1

**Table 1**  
Profile of the sample (N = 404).

Variables	Categories	Percent
<b>Socio-economic variables</b>		
Age	16–34	15.8
	35–55 (female)/35–60 (male)	53.5
	>55 (female)/60 (male)	30.7
Gender	Male	55.7
	Female	44.3
Education level	Primary school and below	36.4
	Junior high school	45.5
	Senior high school and above	18.1
Employment	Farmer	11.1
	Full-time farmer	11.1
	Retired farmer	28.5
	Part-time farmer	16.6
	Non-agricultural worker	43.8
<b>Subjective variables</b>		
Willing to lease farmland	Yes	80.2
	No	19.8
Willing to surrender farmland for urban social insurance	Yes	64.1
	No	35.9
Willing to surrender housing plot for apartment in a centralized settlement site	Yes	55.7
	No	44.3
Expecting difficulties after losing rural land	Yes	70.0
	No	30.0
Life expectations after moving into an apartment in an urban centralized settlement site	Better employment opportunity	14.6
	Better living environment	67.1
	More convenient life	71.3
	Better contact with relatives and friends	22.0
	Better lifestyle	43.1
	Better transportation	70.1
Expected settlement location	Rural areas	41.8
	Urban areas	42.3
	Local town	9.7
	City of Jiangning	3.2
	Main city of Nanjing	3.2
	Other cities	3.0



**Table 2**  
Logistic regression of surrendering farmland.

Independent variable	B	Exp (B)	Sig.
<b>Socioeconomic factors</b>			
Male (female = ref.)	−0.344	0.709	0.147
Age			
16–34 (=ref.)			
35–55 (female)/35–60 (male)	−0.683*	0.505	0.045
>55 (female)/>60 (male)	0.250	1.284	0.617
Education level			
Primary school and below (=ref.)			
Junior high school	0.293	1.341	0.347
Senior high school and above	−0.321	0.725	0.426
Employment			
Farmer	−0.092	0.769	0.912
Part-time farmer	−0.454*	0.635	0.046
Non-agricultural worker (=ref.)			
Farmland			
<4.0 mu (=ref.)			
≥4.0 mu	−0.188	0.828	0.412
<b>Subjective factors</b>			
Plan and willingness			
Willing to lease farmland (unwilling = ref.)	−1.260***	0.284	0.000
Expecting no difficulties after losing rural land (difficulties = ref.)	0.381	1.464	0.138
Settlement intention			
Rural area (=ref.)			
Local town	0.453	1.573	0.066
City of Jiangning	0.642	1.900	0.130
Main city of Nanjing	1.598	4.943	0.057
Other cities	−1.139	0.320	0.217
Constant	2.354***	10.532	0.000
Chi-square	55.010***		
−2 Log likelihood	472.444		
Percent correct	69.3		
N	404		

Note: \* $p < 0.05$ ; \*\*\* $p < 0.001$ .

mu = 666.67 m<sup>2</sup>), and the endowment for retired farmers was RMB 275 per month in 2014. Some elderly villagers indicated that the endowment together with farmland rents could meet the basic demands of everyday life. Although the employment function of farmland is less pronounced, farmland is still an important income source, especially for elderly farmers.

Although most farmers have been willing to lease their farmland, a large proportion of them do not intend to trade it for urban social insurance. They have many reasons for resisting the offer, from a lack of security without farmland to low compensation levels and the loss of rural rights associated with village land. Socio-demographic attributes are likely to influence villagers' decisions to surrender farmland. The quantity of farmland holdings is also likely to make a difference. In addition, villagers' subjective preferences in lifestyle choices and settlement locations should also influence the decision of surrendering or retaining farmland. These variables are explored in the logistic regression model reported in Table 2.

Gender and educational attainment have no obvious effect on respondents' decisions regarding farmland conversion. Compared with the younger generation, middle-aged villagers are significantly less likely to give up their farmland. Villagers in this age group generally shoulder more household responsibilities and are more inclined to retain farmland for income and the sense of security. In contrast, although elderly farmers generally have a stronger sense of attachment to their countryside home, their resistance to land acquisition is relatively weak. Some farmers indicated that by surrendering farmland, they could be compensated with an urban insurance scheme that offers a higher pension than the farmland rents and the rural pension combined.<sup>2</sup>

Part-time farmers are less likely to surrender their farmland than villagers who take full-time non-agricultural jobs, which indicates that villagers less dependent on agriculture are more likely to surrender their farmland. However, the intentions of full-time farmers are not significantly different from non-farmers, which might be explained by the low income generated by agriculture production alone. Consequently, the resistance of full-time farmers to trading farmland for urban social insurance is not as strong as that of part-time farmers who hold both agricultural and off-farm non-agricultural jobs to diversify their income.

The amount of farmland holdings has no significant effect on villagers' decisions, indicating that urban social insurance does not seem to be an adequate incentive for either the small or large farmland holders to surrender farmland holdings. In Nanjing, the government budget for rural land compensation typically includes social insurance as well as a subsidy for land acquisition and funds to help with resettlement and unemployment. In reality, the number of persons compensated equals the amount of collective land acquired divided by the per capita collective land in the acquisition area, which is usually less than the actual number of affected villagers. Urban social insurance is approximately 750 RMB/month, which is higher than rural social insurance but is significantly lower than the minimum wage of 1480 RMB per month from urban employment.

Villagers who are willing to lease their farmland generally resist farmland requisition. Although the rental income from land leasing is limited, many villagers still prefer to retain their farmland as a family strategy to diversify income. Expected difficulties do not hinder the villagers from relinquishing farmland because agriculture is not considered the primary means of livelihood. For the same reason, villagers who intend to settle in the city value farmland in a way that is not significantly different from those who

<sup>2</sup> According to interviews with villagers in 'Sunjiabian' village and 'Xinxing' village in August 2014.

intend to settle in rural areas.

#### 4.2. Intention of relinquishing housing land

Compared to the respondents' attitudes towards relinquishing farmland, fewer respondents are willing to relinquish rural housing plots for urban apartments. The regression analysis (Table 3) reveals that a different set of factors are associated with the decision of housing land conversion.

Gender, age and employment status have no significant effect on the intention to surrender housing land. This is consistent with our interviews with villagers with different demographic characteristics. In general, both young and elderly villagers tend to retain their housing land, although the reasons vary. Most young villagers are unsatisfied with the current compensation scheme and expect better compensation in the future, whereas elderly villagers demonstrate stronger attachment to the rural home and lifestyle, leading to their resistance to land requisition and home relocation. Education makes a difference; villagers with higher education levels are significantly more likely to retain rural housing land. With higher professional qualifications, educated villagers can settle in urban areas more easily and are less dependent on rural housing. However, this research survey was conducted in rural villages, and the sample does not include highly educated villagers who have migrated to the city. Those who remain in their rural home are likely to retain rural housing for reasons related to employment or lifestyle preferences in the villages.

The size of rural housing does not have a significant influence on

the intention to surrender rural land. This can be explained by the fact that the value of rural housing is not properly reflected in the compensation scheme. A better living environment and more convenience are major factors that encourage resettlement in urban areas. According to our interviews, respondents tend to be attracted to the better sanitary and security conditions of urban apartments. Moreover, we found that with less dependence on farming, many rural residents already live a semi-urban lifestyle. These residents do not show emotional resistance to resettlement in local towns or the city and are willing to live in urban apartments with better facilities and a better environment.

In the survey, most respondents stated that the current standard of monetary compensation is much lower than what they expected. Although urban property prices have soared in recent years, compensation rates for rural land have not improved proportionally. Purchasing an urban home with rural land monetary compensation has become increasingly difficult. Buying an apartment at a subsidized price is the only feasible option for most villagers. However, the allocation of resettlement housing depends on the zoning of the original rural housing plot and the financial capacity of the displaced rural household. Villagers with low financial capacity have to demand a smaller apartment due to budget constraints, whereas richer villagers can acquire larger and more numerous apartment units in urban areas.

Respondents who expect no difficulties after relinquishing rural land are more inclined to surrender rural housing land for urban apartments. However, according to the interviews, most villagers still tend to retain their rural housing plots if no housing or

**Table 3**  
Logistic regression of surrendering rural housing land.

Independent variable	B	Exp (B)	Sig.
<b>Socio-economic factor</b>			
Male (female = ref.)	−0.332	0.717	0.164
Age			
16–34 (=ref.)			
35–55 (female)/35–60 (male)	−0.024	0.976	0.950
>55 (female)/>60 (male)	0.399	1.491	0.421
Education Level			
Primary school and below (=ref.)			
Junior high school	−0.372	0.689	0.233
Senior high school and above	−1.107**	0.331	0.008
Employment			
Farmer	0.026	1.026	0.936
Part-time farmer	0.395	1.484	0.251
Non-agricultural worker (=ref.)			
House size			
<227.6 m <sup>2</sup> (=ref.)			
≥227.6 m <sup>2</sup>	0.427	1.533	0.075
<b>Subjective factor</b>			
Expecting no difficulties after losing rural land (difficulties = ref.)	0.868***	2.383	0.001
Expected advantages in urban areas			
Better employment opportunity (not = ref.)	0.066	1.068	0.850
Better living environment (not = ref.)	0.779**	2.180	0.008
More convenient life (not = ref.)	0.662*	1.939	0.043
Better contact with relatives and friends (not = ref.)	−0.458	0.632	0.136
Better lifestyle (not = ref.)	0.412	1.510	0.142
Better transport conditions (not = ref.)	−0.630	0.532	0.062
Settlement intention			
Rural area (=ref.)			
Local town	1.139***	3.124	0.000
City of Jiangning	1.067**	2.907	0.014
Main city of Nanjing	0.300	1.349	0.652
Other cities	1.161	3.192	0.231
Constant	−1.085**	0.338	0.005
Chi-square	81.919***		
−2 Log likelihood	472.895		
Percent correct	67.8		
N	404		

Note: \*p < 0.05; \*\*p < 0.01, \*\*\*p < 0.001.

insurance is provided. Other forms of compensation, such as ‘rental housing provisions’ and ‘shares of collective enterprises’, also contribute to the positive prospects for affected villagers, especially the younger generation.

In contrast with the villagers who prefer to live in the countryside, those who are willing to settle in local towns and the city of Jiangning are more inclined to convert their rural housing plots into apartments. Trading rural housing plots for apartments at subsidized rates meets the demands of such villagers. This also explains why the effect is not significant for villagers who are willing to live in Nanjing's main urban areas. The housing prices and living costs in the main city are considerably higher, and the compensation is inadequate for such a pursuit. The preference of settlement location influences the housing land requisition decision through an evaluation of whether the compensation for housing land could substantially contribute to settling in the desired urban location.

In addition, the steady increase in compensation standards in recent years encourages rural residents in Jiangning to adopt a wait-and-see attitude towards land requisition. Moreover, land requisition usually proceeds through an administrative measure in the absence of transparent and democratic means (He et al., 2009). Rural cadres, which are supposed to protect the interests of rural collectives, are often involved in corruption and jeopardize the interests of their fellow villagers (Cai, 2003; Ho, 2001). Consequently, deep distrust of village leaders and land acquisition arrangements often stir up strong resistance to compensation offers. Many of our respondents complained that the pro-farmer policies of the central government were violated at the village level and their interests were not protected by such policies without effective enforcement measures.

#### 4.3. Intentions of urban settlement

In the survey, 41.8% of respondents stated they preferred to live in the rural countryside permanently, whereas 58.2% of the respondents said they intended to settle in urban areas. Given the survey was conducted in rural villages where huge numbers of migrated villagers were not present during the survey collection, the proportion of villagers who intend to settle in the city would have been even higher if we had include those who were already living and working in urban areas. For those who have remained in rural areas and are dependent on rural land, their settlement intention will significantly determine their lives and the development trajectory of the villages. To explore the settlement intentions of such villagers, the preference for settlement location is regressed with socio-demographic variables and subjective factors (Table 4).

The results indicate that younger villagers are more inclined to migrate and settle in urban areas. Compared to their elderly counterparts, younger villagers have less attachment to the countryside and a greater desire for the urban lifestyle. However, educational attainment does not have a significant effect on villagers' settlement intentions. This can be explained by the fact that most of the villagers with higher educational attainment have already migrated to the city and were not sampled in the survey. Additionally, compared to villagers who work in non-agricultural sectors, full-time farmers are significantly less likely to settle in urban areas, whereas part-time farmers are not significantly different from non-agricultural villagers. This indicates that villagers who retain farming activities show stronger resistance to urban lives. The sizes of farmland and housing have no obvious effect on villagers' settlement decisions, which indicates that the current compensation schemes provide little incentives for rural villagers to give up their rural farmland and housing land.

Regarding the subjective factors, urban settlement intentions are strongly associated with a willingness to relinquish rural

housing plots. Expected difficulties after losing rural land have no significant impact on urban settlement intentions. Nevertheless, the expected advantages of living in urban areas highly motivate urban settlement. For example, villagers who expect more convenient living conditions in the city have stronger intentions to settle in the city. Moreover, villagers who expect better contact with relatives and friends should have a better social network in urban areas and thus are more willing to settle there. However, factors such as employment opportunities, the living environment, the urban lifestyle and transport conditions are not significant. This may be explained by the fact that a large proportion of respondents intend to live in local towns rather than the city of Nanjing. In local towns, good-quality housing and certain urban services are provided, but the environment, employment and lifestyle conditions are not significantly different from their rural homes. According to the interviews, respondents who choose to settle in local towns are attracted by the more convenient facilities and services in urban areas and the proximity to relatives and friends, whereas villagers who prefer to live in large cities are particularly attracted to more employment opportunities and better-quality education for the children.

It is commonly acknowledged that the high cost of living and a lack of access to public welfare without the urban *hukou* greatly hinder rural migrants' settlement in the city (e.g., Sun & Fan, 2011; Zhu & Chen, 2010). Nevertheless, large cities are not the migration destination for everyone. In our survey, a large proportion of respondents intended to settle in local towns rather than large cities. This is partly due to our sampling method, which excluded those rural migrants who had already left the villages. The remaining villagers are definitely more inclined to stay or at least migrate for only a shorter distance to nearby towns. Moreover, for the rural population in Jiangning District, the gap between local towns and the main city in terms of income levels and quality of life has been narrowed. Settling in a local town has become favourable for many rural residents. Oftentimes the compensated apartments are in a local town where residents can enjoy the convenience of urban life at a living cost that is considerably lower than in the main city of Nanjing. The residents can also benefit from existing social networks and a local society that is less discriminatory against rural citizens.

#### 5. Conclusions

According to the ‘value to the owner’ principle, compensation for land expropriation should be equivalent to the market value of expropriated land as well as other losses of the claimant (Denyer-Green, 1994). In Jiangning and other places, although compensation standards regarding rural land have substantially increased in the last decade, compensation schemes are not determined by the market mechanism to reflect the losses of the affected villagers. Consequently, a large proportion of the rural population is still reluctant to surrender their rural landholdings. According to the collective ownership of rural land and the government-led land conversion system, the standard of compensation is determined by the local government based on the location, type and original function of the rural land rather than by the actual market value of the land. The policymaking is neither transparent nor inclusive enough to allow public participation, which leaves a space for rent seeking and corruption. Local village leaders face little risk from misconduct that benefits themselves at the expense of the interest of fellow villagers, especially in places where collective enterprises are immature and lineage and kinship organizations are weak (He et al., 2009). Policies considered unjust or unfair by local villagers can lead to mounting tension between rural villagers and the local government, even causing social conflicts (He & Xue, 2014;



**Table 4**

Logistic regression of settling in urban areas.

Independent variable	B	Exp (B)	Sig.
<b>Socio-economic factor</b>			
Male (female = ref.)	0.287	1.332	0.213
Age			
16–34 (=ref.)			
35–55 (female)/35–60 (male)	–0.955*	0.385	0.023
>55 (female)/>60 (male)	–1.424**	0.241	0.004
Education Level			
Primary school and below (=ref.)			
Junior high school	–0.054	0.948	0.857
Senior high school and above	0.302	1.353	0.449
Employment			
Farmer	–0.485*	0.616	0.016
Part-time farmer	–0.326	0.722	0.327
Non-agricultural worker (=ref.)			
Farmland			
<4.0 mu (=ref.)			
≥4.0 mu	0.034	1.035	0.877
House size			
<227.6 m <sup>2</sup> (=ref.)			
≥227.6 m <sup>2</sup>	0.388	1.474	0.091
<b>Subjective factor</b>			
Expecting no difficulties after losing rural land (difficulties = ref.)	0.052	1.053	0.833
Expected advantages in urban areas			
Better employment opportunity (not = ref.)	–0.758	0.469	0.062
Better living environment (not = ref.)	0.068	1.070	0.813
More convenient life (not = ref.)	1.067**	2.908	0.002
Better contact with relatives and friends (not = ref.)	0.580*	1.786	0.045
Better lifestyle (not = ref.)	–0.306	0.736	0.267
Better transport conditions (not = ref.)	–0.242	0.785	0.442
Constant	0.654**	1.922	0.005
Chi-square	55.618***		
–2 Log likelihood	496.246		
Percent correct	68.6		
N	404		

Note: \*p &lt; 0.05; \*\*p &lt; 0.01, \*\*\*p &lt; 0.001.

Sargeson, 2013).

Moreover, villagers in more industrialized and affluent regions are less dependent on agriculture than those in less-developed regions. Although higher land values and more abundant financial resources enable higher compensation for rural land requisition, compensation schemes are usually inflexible. Such schemes typically comprise urban social insurance for farmland, urban apartments or cash for housing land, and the conversion to the urban *hukou*. This compensation is only provided in specific urban areas rather than the actual or desired urban destination of affected villagers. Villagers do not have a channel to participate in policy making to help refine the compensation schemes, nor do they have the freedom to make alternative proposals. Consequently, even though some villagers intend to migrate and resettle in the city, they may have to turn down the compensation offer because the compensation benefits cannot be enjoyed in their actual host city. Such inflexible policies considerably discourage many rural citizens from relinquishing their land holdings and pursuing urban settlement. The gradual reform of the *hukou* system is impeded by such compensation policies that do not acknowledge the increasing and flexible demands from rural citizens.

Under the current system, almost all compensation regarding land requisition comes from land sales. Dramatically different land values from place to place lead to significantly varied compensation standards, especially between suburban and more peripheral villages and between villages in more and less affluent regions. If the current rural-to-urban transition continues under the system, social inequalities are likely to deepen between rural migrants from different rural origins. Rural migrants from more developed and affluent areas have a much greater opportunity to thrive after relinquishing rural landholdings, whereas their counterparts from

less developed and disadvantaged regions are likely to be severely under-compensated. For the latter group, the deprivation of their rural homes and livelihood is likely to contribute to a growing urban underclass consisting of poor, landless former farmers. Such problems are exacerbated by the long-standing imbalance of regional development and should be mitigated with redistribution measures at higher geographical levels.

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