

Influence of Market Mechanisms on Transformations in Land Property Rights and Immigration Dynamics

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Abstract. This study investigates the effects of land property rights changes on immigration, utilizing data from household surveys conducted in 2004 and 2005 by University College London, Cambridge University, and Peking University. Focusing on how market mechanisms encourage migration by creating new opportunities, in contrast to government interventions like land expropriation, which hinder mobility, this research employs regression analysis and econometric models to dissect these phenomena. Through a detailed examination of the dual influence exerted by market and government mechanisms on migration patterns, the study unveils the complex interplay between changes in land property rights and immigration trends, offering profound insights into the socio-economic ramifications of these dynamics.

Keywords: Land Property Rights; Immigration; Market Mechanisms; Government Intervention; Rural-Urban Migration; Socio-Economic Impacts; Regression Analysis; Econometric Modeling.

1. Introduction

1.1. China's Land System

China's land system presents a pronounced contrast between urban and rural areas. Urban land ownership is characterized by state centralization, a testament to the country's socialist heritage, as documented by Liu et al. (2014). The government owns urban land, dedicating it to the objectives of urban development and public welfare. Conversely, rural areas maintain a collective ownership model, echoing the collective traditions of rural life. Here, land is considered a communal asset of the village rather than personal property.

The distinction between state-owned urban land and rural collective land not only reflects divergent governance models but also aligns with the state's dual priorities. Urban land ownership serves the state's goals for urbanization and societal welfare. In contrast, rural collective land, though it supports the state's broader objectives, is managed with a degree of autonomy under state supervision, as emphasized by Ho (2001) and according to the Constitution of the People's Republic of China (The State Council, 2019). This dichotomy in ownership and governance mechanisms significantly impacts the socio-economic conditions of urban and rural populations, leading to distinct pathways for development and lifestyle across these two landscapes.

In the late 20th century, the Household Responsibility System (HRS) emerges as a defining feature of land property rights in rural China (Tong et al., 2019). This system revolutionized rural life by allocating land-use rights to individual households while maintaining collective ownership. Under HRS, farmers gained autonomy over their allotted land, sowing and reaping the rewards of their labor directly (Tong et al., 2019). They can also voluntarily transfer the operating rights of land for compensation. This system, more than a mere policy, redefined the farmer's relationship with the land. It transformed plots of soil into sources of empowerment and economic opportunity, intertwining the farmer's fate with the rhythms of the seasons and the health of the earth (Tong et al., 2019). The HRS was a cornerstone in China's rural evolution, marking a shift from collective farming to a more personal, household-centric approach to agriculture.

1.2. Migration

For many, migration is a bridge to a better life, a path paved with the promise of higher wages and more abundant employment opportunities than the ones left behind in the countryside (Ye et al., 2013). In the urban expanse, not only are there more abundant employment opportunities, but people often have greater potential to access higher incomes and better resources (Ye et al., 2013). This is a crucial factor driving the rural populace towards city life. However, the call of the city is about more than just money; there are also better resources available. Cities offer access to better educational facilities, the key to unlocking doors that remain closed in rural areas. It is about the future of families, particularly the children. Healthcare plays its part in this narrative of migration as well. Urban centers, with their advanced medical facilities and a broader range of healthcare services, provide a safety net that needs to be improved in rural settings.

2. Literature Review

2.1. Property Right

In rural China, property rights serve as a cornerstone for the economic security and prospective development of countless households. These rights, or the lack thereof, have a profound influence on the migration choices of rural households, thus significantly determining the patterns of rural-urban migration within the country (Long et al., 2016). While rural households possess land-use rights, the land itself is under collective ownership, a status that introduces a degree of uncertainty due to the potential for state expropriation in favor of urban development (Zhou et al., 2019). This instability surrounding land rights critically impacts household decision-making, with secure property rights often facilitating migration by providing a financial safety net. In contrast, the anxiety associated with insecure land rights and the possibility of uncompensated land loss deters migration (Xu et al., 2020).

Property rights are closely interconnected with employment, education, healthcare, and other socio-economic issues in rural communities. The evaluation of migration's advantages and disadvantages by rural households underscores the pivotal role of land rights security in these deliberations (Garriga et al., 2020). Secure land rights not only reassure households about their economic stability but also encourage them to seek better opportunities through migration. Conversely, the vulnerability associated with uncertain land tenure hampers the willingness to migrate, reflecting a critical need for comprehensive reforms in rural land property rights. Such reforms should aim not only at safeguarding these rights but also at facilitating a migration process that is both economically beneficial and socially equitable (Garriga et al., 2020). This understanding underscores the intricate linkage between property rights and rural-urban migration dynamics, advocating for policy interventions that recognize and address the economic and social dimensions of land tenure security.

2.2. The Mechanisms of Land Property Rights Impacting Migration

The facilitation of migration through secure land rights and the deterrence of migration due to the insecurity of these rights. The former mechanism, supported by a market-based approach, allows for the rental of rural land, thus providing rural households with a financial safety net that encourages migration in pursuit of better opportunities. The latter mechanism, characterized by government appropriation, fosters a sense of vulnerability, deterring migration as individuals prioritize the protection of their primary source of security and livelihood. This dichotomy underscores the critical need for enhanced safety in the face of land appropriation.

3. Empirical Analysis

3.1. Data

The selection of data from household surveys conducted in 2004 and 2005 by University College London, Cambridge University, and Peking University is predicated upon their congruence with prior

scholarly inquiries, notably those by Zhang et al. (2018). Renowned for their methodological rigor and expansive variables, these surveys offer indispensable insights into the intricacies of land tenure, migration patterns, demographic trends, and economic attributes essential for elucidating the phenomenon of rural-urban migration in China.

The statistical overview, including the percentage of null values, outliers, and the distribution of key variables, plays a pivotal role in the selection of appropriate statistical models and analytical techniques later in the research. For instance, the binary nature of the 'migration' variable suggests the potential use of logistic regression models to examine the factors influencing migration decisions. Similarly, the continuous nature of 'Logarithmic Income' might necessitate linear regression analyses or the application of transformation techniques to address skewness or kurtosis in income distribution.

3.2. Identification Strategy

$$(\text{migration}) = \beta_0 + \beta_1 X_1 (\text{land property right}) + \beta_2 X_2 (\text{age}) + \beta_3 X_3 (\text{education}) + \beta_4 X_4 (\text{gender}) + \beta_5 X_5 (\text{income}) + \dots + \beta_n X_n$$

Firstly, this paper's dependent variable is migration, which is defined as the movement of the population from rural to urban areas.

Secondly, this paper chooses land tenure system change as a dummy variable for the model. In this paper, the definition of change in the land tenure system is "whether or not one has resided for more than six consecutive months in a place other than one's registered permanent residence." In the empirical analyses, if it is, it takes the value of 1. If it is not, it takes the value of 0.

Finally, this study meticulously selects control variables—gender, age, education level, and income level—to address potential endogeneity concerns. Acknowledging the pivotal role that socio-economic factors such as education and income play in migration decisions, these variables are integrated as independent factors within our analysis. This approach effectively minimizes the heterogeneity attributable to variations in gender, age, education, and income levels, thereby enhancing the precision of our empirical findings. Specifically, the inclusion of these control variables allows for a more nuanced exploration of the market mechanisms through which changes in land property rights influence migration patterns.

3.3. Market Mechanism of Land Property Right Change on Migration

Rent plays an important role in the market mechanism of land property rights changes for migrants. Rural residents can freely choose to rent out the land area according to the rent level. Therefore, this paper establishes a Prohibition model with stepwise regression to analyze the important role of rent in the market mechanism of land property rights changes on migration.

As Table 1 shows, rent has a positive effect on migration, and this effect is significant at the 1 percent level. Thus, rent plays an important role as a contributing factor in the market mechanism of land title change on migration. Also, among the control variables, income, age, education, and gender play important facilitating roles.

This paper analyzes the accuracy of the regression results of land property rights changes on the market mechanism of migration through the robustness test. Robustness test results are shown in Table 2:

The implementation of robustness tests in this study validates the reliability and stability of our initial regression findings, particularly concerning the market mechanisms of land title changes on migration. By conducting these tests, we aim to ensure that our results are not unduly influenced by model specification errors or the presence of outliers. Specifically, the robustness tests employed include alternative model specifications and the inclusion of additional control variables to assess the consistency of the effect of land rental on migration.

Table 1. Regression results for market mechanism

	(1)	(2)	(3)	(4)
Migration Status				
Land Rental Percentage	0.0875** (0.0691)	0.0791*** (0.0694)	0.0819** (0.0697)	0.0863** (0.0697)
Logarithmic Income	0.0347* (0.0149)	0.0434** (0.0148)	0.0438** (0.0148)	0.0435** (0.0148)
Province	-0.00114 (0.00269)			
Age	-0.00945*** (0.00219)			
Education	-0.0843** (0.0320)			
Gender	0.389*** (0.0415)	0.392*** (0.0414)	0.391*** (0.0415)	0.396*** (0.0416)
Health Status	0.0105 (0.0214)	0.00168 (0.0214)	0.00298 (0.0215)	0.00367 (0.0215)
Party Membership		-0.332*** (0.0691)	-0.332*** (0.0693)	-0.328*** (0.0692)
Han Ethnicity		-0.0293 (0.0736)	-0.0207 (0.0747)	-0.0290 (0.0736)
Private Business Ownership			0.0322 (0.0759)	
Parental Status				-0.0636 (0.0579)
Constant	0.601** (0.185)	-0.0293 (0.0736)	-0.0249 (0.213)	0.159 (0.170)
N	528	526	525	526

t statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The results, as presented in Table 2, affirm the robustness of our initial findings: the opportunity to rent land continues to exhibit a significant and positive influence on the decision to migrate. This consistency across various model specifications substantiates the accuracy and reliability of our regression analysis, reinforcing the conclusion that land rental, as a key component of market mechanisms, indeed facilitates migration. Through these robustness tests, we further strengthen the empirical foundation of our study, providing a more rigorous and comprehensive understanding of how changes in land property rights impact migration dynamics.

4. Analysis

4.1. Market Channel

4.1.1. Land Property Rights and Agricultural Production Efficiency

Under the revised institutional framework of land property rights, a significant consolidation of land among agricultural producers is anticipated. This consolidation facilitates centralized management,

enabling the adoption of advanced farming technologies and the expansion of production on a larger scale. By leveraging economies of scale, agricultural producers can significantly reduce operational costs and maximize profits. The efficiency gains from such scale effects not only enhance the competitiveness of agricultural producers but also contribute to the broader objective of agricultural modernization and sustainability.

Table 2. Robustness of Regression results for the market mechanism

	(1)	(2)	(3)	(4)
Migration				
Land Rental Percentage	0.206*** (0.0753)	0.209*** (0.077)	0.242** (0.117)	0.320** (0.154)
Logarithmic Income	0.229** (0.0946)	0.241** (0.107)	0.0438** (0.0147)	0.0435** (0.0148)
Province	-0.000436 (0.0105)			
Age	-0.0178** (0.00469)			
Education Level	-0.129* (0.0685)			
Gender	0.0147 (0.0326)	0.135 (0.0946)	0.0166*** (0.00619)	0.396*** (0.0424)
Health Status	0.0442 (0.0331)	0.00168 (0.0212)	0.00298 (0.0214)	0.00367 (0.0213)
Party Membership		-0.0242 (0.131)	-0.0150 (0.0131)	-0.0418*** (0.0135)
Han Ethnicity		-0.125 (0.0951)	-0.0103 (0.133)	-0.0290 (0.0649)
Private Business Ownership			0.0322 (0.0736)	
Parental Status				-0.0636 (0.0547)
Constant	-0.00573 (0.00756)	0.0515 (0.128)	-0.00273*** (0.000979)	0.0584*** (0.0158)
N	528	526	525	526

4.1.2. Impact on Prices and Sectoral Development

The reformation of land property rights is expected to catalyze the rural economy's growth, leading to a reduction in the prices of agricultural products. This reduction is attributed to increased productivity and cost efficiency within the agricultural sector. Concurrently, the lowered cost of agricultural inputs benefits the industrial sector by reducing production costs, thereby stimulating expansion. As the industrial sector evolves, productivity enhancements are projected to decrease product prices further, facilitating economic diversification and stability.

4.1.3. Income Disparity and Rural Income Improvement

The transition in land property rights is poised to augment farmers' rental incomes significantly. Alongside price reductions, these increased earnings effectively elevate the actual income levels of rural households. Consequently, the income disparity between rural and urban populations is expected to narrow, alleviating urban pressure stemming from rural-to-urban migration. This adjustment in

income levels underpins a more balanced economic development model, fostering social cohesion and financial inclusivity.

4.1.4. Rural Economy Development and Labor Dynamics

The clarification of land property rights plays a pivotal role in propelling the rural economy forward. This advancement inherently enriches the suite of social services available to farmers, which is critical for their sustainable development. Despite the interdependence between urban industrial growth and rural agricultural support—whereby industrial economies provide resources to rural areas—the rural sector's reliance on land as a primary production factor remains integral. This dependence ensures a steady labor supply for the rural economy, which is crucial for its ongoing development. In the modernization process, changes in land ownership have facilitated rural-to-urban migration, significantly impacting population mobility patterns. This dynamic underscores the complex interplay between land ownership, economic development, and migration, highlighting the transformative potential of land property rights reforms on the socio-economic landscape.

5. Conclusion

This paper analyzes the impact of changes in rural land tenure systems on urban and rural migrants. Using cross-sectional data from two household surveys conducted by University College London, the University of Cambridge and Peking University in the summers of 2004 and 2005 respectively, this paper analyzes the impact of changes in land property rights on rural and urban migrants in terms of market mechanisms respectively.

The analysis delineates through the lens of market mechanisms, land titling serves dual roles: it reduces urban market prices and simultaneously enhances farmers' incomes through the rental of vacant land. These dynamics collectively facilitate migration by improving economic incentives for rural residents to move to urban areas. Conversely, within the government expropriation channel, the scenario is markedly different. Local governments' forceful expropriation of land often results in inadequate compensation for farmers, undermining their economic security upon urban relocation.

In the context of accelerating urbanization and industrialization, alongside gradual reforms in the household registration system, the urban influx of rural labor has highlighted the challenges urban farmers face in managing their contracted land. The introduction of policies enabling the separation of contractual rights from management rights caters to the growing need to maintain contractual land ownership while delegating land management. This legal distinction between “contractors” and “operators” not only secures land transfers but also minimizes investment risks for new operators. To cultivate a symbiotic relationship between land transfer and population mobility, it is imperative to refine the government's expropriation mechanisms and further advance industrialization and urbanization processes. Such enhancements are crucial for sustaining the dynamic interplay between land reallocation and population mobility, presenting a more nuanced and practical approach compared to prior strategies highlighted in the literature.

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