

# The Impact of Land Property Right on China's Rural-urban Migration

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**Abstract.** In this paper, we study the impact of land property rights on migration in rural areas. We use whether property rights are well protected as a judgment to verify the impact between the two. We used data from 2013 and 2014 for our analysis. From the probit chart, we can conclude that when land property rights are well protected, people will choose to emigrate. We used the rental ratio to confirm that land rights were well protected. When property rights are not well protected people will stay where they are. We use government acquisition of land to analyze that land rights are not well protected.

**Keywords:** China; Migration; Land property right; Land appropriation; Rent.

## 1. Introduction

### 1.1 China's land system

Since 1950, China's land system has gradually changed from feudalism to private ownership. This change allowed people to own land freely. In the beginning, the distribution of land was decided by the leaders of a group of people. Over time, people began to privately own and lease land. People themselves can decide how to use the land. In some rural areas, people are free to rent and distribute land. In nowadays, land has become a necessity in people's life. Accordingly, the land system became more complete over time.

#### 1.1.1 China land system: urban and rural

In modern times, rural land distribution and urban land distribution has been significantly different. For rural places, most of land owned by the people from local communities and villages. These lands are collectively operated and managed. Again, these lands are not owned by individuals but by groups of people. These villagers' assets are usually built on land, such as houses and crops. In China, building infrastructure in rural areas will be subsidized, including energy, transportation, water conservancy and so on. In urban, people don't have the right to own land. Most of the land is owned by the state. People who live in cities only have the right for their assets, like buildings. In addition, the life of residential land is generally only 70 years, and this period can be extended by renewal. These different systems indirectly lead to the tendency of some people to emigrate (Chen Qian, Liqun Shao, Haibin Chen, 2022).

#### 1.1.2 HRS land property right characteristics

Household Responsibility System (HRS) represents the division of land by family units. Essentially, the land still belongs to the state. These rural families are free to grow crops but do not have the right to transfer their land. In fact, people in rural place still privately exchanged and redistributed land. In general, migrants do not return to the countryside in a short time. In this way, they need to consider whether those who remain in the countryside are able to survive on their own. Due to HRS, fewer people in a household means less land distribution is likely. As a result, people are restricted from immigrating easily.

## 1.2 Migration

In this thesis, "migration" is people moving from rural areas to cities. In modern times, when some people can not stand the local economy, they start to migration to the big city in order to get a job

(Katrina Mullan, Pauline Grosjean, Andreas Kontoleon, 2011). In China's biggest urban-migrations, there are fourteen million people migrated to the urban place. In fact, there is a barrier in their migration which is the hukou system in China. In China, residents with a local hukou can enjoy variety benefits. For those who don't, the daily costs will be huge. In this way, people need to consider more before immigrating (Jing Zhou, Liyue Lin, Shuangshuang Tang, Shuhai Zhang, 2022).

### **1.2.1 The profits of migration**

These people have benefited to varying degrees through immigration. Some go to big cities to seek work and earn money. Some people go to fulfill their dreams or contribute to society. Moving to a new city represents a different living environment and new opportunities (Sudan Zhao, Yongmu Jiang, 2022). For immigrant cities, these new people can help stimulate the local economy to help economic growth (Di Bu, Yin Liao, 2022).

## **2. Literature review**

### **2.1 Property right**

Property right system is the basic system of land distribution in China. One way the state manages land by law is through the system of property rights. Strictly speaking, property rights refer to the ownership of legal property. This right has access, profit, and ownership. The owned land is exclusive, but it does not affect the enforcement of the law. In rural areas of China, people allocate land by family. They have the right to use the land, not the right to own it. It also prevents people from planting or illegal activities on the land. In contrast, in the city, people have more right to live in the house. Over time, it was understood that people owned property rights in the land. There are many constraints in property rights, and people can only choose between the constraints.

### **2.2 The mechanism of land property right impacting migration**

Attitudes to property rights differ in different regions. This is because in China, rural and urban property rights are defined differently. The hukou system has been cited as the main reason for restricting labor mobility. The complex division of hukou also prevents people from migrating at will. These differences make people in different areas have different rights and need to consider different conditions. These conditions indirectly restrict or stimulate migration from rural areas to cities. According to the different laws of the country, people will have different attitudes towards immigrants.

#### **2.2.1 When the land property is not well protected (appropriation)**

People often do not migrate when their land and property are not protected. There are two reasons for this. The first is that people don't have a fixed income when their land is vulnerable to government expropriation, so they stay where they are and don't do anything risky. The second aspect is rural people's views on land leasing. When land does not produce steady profits, people worry that revenues are not enough to cover costs. They will worry that the land will not support their livelihood and will not choose to migrate. (Mingda Cheng, Julan Du, Chunhui Ye, Qi Zhang, 2022)

#### **2.2.2 When the land property is well protected (rent the land out)**

If property rights are protected, it means that people can allocate and lease land at will. People are more likely to emigrate when they have the right to a fixed income provided collectively in these ways. In China, the law serves as the main protection of land property. There are two ways that owners can use the law to defend their rights. The first is to ask the local government to investigate. The second is to ask for the land to be restored. Both methods can protect people's land property and increase the probability of migration in a certain sense. (Qiu Tongwei, Biliang Luo, S.T. Boris Choy, etc, 2020)

### 3. Empirical Analysis

#### 3.1 Data

The data we use is the China Health and Retirement Longitudinal Study (CHARLS) which aims to collect a high-quality sample of nationally representative Chinese residents aged 45 and over to meet the needs of scientific research on older adults. The nationwide CHARLS baseline wave, which began in 2011, includes approximately 10,000 households and 17,500 people in 150 counties/districts and 450 villages/neighborhoods. Individuals will be followed up every two years. All data will be made public one year after the end of data collection.

**Table 1. Summary Statistics**

Variable	Obs	Mean	Std. dev.	Min	Max
age	20,623	58.83354	10.91945	19	146
migration	7,165	0.5773901	0.4940089	0	1
health	9,286	3.024122	0.9782006	1	5
gender	20,653	0.4747494	0.4993741	0	1
edu	20,484	1.575425	0.837429	1	5
party	18,556	0.1079974	0.3103855	0	1
han	18,519	0.923268	0.2661729	0	1
hukou	18,551	1.247318	0.4598901	1	4
appropriat~n	10,826	0.1345834	0.3412938	0	1
prov	22,983	13.3289	7.170836	1	28
income	10,871	1131.542	3306.537	0.02	200000
logincome	10,871	6.168619	1.302449	-3.912023	12.20607
rent_per	6,402	0.0969766	0.2749459	0	1
weight	18,264	31029.01	39903.73	7080.477	1029980
private_busi	10,141	1.907603	0.2896001	1	2
marital	18,585	1.579069	1.349695	1	7
parents	10,712	1.861464	0.345478	1	2

The data is very large, so we also used Stata 17 to organize the data. Stata 17 was also used to remove the outliers.

#### 3.2 Identification strategy

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \dots + \beta_n X_n + \mu \quad (1)$$

This formula can help us judge the impact of land property rights on immigration. The Y variable in the formula represents immigration, and the red X1 represents whether the land property rights are protected. Y's initial question is whether people have been away from their place of residence for more than six months. This represents whether or not population movements have occurred. X1 is divided into two types: market mechanism and government mechanism, which respectively represent the situation of land being protected and unprotected. In the market mechanism, we will use the land rent ratio to determine that people's land property rights are protected. We also use whether the land is expropriated as a government mechanism, that is, the land is not well protected. The remaining X2 to X5 represent general factors such as gender, age, income, region and education. The last Xn represents special variables, which include marriage and health.

### 3.3 Market mechanism of land property right change on migration

When people are in the market mechanism, it means that people's land is well protected. This protection can be the protection of the right of use, the right of lease and the right of transfer. We believe these land titles are well protected when people are free to use those powers. The use of these rights will bring people relatively stable income. In this case, people will not worry about the elderly and children at home, so they will be more inclined to go to big cities to improve themselves.

#### 3.3.1 Basic regression

As shown in Table 2 regression1, these data are categorical data, so we use the probit model to analyze them. This helps us to judge the impact and changes of land property rights on resettlement under different circumstances. First of all, we limit the age to under 80, because the immigration probability of people over 80 is very low. People younger than 80 are more likely to have population movements. Second, we restrict the hukou type to agricultural hukou. This helps us to study migration in rural areas more accurately. Additionally, we log the income so that we can analyze it more easily.

The key variable X1 is the rent percentage which calculated by dividing the rental land by the total land. In Table 2, X1 is positive and significant, which means that people are more likely to emigrate when they can freely rent out land. As we know, people look for more opportunities when they have a stable income. The stable rental income allows them to seek more sources of income in big cities. This will narrow the differences in land rents across regions.

#### 3.3.2 Robustness checks

In Table 2, we performed a Robustness check by adding variables. In the first time we added the two variables party and han. Among them, party as a significant variable confirmed the accuracy of the research results for us. When people in rural areas are party members, they do not choose to immigrate because party members are generally village cadres locally. These people are not willing to give up their local power and emigrate to the cities. The result of the variable han is not significant here. In the third through fourth we added a survey about whether people own private businesses. We believe that having or owning a private business locally increases their likelihood of immigrating. As we know, it will be easier to get a job in a big city with someone who has work experience, so this will make people more inclined to go to the city to improve their income and standard of living.

**Table 2.** Market Mechanism

	(1)	(2)	(3)	(4)	(5)
migration					
rent_per	0.376*	0.623**	0.870***	0.890***	0.865***
	(1.67)	(2.15)	(2.97)	(3.04)	(2.94)
logincome	0.088*	0.136**	0.139**	0.143**	0.135**
	(1.95)	(2.55)	(2.38)	(2.43)	(2.36)
prov	0.00				
	(-0.485)				
age	-0.038***				
	(-4.794)				
edu	-0.173*				
	(-1.723)				
gender	1.124***	1.508***	1.372***	1.378***	1.370***
	(8.46)	(9.05)	(7.71)	(7.77)	(7.70)
health	0.03	0.03	0.01	0.02	0.01

	(0.40)	(0.37)	(0.11)	(0.18)	(0.07)
party		-0.981***	-0.841***	-0.847***	-0.848***
		(-3.825)	(-3.281)	(-3.298)	(-3.294)
han		(0.30)	(0.22)	(0.21)	(0.23)
		(-1.020)	(-0.720)	(-0.689)	(-0.750)
private_~i				0.21	
				(0.78)	
parents					0.10
					(0.41)
_cons	1.241*	(1.12)	(0.84)	(1.32)	(1.00)
	(1.92)	(-1.223)	(-0.883)	(-1.152)	(-0.962)
N	489.00	478.00	468.00	468.00	468.00

t statistics in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

### 3.4 Government mechanism of land property right change on migration

When people are in government institutions, it means that people's land can be freely expropriated. The land cannot generate any profit in the case of expropriation. Random expropriation also increases fears for the future. This leaves people without a steady source of income to support their families and reduces the likelihood that people will emigrate.

#### 3.4.1 Basic regression

As shown in Table 3, we still use the probit model for data analysis. The conditions for selecting variables are still that the age is less than 80, and the hukou type is rural hukou. We used the same variable, the only difference being that we replaced the rental ratio with the government's expropriation of the land. The question in the original questionnaire was whether the land had ever been expropriated. This will help us judge whether the government's land acquisition has an impact on people's migration.

In Table 3, we can see that X1 exhibits negative significance. This means that when the government can take land at will, people will be more inclined to stay where they are rather than go to big cities for opportunities. In this case, people cannot have a stable source of income. This causes them to worry about food and clothing at home, so they usually choose to stay in rural areas.

#### 3.4.2 Robustness checks

In Table 3, we use the stability test to test whether the results are accurate by adding variables. The first additions are party and han. Among them, party showed negative significance. This is very reasonable, village cadres will not increase their income by going to big cities, so they will have less chance to emigrate. In addition, han is not significant. The inclusion of private firms in the third column also appears to be insignificant. The last parent we added was also not significant in Table 3.

**Table 3. Government Mechanism**

	(1)	(2)	(3)	(4)	(5)
migration					
appropri~n	-0.19 (-1.151)	-0.301* (-1.777)	-0.308* (-1.773)	-0.403* (-1.748)	-0.414* (-1.896)
logincome	0.118** (2.56)	0.146*** (3.06)	0.159*** (3.16)	0.204*** (3.18)	0.186*** (2.99)
gender	1.292*** (9.76)	1.477*** (10.01)	1.453*** (8.95)	1.439*** (7.13)	1.342*** (6.92)
health	0.10 (1.61)	0.07 (1.04)	0.05 (0.68)	0.14 (1.48)	0.10 (1.14)
party		-1.091*** (-4.718)	-1.086*** (-4.114)	-1.114*** (-3.759)	-1.078*** (-3.670)
han		0.13 (0.53)	0.17 (0.66)	0.27 (0.81)	0.16 (0.48)
private_~i				0.37 (1.27)	
parents					0.33 (1.44)
_cons	-1.790*** (-2.592)	-2.052** (-2.574)	-2.248*** (-2.861)	-2.967** (-2.460)	-2.927*** (-2.965)
N	618.00	616.00	601.00	405.00	416.00

t statistics in parentheses  
\* p<0.1, \*\* p<0.05, \*\*\* p<0.01

## 4. Analysis

### 4.1 Market Channel

Through the probit model in Table 2, people are more inclined to emigrate when they can guarantee land security. Among them, X1 is significant in the original expression and remains significant in the stability test. This explains that people have a greater chance of migrating when their tenancy rights are free. By comparing raw and logarithmic incomes, we can see that people are more inclined to immigrate if they have income. We think this phenomenon is because when people have a stable income they have enough financial resources to support household consumption. This gives them the ability to emigrate to find opportunities elsewhere. In terms of age, we believe that the older you are, the less likely you are to carry out immigration activities. The physical strength of the elderly is

usually weaker than that of the young, and the young will have greater job opportunities in big cities. In terms of gender, we can analyze from the data that men have a greater tendency to immigrate. Typically, men can do more physical work. In this case, they can have more job opportunities. Finally, we can see that people are more inclined to emigrate when the land is well protected.

#### **4.2 Expropriation (government) Channel**

From Table 3, we can know that government expropriation will cause people to reduce the probability of emigration. After passing a stability test, the result was certified. The coefficients of land acquisition decreased sequentially after adding variables and showed significant. The arbitrary expropriation of land by the government is a violation of people's rights. This includes people's rights to use the land, lease rights, and transfer rights. When the government expropriates land, people feel their privacy is violated and disturbed. They do not go to big cities to seek opportunities when they have no income, because the distribution of housing in rural areas is related to the number of people. If the number decreases, it could result in them losing their shelter. This prevents people from going to big cities to seek job opportunities or other income. At the same time, when people's land is expropriated, their source of regular income becomes limited. In rural areas, people usually have to take care of the living expenses of the family. Their savings won't support them going to big cities to find opportunities.

### **5. Conclusion**

#### **5.1 Things we have done in this paper**

In this article, we summarize the impact of land tenure on migration in rural areas. We first select the influencing factors by formula. We choose resettlement as Y and rent ratio or land acquisition as key variable X1. Other control variables were age, gender, income, region, and education level. After the variable selection is complete, we make a probit model based on the data to verify our ideas. To verify the accuracy of the experiment, we used more variables for stability tests and added marital status and health status. Then, we analyze the resulting data. Through analysis, we know that people choose to emigrate when they have control over land rents. Conversely, when land is expropriated by the government, people in rural areas will choose to stay where they are and not go to big cities to find work.

#### **5.2 Conclusion**

The conclusions of this study can be divided into two parts. The first is that under the market mechanism, people will obtain stable income by obtaining the right to use, lease, and transfer the land. In this case, people will choose to move to big cities to increase their income. For example, people only get one income from using the land themselves, but if they rent out the land and go to the big cities themselves they get double the income. The total amount of these two incomes is generally greater than the income from their own farming. Free tenure, lease and transfer rights are very beneficial to people in rural areas.

The second point is when people are in government mechanism. Under this mechanism, the government can expropriate people's land at will. People in this situation do not choose to go to the big cities to increase their income but stay where they are to keep their homes in rural areas. People respond differently to these two different mechanisms. The two mechanisms also affect people's migration differently.

#### **5.3 Policy Implication**

In the first case, people will actively go to big cities to work and increase productivity. As we know, people in rural areas cannot buy large agricultural facilities on their own, so they rent out their land to other high-volume companies. This will not only increase the productive capacity of the land,

but through immigration, other regions can obtain more labor. This is undoubtedly very good for the overall economy. The government should keep people moving in this situation.

In the second case, the government should return the land in time to protect people's land property rights. In the case of land expropriation, people have nothing to produce. This leads to poorly functioning markets, higher unemployment, and no income for people. These phenomena will occur after the government has acquired land.

#### 5.4 Future

The government can start from the legal aspect and relax the restrictions on land property rights legally. This allows for greater population mobility and increased productivity. The government can do this in three ways. (Hui Li, Kunqiu Chen, Lei Yan, Ling Yu, Yulin Zhu, 2022)

First, the government can open up land lease rights. This would give people the ability to move to larger cities to find opportunities while having a steady income. The right to lease land will improve social basic security, because people in rural areas have a stable income and do not need to worry about the elderly and children at home. They are able to move to more opportunities and a higher standard of living after going to big cities. When people have double wages, their purchasing power rises and drives economic development in rural areas. This change is definitely good for society.

The second is to open up the right of use, people should be allowed to grow any crops. This will make the market more consumer-oriented and make the market more balanced. With perfect tenure rights, people will grow crops according to market demand. In this case, as people's incomes rise, economic development in rural areas will also be stimulated. This will accelerate social development.

Third, the government can stimulate the economy by transferring rights. In today's rural areas, land is not allowed to be transferred at will. They would use the household mechanism to allocate land. Such allocations do not make the most of the land. When people can transfer land at will, they can freely distribute land and property. This would allow the currency to have fresh liquidity and stimulate the local economy. This approach can be achieved by reducing transfer taxes.

These methods are all ways that the government can improve the economy of rural areas through land property rights in the future.

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