



# Research on the Uncoordinated Development of Land Urbanization and Population Urbanization

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**Abstract.** Focusing on the local government's promotion of urbanization, this paper attempts to establish the political economic logic behind the incoordination between the land urbanization and population urbanization in China. By constructing a theoretical framework of political and fiscal incentives, this paper analyzes the process of urbanization promoted by local governments since the reform of the tax-sharing system, and concludes that promoting uncoordinated urbanization is a rational choice under financial and political incentives. The reason why local governments focus more on land urbanization is mainly affected by financial and political incentives. They rationally and strongly pursue economic growth by expansion with land urbanization. On the contrary, there is insufficient investment in population urbanization that cannot promote GDP growth in the short term or demonstrate the performance of local government officials. Therefore, the phenomenon that population urbanization lags behind land urbanization is determined and formed endogenously by local government behaviors under this institutional background.

**Keywords:** Chinese land urbanization · Population urbanization · Fiscal incentives · Political incentives · Local government behavior

## 1 Introduction

Since the reform and opening up, especially since the mid-1990s, China's urbanization process has developed rapidly, and urbanization has become a great engine to promote economic growth after industrialization [1]. However, it cannot be ignored that a prominent problem in China's urbanization is that the level of population urbanization lags significantly behind that of land urbanization [2]. According to China Statistical Yearbook, from 1990 to 2000, the expansion rate of land urbanization calculated based on urban built-up areas was 1.71 times the rate of population urbanization calculated based on urban permanent population. The gap further widened to 1.87 times between 2000 and 2012. This development model in which the rate of land urbanization is much faster than that of population urbanization has promoted the increase in government revenue and economic growth in the short term, but it has also brought a series of long-term

negative effects on Chinese economy. For example, the rapid expansion of land urbanization with land as the core has led to serious waste of land resources and disorderly growth of urban scale [3].

In response to the phenomenon that China's population urbanization lags behind land urbanization, scholars have put forward explanations from different perspectives. For example, Yao Yang and Xie Dongshui considered restricted population flow and government monopoly of land supply to be the reasons of uncoordinated urbanization from the perspectives of household registration system and the land system respectively [4, 5]. However, these views ignore the influence of government behavior, because China's urbanization has an obvious government-led characteristic [6]. In addition, some scholars have put forward the influencing factors of local government behavior on the problem of the incoordination between population and land urbanization. For example, Cai Jiming believed that factors such as current fiscal system, urban-rural land system, and the performance evaluation mechanism of local officials are important reasons for population urbanization lagging behind land urbanization [2]. Li Lixing believed that the land and fiscal motives of local governments interact with their financial pressure to provide social welfare for the agricultural migrant population, resulting in population urbanization lagging behind land urbanization [7]. However, these studies ignore the whole Chinese-style decentralization model, including incentives of fiscal decentralization and political incentives under local government competition [8–10]. Existing literature explains the phenomenon that China's population urbanization lags behind land urbanization from different perspectives. However, it fails to systematically explain the uncoordinated development of land urbanization and population urbanization. Thus, this paper will analyze from the perspectives of both financial incentives and political incentives.

In order to provide a logically consistent theoretical framework for understanding the imbalance between land urbanization and population urbanization (Fig. 1), this paper first attempts to discuss the influencing factors of land system and household registration system on the uncoordinated development of land and population urbanization from the external institutional reasons. Then, it discusses the reasons why local governments pay more attention on land urbanization while ignoring promote population urbanization from the internal incentives affecting local officials. Focusing on the motives of local officials to promote uncoordinated urbanization, this paper believes that China's urbanization is largely driven by local governments under the direct influence of financial and political incentive mechanisms. This is because the promotion of land urbanization can greatly increase the fiscal revenue of local governments, promote rapid economic growth and improve political performance, while promoting population urbanization will increase the financial burden of local governments, and increase labor costs in cities, affecting regional economic growth and local officials' performance. Therefore, local governments have a strong motivation to promote uncoordinated urbanization.

This paper is structured as follows. The second part discusses the land system and household registration system from the perspective of external institutions. The third part discusses internal incentives and focuses on the impact of financial and political incentives on local government behavior.

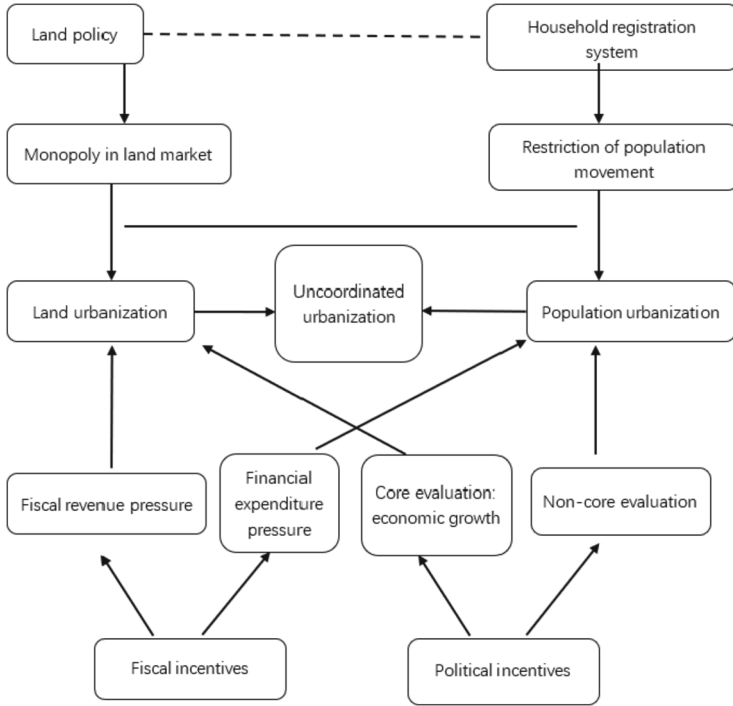


Fig. 1. Analytical framework of uncoordinated urbanization.

## 2 Current Situation of Population Urbanization and Land Urbanization

At present, China’s land urbanization and population urbanization are seriously uncoordinated. Commonly used methods are single-factor method and comprehensive-factor method. Among them, the former mostly conduct measurement according to the growth elasticity coefficient of urban land scale. This indicator compares the ratio of urban land growth rate to urban population growth rate, and uses 1.12 as the dividing point. When the ratio is larger than 1.12, it indicates that land urbanization is faster than population urbanization. As shown in Fig. 2, the growth rate of urban built-up areas is always higher than that of urban population except for few years. In the 13 years investigated, the elasticity coefficient of 11 years is larger than 1.12, indicating that land urbanization and population urbanization are uncoordinated. The objectively existing uncoordinated development of population and land has also caused a series of social problems. For example, serious secondary problems are caused by the fact that non-permanent urban migration is not conducive to the promotion of domestic demand and the improvement of the service industry. Uncoordinated urbanization of land and population has become an important obstacle to expanding domestic demand, and the limitations of land resources and the characteristics of land income make land finance unsustainable [4].

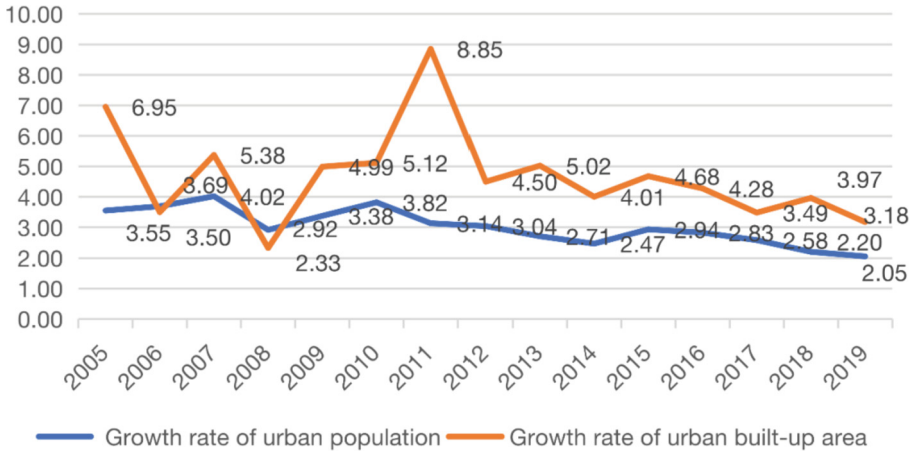


Fig. 2. Fluctuation of urban land growth rate and urban population growth rate.

### 3 Influencing Mechanism of Population Urbanization and Land Urbanization

In order to further analyze the reasons for the incoordination, this section focuses on the analysis of the external system that contributed to the uncoordinated urbanization, namely the household registration system and the land system.

#### 3.1 External Institutional Factors – Dual Household Registration System and the Land System

Land and household registration systems are often considered as together causing the uncoordinated development of land urbanization and population urbanization. Household registration control can explain the lagging development of population urbanization because it restricts the transfer of rural population to urban areas. The household registration system is closely related to people's lives. It brings not only the difference in identity, but more importantly, different social welfare and rights. There is a big difference between different household registration status, from medical insurance, labor and employment to housing subsidies, and to college enrollment, retirement and pension [4]. Therefore, the reason of strict control of urban household registration is the uneven social services. The land system is also often considered to be the cause of the incoordination between population urbanization and land urbanization, because agricultural land expropriation and use systems have different economic effects on urbanization [11]. The expropriation system gives land expropriation a government attribute, while land transfer is a market attribute. Therefore, the difference between the two behaviors allows the government to obtain a larger benefit in land expropriation, leading to the rapid expansion of land urbanization. Specifically, land expropriation compensation is based on the

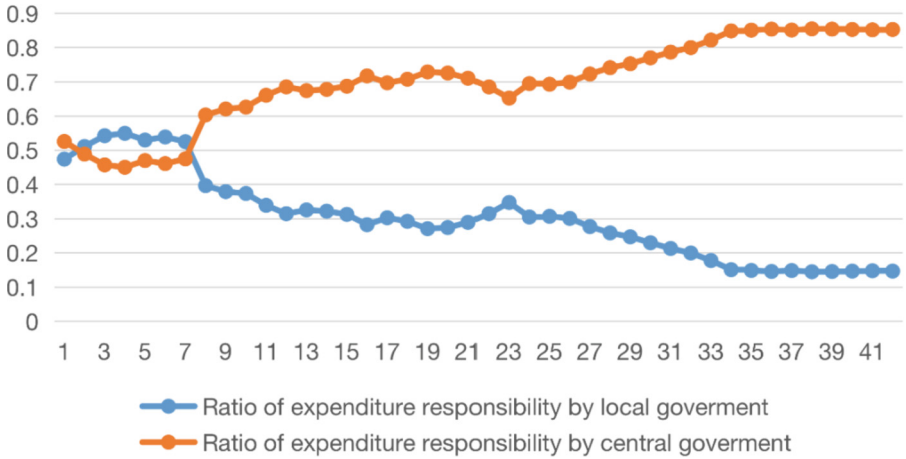
income generated by the original use of the land, rely on the principle of using several times of the annual output value of the land as the calculation basis of compensation, and does not consider the market value of the land. However, land transfer is based on the market value. Therefore, when local government faces financial pressure, it mainly uses various channels to make the land a real source of wealth.

However, although the combination of these two external systems led to the uncoordinated development of land urbanization and population urbanization, these systems failed to explain local governments' motives for the actual implementation of this difference. Therefore, scholars such as Xiong Chai, Gao Hong believe that the dual land system and household registration system are the direct causes to the contradiction in between, but the underlying cause is the behavior of local officials [6]. Local governments are the actual executor of urbanization, that is to say, urbanization is a process of institutional change promoted by the local government, and the land system and the household registration system are only tools used by local governments in this process. The maximization of interests is the code of conduct of local governments. Thus, studying the behaviors and motives of local governments is the key to understanding this contradiction.

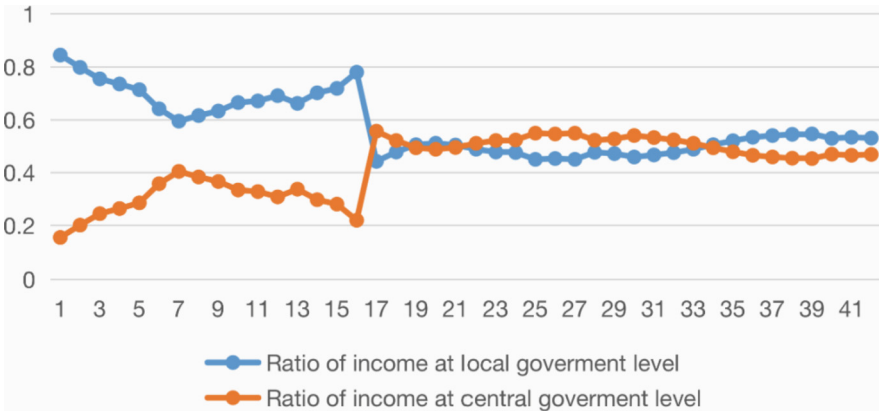
### 3.2 Internal Incentives

**Fiscal incentives.** After the tax-sharing reform in 1994, fiscal incentives faced by local governments have always been regarded as a key factor in increasing the incoordination between land and population urbanization. To put it simply, after the 1994 tax-sharing reform, fiscal revenues were centralized to the central government, but the actual powers were not properly adjusted, which made local governments' fiscal revenue cannot cover the expenditure. The transfer payment system that balances the gap in local governments' financial resources is not comprehensive. Facing the fiscal incentives, local governments therefore resort to filling the vacancy with land transfer, which is one of the important reasons for the seriousness of land expropriation.

After the 1994 reform, the central government collects the fiscal power but delegates administrative power to local governments. The proportion of local government revenues dropped significantly, and that of expenditures rose sharply. The degree of mismatch between the central government's fiscal power and administrative power had an increasing trend (as shown in Fig. 3 and Fig. 4). As of 2019, the general public budget of the central government was 3.5 trillion yuan, and that of local governments was 20.4 trillion yuan. The central and local government fiscal expenditures accounted for 14.7% and 85.3% respectively and their fiscal revenues accounted for 47% and 53% respectively. The contradiction between central and local fiscal power and administrative power is prominent.



**Fig. 3.** Fiscal expenditure rates of central and local governments from 1978 to 2019



**Fig. 4.** Fiscal revenue rates of central and local governments from 1978 to 2019 (%).

In addition, an important research perspective is to analyze income and expenditure separately, because they reflect the opposite characteristics. From the perspective of fiscal revenue distribution, the tax-sharing system is undoubtedly a “centralized” reform, because 75% of the increase in value-added tax, the main tax collected by the local government, is concentrated in the central government. The tremendous change in the proportion of central and local fiscal revenues after the tax-sharing system also clearly illustrates the intensity of fiscal revenue concentration. However, from the perspective of fiscal expenditures, the decentralization of fiscal expenditures among central and local governments has not undergone such great changes due to the tax-sharing system, and has continued to increase. This result undoubtedly increased local financial pressure. This institutional pressure pushes local governments to seek new sources for increasing local fiscal revenue.

- (1) **From the perspective of fiscal revenue concentration.** From the perspective of the high degree of centralization of fiscal revenue, the concentration of revenue increases the pressure on local governments' expenditures, and promotes local governments to seek land as a channel to relieve pressure. Some scholars, such as Zhou Feizhou and Xie Dongshui, believed that as the main body of interest formed under the fiscal responsibility system that pursues fiscal revenue growth, local governments do not weaken this awareness after the tax-sharing system, but greatly strengthened it under the expenditure pressure [5, 12]. Therefore, for local governments, the urgent problem is how to find new and discretionary fiscal revenue to ease the pressure on expenditure. As an extra-budgetary income, the land transfer fee will all be retained in local finance, and local governments have strong incentives to earn the price difference through land grant. Therefore, coupled with the existence of the land system, the government's monopoly position in the land market also enables it to requisite agricultural land at a low cost and sell it at market price to obtain great income from land transfer.

An important phenomenon after the tax-sharing system is that the growth mode of local governments' fiscal revenue has undergone a significant change, that is, relying on corporate taxation in the past has changed to relying on other taxes, especially business taxes. Unlike value-added tax, business tax is mainly a tax levied on the construction industry and the tertiary industry, of which the former is the largest consumer of business tax. Therefore, it is logical for local governments to focus on the development of the construction industry. Secondly, in addition to the changes in local fiscal development patterns brought about by the structural adjustment of budgetary fiscal revenues, the reform of the tax-sharing system also has a great impact on the extra-budgetary and non-budgetary revenues of local governments. After the reform of the tax-sharing system, the central government issued a series of reforms for extra-budgetary funds in an effort to incorporate administrative fees into the budget for more standardized management. However, there has been no proper management for non-budgetary funds. So, non-budgetary funds, especially the land transfer revenue, have begun to become the main method for fiscal growth that local governments rely on. Therefore, the pressure on local governments from the tax-sharing system and income tax-sharing reforms has forced local governments to seek other ways to make money by developing the construction industry and increasing extra-budgetary items and non-budgetary funds. Taking Shaoxing County in Shaoxing City as an example, the proportion of indirect and direct taxes on land in the local budgetary revenue increased from 30.5% in 2001 to 38.4% in 2003. More than 1/3 of Shaoxing County's budgetary revenue are taxes from land [12]. At the same time, land-related income accounts for the main part of extra-budgetary finance. In Shaoxing County, both budgetary and extra-budgetary land revenue are of great significance, and land revenue is undoubtedly the pillar of local finance.

- (2) **From the perspective of fiscal expenditure decentralization.** Contrary to the high concentration of fiscal revenues pursued by local governments under the tax-sharing system, China has implemented a high degree of decentralization for local governments in terms of fiscal expenditures. In the absence of revenue, local governments

have huge expenditure pressure and have to choose to cut unnecessary expenditures as much as possible, resulting in the insufficient supply of public services. Due to the large population, social and public welfare expenditures are an important fiscal expenditure from the government, and the provincial governments and below are mainly responsible for it, with government expenditures below the provincial level long accounted for the bulk. Taking health and education expenditures as examples, in total expenditures, the proportion of local fiscal expenditures has long been above 90%. With economic growth and increasing urbanization, many public service needs must be met by local governments. At the same time, unlike economic fiscal expenditures, social expenditures often cover a wide area, have a long term, and have insignificant input-output effects. Therefore, local governments are not so enthusiastic about providing public goods for the rights and interests of migrants. Lu Wanjun and Zhang Binbin used empirical evidence to show that raising the threshold of household registration in cities with larger populations has a positive impact on local per capita output in a short term, and their reform momentum is weak. In addition, according to Chen Xiwen's calculations, for the transformation of 50 villages in urban-rural fringe in Beijing, the government will have to invest an average of 1 million yuan per person for the 20,000 to 30,000 farmers to become citizens. In the case of higher fiscal decentralization, local governments, as "rational economic men", are more inclined to promote land urbanization from the perspective of cost and benefit, and do not pay enough attention to the urbanization of agricultural transferring populations [6, 13, 17].

### 3.3 Political Incentives

The process of political incentives is reflected in the fact that under a system with economic growth as the main performance evaluation index, local governments have strong incentives for land expropriation, resulting in the incoordination between land urbanization and the urbanization of agricultural transferring populations [15]. The reason why political incentives are tenable can be explained from the public choice theory. This theory believes that the government and government officials also play the role of "economic men" in the process of social management and market transactions, and seek to maximize the interests of political groups and individuals [11]. The main interest that local officials care about is their promotion in their careers or avoiding being eliminated. Therefore, the performance-oriented evaluation mechanism is a powerful "visible hand" that induces local government behavior.

On the one hand, under political incentives, land resources are forced to become a major strategy for local officials to pursue promotion. Since the 1990s, the increasingly significant performance evaluation mechanism centered on GDP and fiscal revenue growth is a pressuring and incentive mechanism with strong utilitarianism. The current cadre evaluation and incentive mechanism has led to three consequences. First, the promotion mechanism induces local officials to focus on the "vanity project" during their term of office. Second, the asymmetric information between the superior and the subordinate causes the grassroots officials to show their achievements with "resource-intensive" projects. Third, these actions are strengthened and continued due to competition among



government officials at the same level. Specifically, in order to obtain a promotion opportunity with compelling achievements in a short term, an official must have the ability to mobilize sufficient resources to break through the existing budget. Using the land system to achieve better spreads in land expropriation has become the best strategy for local officials. Since the reform of tax-sharing system, the source of tax revenue of local governments has mainly relied on major taxes such as value-added tax, business tax, and corporate income tax, which three accounted for more than 60% of local tax revenue, and the highest even exceeded 70% [12]. Therefore, in order to make political achievements to get promotion, and obtain more revenue to alleviate fiscal pressure, the tax revenue structure represented by turnover tax is inherently compatible with the GDP growth-oriented promotion mechanism. In addition, local management authority brings personal interest to officials. Therefore, the above-mentioned incentive mechanism makes the economic development based on land become the “engine” and “power source” for local governments to actively promote land urbanization.

On the other hand, the ignorance of non-economic factors under the promotion mechanism has led to a lack of motivation for local officials to promote population urbanization. Under the influence of the promotion mechanism, local governments focus on the evaluation goal and prefer to select the kind that is easy for the central government to assess, can be assessed at that time, and easy to implement within the city, such as GDP growth rate and fiscal revenue growth rate, etc. Indicators with wide coverage, long periods, and insignificant input-output effects, are usually ignored and slack at. For example, insufficient investment in education, medical care, social security, etc., especially neglecting the urbanization of the agricultural population to reduce fiscal expenditures makes the government “offside” and “absent”. Secondly, because the power of appointment and removal of key officials of local (subordinate) governments is concentrated in the central (superior) government, this “top to bottom” governance model can easily lead to local governments’ contempt for the interests of people in their jurisdictions. More specifically, as the main body of interest, while implementing the policies of the central government, local governments change actual implementation to safeguard their interests, which is contrary to the original intent of the central government’s policies and harms the interests of the local public [10]. In other words, the lack of the public “actual voting” mechanism and the limited horizontal supervision and accountability have resulted in the lack of local government rights and the function of “local agent”. This has led to insufficient attention to the urbanization of the agricultural transferring population and the emergence of uncoordinated land and population urbanization.

## 4 Conclusion

Based on the analysis of the impact of the land system and household registration system behind the phenomenon of uncoordinated land and population urbanization, as well as the behavioral incentives of local officials, this paper analyzes the impact of fiscal incentives and political incentives on the behavior of local officials. It is found that fiscal and political incentives are the main ways affecting the uncoordinated land and population urbanization, and the household registration system and land system, as external factors, are the means to successfully implement uncoordinated urbanization under the influence

of political and fiscal incentives by local government behavior. Specifically, under the mutual influence of local government competition caused by fiscal and political incentives, local governments are more inclined to promote land urbanization to increase fiscal revenue, achieve faster economic growth, and improve political performance. However, there is insufficient enthusiasm for the promotion of population urbanization, which will increase local financial burden and have no significant short-term effect on local economic growth, leading to current situation of uncoordinated development of land urbanization and population urbanization.

## References

1. Chengri, D., Lichtenberg, E.: Land and urban economic growth in China. *J. Reg. Sci.* **51**, 299–317 (2010)
2. Jiming, C., Chai, X., Hong, G.: Uncoordinated development of population urbanization and land urbanization and its causes. *Econ. Perspect.* **2013**(6), 1522 (2013)
3. Liu, S.: Risks and reforms of development relying on lands. *Int. Econ. Rev.* (2), 92–09 (2012)
4. Yang, Y.: Research on household registration system reform and urbanization. *China Mark.* (31), 7–11 (2013)
5. Xie, D.: Why China's labor migration differs: an urban government behavior model. *J. Guangdong Univ. Bus. Stud.* (4), 7480 (2014)
6. Chai, X., Hong, G.: The mismatches between population urbanization and space urbanization: a perspective on fiscal decentralization. *Finan. Econ.* **2012**(11), 102–108 (2013)
7. Li, L.: China's urbanization level: status quo, challenge and countermeasure. *Zhejiang Social Sci.* (12), 27–34 (2010)
8. Blanchard, O., Shleifer, A.: Federalism with and without political centralization China versus Russia. *IMFStaff Papers* (4), 17179 (2004)
9. Li, H., Zhou, L.: Political turnover and economic performance: the incentive role of personnel control in China. *J. Public Econ.* **89**(9–0), 17434762 (2005)
10. Zhou, L.: Governing China's local officials: an analysis of promotion tournament model. *Econ. Res. J.* **2007**(7), 36–50 (2007)
11. Xie, D.: Local government competition, monopolized land supply and urbanization development imbalance. *J. Finan. Econ.* **2016**(4), 102–111 (2016)
12. Zhou, F.: Large scale construction: land finance and local financial behaviors. *Comp. Econ. Social Syst.* **2010**(3), 7789 (2010)
13. Lu, W., Zhang, B.: Household threshold, development-oriented government and the urbanization of population policy: evidence from large and medium-sized cities in China. *South China J. Econ.* **34**(2), 28–42 (2016)
14. Chen, X.: Promote the integration of urban and rural areas with new urbanization and rural construction. *Seeker* **2017**(11), 4–10 (2017)
15. Ran, T., Hui, W.: China's unfinished land system reform: challenges and solutions. *Int. Econ. Rev.* (2), 9323 (2010)