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**RESEARCH ARTICLE**

## Government and the Integration of Regional Land Factor Market: Taking the Beijing-Tianjin-Hebei Region as an Example

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**ABSTRACT**

The purpose of this paper is to discuss the influence of government behavior on the integration of the land factor market in the region so as to provide direction for promoting the integration of the region land factor market. The method is to construct the theoretical model of the relationship between government and the land factor market and the case analysis method. The results show that: (1) The internal logic of regional land factor market integration highlights the important influence of this integration on regional economic development and the central role of government in the process of integration; (2) The integration of land factor market represented by Beijing-Tianjin-Hebei region has some problems in the market environment, mechanism, and coordination. In conclusion, we put forward governance suggestions from three aspects: fostering a market with a good environment and providing comprehensive government services, fostering a market with full competition and moderating government intervention, and fostering a market with synergy and deepening government coordination.

**KEYWORDS**

The integration of regional land factor market; government and market; market-oriented reform of land factor

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**1. Introduction**

On March 25, 2022, the Central Committee of the Communist Party of China and the State Council issued the *Opinions on Accelerating the Construction of a Large Unified National Market*, proposing to *promote the smooth flow of commodity factor resources on a larger scale and accelerate the construction of a large unified national market that is efficient, standardized, fair competition, and fully open*<sup>1</sup>. As an essential part of building a large unified national market, the integration of the regional land factor market requires that the land factor flow freely across regions to promote regional coordinated development. However, the current regional land factor market integration is still at a relatively low level, with insufficient marketization and serious market segmentation. Therefore, the potential of the land factor for economic growth can still be further released, and the dividend space for the market-oriented reform of the land factor is still significant (Cui Zhanfeng & Xin Desong, 2021).

**2. Literature Review**

The existing research on the market-oriented reform of the land factor is carried out from the following aspects: First, review the history of the market-oriented reform of the land factor, comprehensively summarize the experience of the reform or clarify the direction of future development. Chen Ligen and Long Kaisheng (2019) reviewed the evolution of the urban and rural land system in the 70 years of PRC and pointed out that land resources should be allocated by the market; Yan Jinming (2020) summarized the many challenges faced by the development of the land factor market. Second, by evaluating the development level of the land

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<sup>1</sup> Opinions of the Central Committee of the Communist Party of China and the State Council on Accelerating the Construction of a Large Unified National Market, [http://www.gov.cn/zhengce/2022-04/10/content\\_5684385.htm](http://www.gov.cn/zhengce/2022-04/10/content_5684385.htm).

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factor market, we can make recommendations based on the current situation. Qian Zhonghao and Mu Yan (2012) used the weighted average method to measure the marketization level of the agricultural land conversion market and the primary land market and combined the coefficient of variation and Theil index, the differences in the level of land marketization in the eastern, central and western regions of China were analyzed; Qu Futian and Wu Yuling (2007) measured the degree of land marketization in Jiangsu development zones by establishing an index system with the marketization rate of land transfer, government intervention, land supply and demand balance, land price sensitivity, and land market competition as evaluation factors; Zhan Haibin (2011) put forward development suggestions based on the status quo of five aspects: the integration of land prices, the integration of supply, the integration of income distribution, the construction of trading platforms, and the construction of regional land resource management organizational forms.

The above research is full of insights and summarizes the significance, practical problems, and countermeasures of the current market-oriented reform of the land factor from multiple perspectives and research methods. However, there is still room for exploration of this proposition. First, the existing research mainly focuses on the market of land factor. However, the process of marketization has never been the evolution and development of the market alone and is closely related to the subject of the government. Especially for the goal of integration, the administrative boundary *is not only a geographical boundary but also the boundary that the local government divides the local market* (Xu Xianxiang & Li Huan, 2005), and yet few studies discuss the government's role in integration. Second, the existing research is mostly concentrated in the Yangtze River Delta, Pearl River Delta, and other regions where the land market is relatively mature. In the face of the diversity and differences in the integration practice of the land factor market in different regions, the scope of the research needs to be further expanded.

Based on this, this paper mainly discusses the influence of government behavior in the region on the integration of the land factor market and selects the Beijing-Tianjin-Hebei region as an example. This region is an important population and economic hinterland in China, and its regional economic development has a huge demand for land, so it is necessary to speed up the optimal allocation of land factor resources in the region; at the same time, the coordinated development of Beijing-Tianjin-Hebei has the distinctive feature of *impetus from high-level authorities* (Wei Wei, 2021), the influence of the government's behavior in this region is more prominent. The Beijing-Tianjin-Hebei Coordinated Development Planning Outline adopted in 2015 pointed out that *market-led and government-guided* is the basic principle to be followed by the Beijing-Tianjin-Hebei coordinated development strategy (Gan Wenxiao & Huo Xiaolong, 2016), so this is also in line with the research perspective of this paper.

### **3. Methodology**

#### **3.1 The relationship between the government and the integration of the regional land factor market**

The discussion on the relationship between the government and the market is endless. The process from the planned economic system to the socialist market economic system reflects China's in-depth understanding of the relationship between the government and the market. In particular, the assertion of *promoting a better combination of an efficient market and promising government* put forward by the Fifth Plenary Session of the 19th Central Committee<sup>2</sup> is a new understanding of the relationship between the government and the market with Chinese characteristics. In academic circles, new structuralism economics pays particular attention to issues related to an efficient market and promising government and has three theoretical points: first, factor endowment is the starting point; second, factor endowment structure and economic development are in the dynamic evolution process of interaction; third, in every period of economic development, the market is the basic mechanism for the efficient allocation of resources, but with economic development, industrial upgrading, and the corresponding improvement of hardware and software infrastructure, the market will also carry out structural adjustment, and the externalities brought about by this adjustment are difficult for micro-individuals to bear alone. Therefore, outside the market mechanism, the government has to be required to play an active role in the process of structural adjustment (Lin Yifu, 2012). This provides theoretical support for this paper to discuss government behavior in the integration of the regional land factor market.

As for market integration, Fritz Machlup (1976) believes that it means that all products or factors in the market have sufficient liquidity and thus reduce costs, but this needs to be achieved through non-discrimination in production and sale. Domestic scholars have roughly two perspectives on the definition of market integration: one is to use the market supply and demand relationship to explain, and the other is to define it in terms of administrative barriers or market segmentation as opposed to market integration. Specifically, the former perspective believes that market integration is the fact that economic entities in different regions face the same market supply and demand, forming a common supply and demand curve for the entire region in a larger range (Wang Linlin, 2018); the latter perspective believes that market segmentation means that local governments in each administrative region restrict the exchange of enterprises or resources across regions through administrative means or other means to protect or increase the interests of the region, while market integration is the process of breaking administrative barriers and eliminating regional

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<sup>2</sup> Communiqué of the Fifth Plenary Session of the 19th Central Committee of the Communist Party of China, [http://www.xinhuanet.com/politics/2020-10/29/c\\_1126674147.htm](http://www.xinhuanet.com/politics/2020-10/29/c_1126674147.htm).

market segmentation, allowing the market to efficiently allocate resources (Yin Wenquan & Cai Wanru, 2001). In short, the connotation of market integration includes two main points: first, it is a requirement for market development and a higher state of marketization; second, resources in the market can flow freely across regions and constantly eliminate flow barriers such as local protectionism, and a mature market are conditions for the free flow of resources.

To sum up, as an important type of regional factor endowment, the land factor market integration also has the characteristics of market integration and is also affected by government behavior. The definition of the integration of the land factor market in existing studies is generally based on its performance, such as *the process or state of establishing a unified land market without administrative boundaries, legal differences, regulatory differences, and restrictions in the region* (Yang Yuelan, 2008). Combining the above-mentioned theories about the relationship between government and market and market integration, the internal logical framework of the integration of the land factor market has emerged: First, the land factor is fluid and therefore involves regionality, forming the integration of the land factor market. Second, the integration of the land factor market will inevitably involve the two main subjects of the market and the government, and the coordination and cooperation between the two subjects is the core factor affecting the integration trend of the regional land factor market. This internal logic will be explained in detail below.

#### (1) Formation of the regional land factor market: the flow of the land factor

Land is the material basis for the development of human society and has the natural characteristics of fixed location and different qualities. With the expansion of the scope of commodity trading activities and the refinement of the division of labor, only the flow of resources between different members of society can meet the diverse needs of human production and life. The flow of the land factor produces a market for the land factor, which allocates land resources with the invisible hands of price mechanisms, supply and demand mechanisms, and so on. At the same time, subject to the natural characteristics of the land, its flow has a clear regionalization tendency.

#### (2) The inherent tension of the regional land factor market: the interaction between the trend of market integration and administrative power

The integration of the factor market is more meaningful than the development of the commodity market. The factor flow formed by the integration of the factor market is the guarantee for adjusting the structure of the commodity market and a way to narrow the gap in regional economic development. Therefore, *if the commodity market is the foundation of the market system, then the factor market is the core of the market system* (Xu Jingyong, 2016). At the same time, the land factor market can further exert the production factor function and social security function of land and bring scale effects, spillover effects, and combination effects. Therefore, in order to promote regional economic development, the integration of the land factor market is imperative. However, compared with other factors, the natural attributes of the land itself, as well as the social function that is the basis for the division of administrative regions, make its flow most susceptible to the influence of administrative subjects; even without government behavior, the land market cannot be discussed. Therefore, the inherent tension of the integration of the factor market mainly comes from the interaction between the trend of market integration and administrative power.

#### (3) The Core of Promoting the Integration of Regional Land Factor Market: Promising Government

As a unified government, its behavioral influence is greater than the influence of dispersed market micro-subjects, so the influence of the government on the integration of the regional land factor market cannot be underestimated. In the process of promoting the integration of the regional land factor market, the market is the basic allocation mechanism and boosting means, but the defects of the market itself hinder the development of the regional land factor market in the direction of marketization and a higher level of integration. The spontaneity, blindness, and lag of the land factor market make the micro-subjects in the market always tend to be high-efficiency areas, causing problems such as congestion in the land factor market, disrupted order, and rising transaction costs; the process of spontaneously forming a stable rule system in the regional land factor market is relatively slow, and the external rule system environment in which it is located is not yet perfect. In this regard, the government can take the initiative to guide the intentions and activities of market micro-subjects using policies, systems, and other tools and to improve the external institutional environment of the regional land factor market more quickly. At the same time, government failures such as inter-governmental interest games, self-interested behaviors, and official corruption also affect the regional land factor market, which will make the market more rigid and market segmentation more serious. On the contrary, if the government strictly restrains its behavior, the positive behavior of the government will become an important factor in promoting the integration of the regional land factor market. Therefore, the formation of a unified regional land factor market requires not only the efficient allocation of the market but also the standardization of the plan. Obviously, on the one hand, the government takes the initiative to guide the development of the regional land factor market externally; on the other hand, the government does not act indiscriminately, strictly restrains its behavior internally, and does not hinder the development of the regional land factor market. Active action and non-disorderly action are both the government's central roles as a promising government to promote the integration of the regional land factor market.

In a word, whether the government's behavior is beneficial or not has a profound impact on whether the integration of the regional land factor market can be achieved well and quickly. If the integration of the regional land factor market is the goal, and the market environment, market mechanism, and market unification are the decomposition factor, the guiding role of government behavior can be more clearly demonstrated (see Figure 1): Firstly, a favorable market environment requires the government to improve the basic environment of the market without being absent; secondly, the normal operation of the market mechanism requires the government to conduct moderate macro-control of the market without overstepping; thirdly, the unified and coordinated market requires the government to coordinate inter-government relations to weaken administrative barriers. Obviously, the effectiveness of government behavior reflects the progress of regional land factor market integration in terms of market environment, mechanism, and unification. Thus, this guiding role provides the analytical framework for the following analysis and response goals.

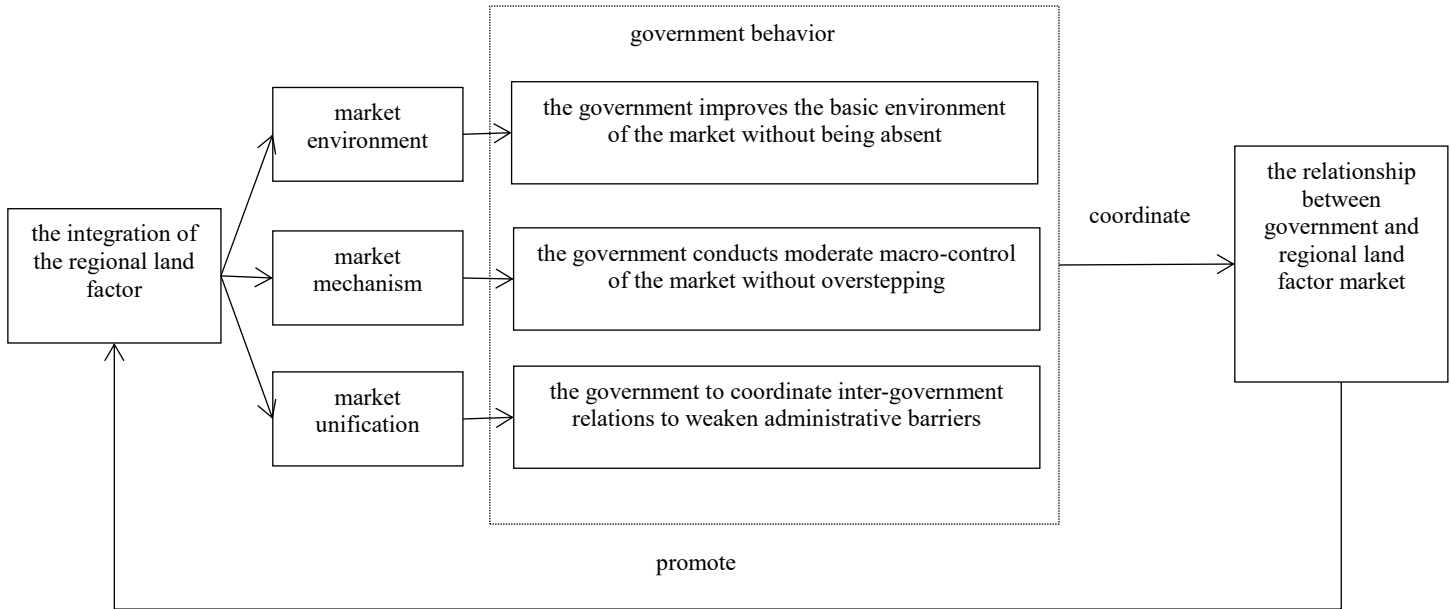


Fig. 1 The interactive logic of the integration of government and regional land factor market

**3.2 The Realistic Problems of the Integration of Regional Land Factor Market —Taking Beijing-Tianjin-Hebei as an Example**

The Beijing-Tianjin-Hebei region is located in North China and is an important political and economic zone in the country, including 11 cities, namely Beijing, Tianjin, Shijiazhuang, Zhangjiakou, Chengde, Tangshan, Qinhuangdao, Langfang, Cangzhou, Hengshui, Xingtai, Baoding, and Handan, with a total land area of about 217,000 square kilometers. In 2015, the Beijing-Tianjin-Hebei Coordinated Development Planning Outline pointed out three major reform tasks. The primary task is to promote the integration of the factor market reform, which specifically mentions the integration of the land factor market<sup>3</sup>. It marks the integration of the Beijing-Tianjin-Hebei land factor market and has become an important part of the coordinated development of the three places. Therefore, the efficient allocation of land factor resources in the Beijing-Tianjin-Hebei region has attracted much attention. However, as an important way to fulfill this task, there are still many practical problems in the current integration of the land factor market in the Beijing-Tianjin-Hebei region.

(1) Market level

First, the market development environment is poor. The basic environment of the land factor market includes two main contents: hardware and software. In terms of hardware, the trading platform of the Beijing-Tianjin-Hebei land factor market has not yet been established. At present, it mainly relies on the Beijing Municipal Commission of Planning and Natural Resources, the Tianjin Municipal Bureau of Planning and Natural Resources, the Department of Natural Resources of Hebei Provincial, and the government portal of the natural resource management agencies of prefecture-level cities, plus national land factor market information platforms such as China Land Market Network and China Land Network, and technologies such as big data have not been fully applied to the Beijing-Tianjin-Hebei land factor market information platform is being established. The lack of trading platforms or intermediary organizations for information collection, storage, and release has made the liquidity of land factor market information unable to keep up with the pace of market transactions but has become a constraint restricting market transactions.

<sup>3</sup> The Beijing-Tianjin-Hebei Coordinated Planning Outline: First to solve the problem of big cities in Beijing, <http://house.people.com.cn/n/2015/0824/c164220-27505237.html>.

In terms of software, the Beijing-Tianjin-Hebei land factor market rules do not play a sufficient role in market access, factor exchange, and exclusion of bad market players. The market environment and the created market atmosphere supported by these rules affect the trend of the integration of the Beijing-Tianjin-Hebei land factor market. In short, factors such as the lack of a trading platform for the land factor market in the region and the unsound market rules can easily lead to various market chaos and negative problems such as rent-seeking and local protection, resulting in insufficient or even malicious competition, affecting the development and operation environment of the Beijing-Tianjin-Hebei land factor market.

Second, the market development level is low. *The high degree of marketization of land supply is one of the manifestations of the maturity of the land market* (Li Juan et al., 2006). It can be said that the level of market-oriented allocation of the land factor is the basic manifestation of the development level of the land factor market. As one of the ways of resource allocation, the strength of the planning method implemented by the government also reflects the strength of the market method. Therefore, in the supply of land factor, judging the proportion of government supply can intuitively understand the degree of marketization of the corresponding allocation of land factor and then understand the level of marketization of land factor. That is to say, the degree of marketization of land supply is the core factor that expresses the degree of marketization of land factor. In this regard, the academic circles and the actual situation all believe that *transaction or leasing, equity investment or authorized operation, allocation, the transition of land use from paid to free, and the degree of marketization also decrease in turn* (Li Juan, Wu Qun & Liu Hong, 2006). Figure 2 below shows a schematic diagram of the proportion of supply methods of state-owned construction land in Beijing-Tianjin-Hebei from 2014 to 2017. During this period, the transaction methods mainly included allocation, agreement transfer, bidding, auction, listing, leasing, etc. Since there were only 12 land transfers by lease from 2014 to 2017, a total of 63.54 hectares accounted for a very small proportion, so it is not shown on the map. It can be clearly seen from the figure that the allocation and bidding, auction, and listing methods account for more, and the agreement transfer accounts for the least. Generally speaking, it seems that the transfer accounts for a larger proportion than the allocation, and the allocation method has a trend of decreasing year by year with the development of time, the way of bidding, auction, and the listing have a trend of increasing year by year. However, from 2014 to 2017, the proportion of allocation and bidding, auction, and listing methods was not much different. In 2017, the gap was the largest, but it was only 10%.<sup>4</sup> Obviously, the proportion of the allocation method that is completely non-market-oriented and the method of bidding, auction, and listing with a high degree of marketization is not much different, which shows that the marketization level of the land factor in the Beijing-Tianjin-Hebei region still needs to be improved.

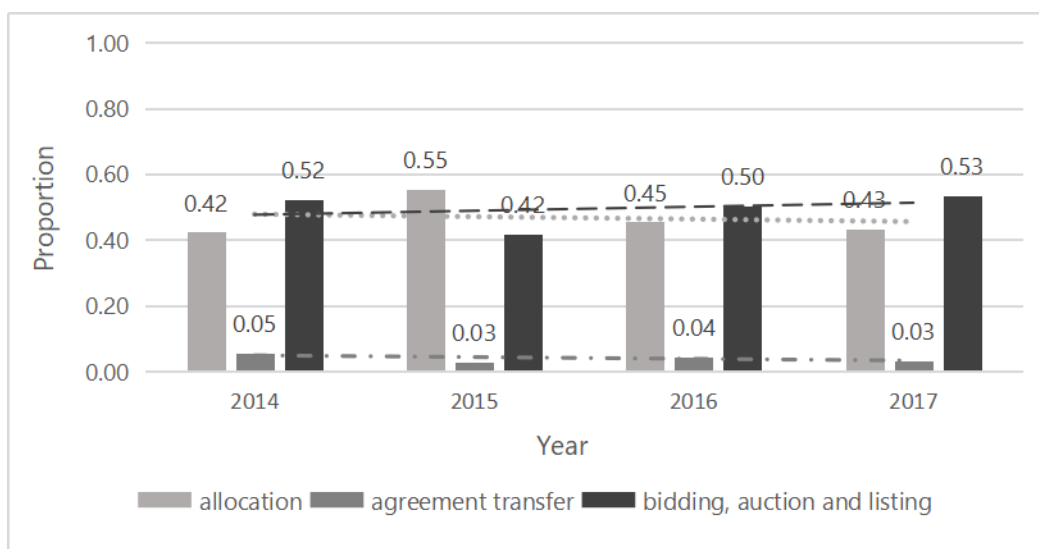


Fig.2 Proportion chart of state-owned construction land transfer methods in Beijing-Tianjin-Hebei from 2014 to 2017

Third, the market development synergy is deficient. The integration of the regional market means that commodities and factor resources can flow freely across regions, which ultimately manifests as a characteristic phenomenon of regional commodity price convergence (Li Xiaoxin, 2020). The same is true for the land factor. Whether the price of land factor is convergent is an important indicator in examining the synergy and integration degree of the regional land factor market. However, since 2014, in Beijing, Tianjin, and Hebei, whether it is commercial service land, residential land, or industrial land, Beijing has the highest land price, followed by Tianjin, and last in Hebei.<sup>5</sup> Especially for commercial service land and residential land, the land price gap between

<sup>4</sup> Data source: 2015-2018 China Land and Resources Statistical Yearbook, <https://data.cnki.net/>.

<sup>5</sup> For example, in 2014, the annual prices of commercial service land, residential land, and industrial land in Beijing were 44,946 yuan, 46,426 yuan, and 2,256 yuan per square meter respectively, and the annual prices of the three types of land in Tianjin were 8,859 yuan, 6,073 yuan, and 822

Beijing, Tianjin, and Hebei first increased and then decreased, and the gap may continue to be stable; for industrial land, the land price gap between Beijing, Tianjin, and Hebei has not only not decreased, but has continued to increase as a whole. The land prices of commercial service land, residential land, and industrial land in these three places are quite different, and the price of industrial land has the weakest convergence feature, so the integration of the land factor market in the Beijing-Tianjin-Hebei region is relatively low. Moreover, compared with the price of commercial service land and residential land, the price of industrial land is much lower than the former two, which reflects that in the Beijing-Tianjin-Hebei land factor market, there is no lack of competition for resources by lowering the price of industrial land. There is still significant market segmentation in the factor market.

## (2) Government level

First, government services are inadequate. As the guider of the integrated development of the Beijing-Tianjin-Hebei land factor market, the government's service to the integration of the Beijing-Tianjin-Hebei land factor market lies in providing software and hardware guarantees. However, at present, the central government and the Beijing-Tianjin-Hebei government still have the concept of attaching importance to management and despising service. For example, in the dissemination of market transaction information, the release of land factor market transaction information on the government's official website is slow and incomplete. In terms of the market transaction system, there are barriers to the dissemination of market information, the government business process services for cross-regional transactions are not sufficient, and there are still areas where the supervision of land transfer is not transparent, which is not friendly to enterprises seeking cross-regional transaction opportunities. Finally, in terms of the planning and design of the integration of the land factor market, the original Beijing-Tianjin-Hebei land-use plan was planned until 2020, and it was centered on land use rather than the land market. The Beijing-Tianjin-Hebei region currently lacks long-term planning and a macro-layout for the integration of the regional land factor market.

Second, government intervention is stronger. Up to now, even if the collective commercial construction land can enter the market, the local governments of Beijing-Tianjin-Hebei are still the main suppliers and influencers of the primary market of urban land<sup>6</sup>. As shown by the above-mentioned land supply data, in 2017, the way of administrative allocation was still as high as about 43% (see Figure 2), accounting for a large proportion of urban land supply. The government's strong position in the supply of land factor, coupled with *the political promotion of local officials, is closely related to the economic performance of their jurisdictions, causing local governments to compete for economic growth* (Zhong Junwei & Lin Yongran, 2018), which often leads local governments to adopt local protectionism. After the implementation of the tax-sharing system reform, many good tax sources were distributed to the central government, and local governments were financially tight. At this time, *the land is the most valuable resource controlled by local governments, and land supply has become the main means to attract investment and obtain extra-budgetary revenue* (Wang Xiaobin & Shao Yanfei, 2014). When transferring state-owned land use rights, the government considers that the consumers of commercial service land and residential land developers are people in the region, and they must compete to purchase land use rights in the region. Therefore, local governments usually try their best to raise the price of commercial service land and residential land. On the contrary, in order to attract corporate capital and revitalize the economic vitality of the region, local governments often reduce the cost of enterprises by lowering the price of industrial land, thereby attracting investment, which is one of the reasons why the price of industrial land is lower than that of commercial service land and residential land (Tan Rong, 2021). All in all, under the circumstance that the development of the Beijing-Tianjin-Hebei land factor market is still relatively weak, the intervention of the tripartite governments is stronger, and they have not actively achieved full coordination with the regional land factor market, so they cannot promote the Beijing-Tianjin-Hebei land factor market development.

Third, intergovernmental conflicts of interest. Promoting the integration of the Beijing-Tianjin-Hebei land factor market involves both the local governments of the three regions and the central government. Between central and local governments, the risk of conflict of interest arising from the principal-agent relationship always exists. Generally speaking, *the principal-agent theoretical model consists of the following three factors: information asymmetry, contractual relationship, and conflict of interests* (Gao Xingmin,

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yuan per square meter respectively. Taking Shijiazhuang in Hebei as an example, the annual prices of three types of land in Shijiazhuang were 5,010 yuan, 3,836 yuan, and 690 yuan per square meter respectively. In 2020, the annual prices of commercial service land, residential land, and industrial land in Beijing were 25,370 yuan, 37,390 yuan, and 3,059 yuan per square meter respectively. The annual prices of the three types of land in Tianjin were 8,532 yuan, 9,465 yuan, and 1,119 yuan per square meter respectively, and in Shijiazhuang, they were 2,653 yuan, 2,461 yuan, and 779 yuan per square meter. Data source: China Land Value Monitoring Network, <https://www.landvalue.com.cn/>.

<sup>6</sup> For example, from 2001 to 2016, the permanent resident population in Beijing increased from 13.851 million to 21.729 million, and the construction land area increased from 4.386 million mu to 5.396 million mu; the permanent resident population in Tianjin increased from 10.0406 million to 15.6212 million, and the construction land area increased from 5.638 million mu. increased to 6.216 million mu. The growth rate of construction land in the two places is much lower than the growth rate of the population, indicating that the supply of construction land allocated by the governments of the two places is basically incommensurate with the size of the population. Local governments are still the main determinants of land use patterns, and they mainly determine the scale and direction of urban land use from their own interests. See Liu Yong, Wang Guanghui, and Liu Yang: *Current Situation, Problems and Innovative Mechanisms of Land Management Integration in Beijing-Tianjin-Hebei, in Reform of Economic System 2020 Issue 5.*

2012). When discussing and planning various matters concerning the integration of the Beijing-Tianjin-Hebei land factor market, the central government usually puts forward specific goals and requirements, and the tripartite local governments will make a commitment to the central government to implement the goals and requirements, then the two parties through the division of power such as things, people, money, etc., will eventually reach a contractual relationship. However, in reality, local governments can obtain high-quality land factor market information faster, and they are at the advantage of information asymmetry, while the central government is at a disadvantage, resulting in the emergence of *information asymmetry* (Jia Hongbo, 2020). Although the central government and local governments have reached a contract, the starting point of the former is to maximize the benefits of the Beijing-Tianjin-Hebei region as a whole or even the whole country, while the starting point of the latter is to maximize local benefits within the administrative region. There is a conflict of interest between the central and local governments. This conflict of interest may cause the previous contract formulation and information acquisition links to become useless to a certain extent, slowing down the integration of the Beijing-Tianjin-Hebei land factor market. In terms of deepening the coordination and cooperation of cities in the region among local governments, the Beijing-Tianjin-Hebei tripartite governments lack the awareness of cooperation and community, and the common interests of the three still need to be clarified.<sup>7</sup> In addition, because Beijing, Tianjin, and Hebei have a double gap in their political and administrative levels and economic and social development levels (Yang Zhiyun & Ji Shanshan, 2021), it is more difficult and complicated for the three regions to coordinate development in terms of land use.

The practical problems of the integration of the land factor market in Beijing-Tianjin-Hebei show that, as a result, the integration of the regional land factor market must be based on the market as a lasting driving force; and as a process, it must rely on the government's administrative behavior to fulfill. On the one hand, the central government and regional governments have taken some action to actively provide guidance and services; on the other hand, they do not act indiscriminately, intervene moderately, and give full play to the market initiative. If there is no strong impetus from the government, the integration of the regional land factor market will not be able to quickly get on the right track. The active and non-disruptive actions of the promising government, as well as the full cooperation between governments, are the inevitable requirements to promote the integration of the regional land factor market.

#### 4. Results and Discussion

In view of the existence of the administrative hierarchy gap between Beijing, Tianjin, and Hebei, the administrative factors for the integration of the land factor market in the region are more complicated, and the relationship between the government and the land factor market is more prominent. Therefore, the practical problems of the relationship between the government and the integration of the land factor market in the Beijing-Tianjin-Hebei region have more reference significance. In order to rationally allocate land element resources in the region and better promote regional economic development, for the above-mentioned practical problems, corresponding measures can be put forward from three aspects: fostering a market with a good environment and providing comprehensive government services, fostering a market with full competition and moderating government intervention, and fostering a market with synergy and deepening government coordination.

##### 4.1 Fostering a market with a good environment and providing comprehensive government services

From the perspective of the hardware facilities of the market environment, the government must strengthen the role of information technology in the integrated development of the land factor market. Specifically, the government can stimulate the enthusiasm of all micro-subjects in the market, urge market micro-subjects to consciously and actively build a land factor trading platform, and accelerate the development and application of big data in the establishment of a regional land factor integrated market. Technology-based enterprises take the initiative to research and develop, intermediary organizations seize business opportunities, and other micro-subjects provide scattered transaction information so that comprehensive market transaction information can be collected on the platform and can be sorted and processed. Finally, the platform is used as an intermediary to gradually visualize the invisible hand of the market and transmit the market information of the land factor to the demanders in the market so that the demanders can effectively make decisions based on this information, avoid risks, and reduce *foresight cost*, *observation cost*, and *confirmation cost* (Zhao Shugao & Li Zhen, 2021). At the same time, the government must effectively use the information transmitted by the platform to provide a new medium for the integration process of its observation and analysis, especially for the central government to monitor the local and regional land factor market condition, thus reducing information asymmetry between central and local.

<sup>7</sup> For example, the price of industrial land and commercial service land in the districts and counties with development zones between the governments of the Beijing-Tianjin-Hebei region is lower than those without development zones, which shows that the development zones in the Beijing-Tianjin-Hebei region generally implement industrial land low-price supply strategy, and this phenomenon is mainly due to the low-price competition for industrial land between provincial development zones. See Xi Qiangmin, Mei Lin: Research on the Evolution Characteristics and Regulation Countermeasures of the Land Market in Beijing-Tianjin-Hebei, published in Hebei Academic Journal, No. 1, 2019.

In the software aspect of the market environment, the government needs to provide more and better services. First of all, there must be a unified land factor market transaction system in the region. A fair, open, and standard-consistent regional land factor market transaction system is a guarantee for preventing and supervising local protectionism, gray transactions, and other phenomena that interfere with the order of the regional land market, and also a guarantee for boosting regional land factor market transactions. The advanced planning and design of the integration of the regional land factor market are also extremely important, which depends on the government's high-level construction to point out its prospects and directions. Based on fully understanding the current situation of the regional land factor market, the relevant government must continue to take the overall development of the region as the goal, make an overall plan in line with the current situation of the regional land factor market, make a detailed annual utilization plan, and develop overall planning of land and space utilization, etc. Planning plays a leading role, and design plays a maintenance role. With planning, the integration of the regional land factor market can have goals; with design, the regional land factor market integration can have guidelines. Designing an effective land factor market transaction system and formulating a reasonable regional land factor market plan are the main service contents of the relevant government.

#### ***4.2 Fostering a market with full competition and moderating government intervention***

*In order to enable enterprises to spontaneously enter and select industries and technologies that conform to the factor endowment structure, the price system of the economy must reflect the relative scarcity of factors, and only a competitive market can do this* (Lin Yifu, 2012). In a fully competitive market, the main body of competition cannot be singled. Especially for the urban land factor market, the original main body of supply is the government itself, to be precise, the local government itself, while the rural land can only enter the market through unfair land acquisition. However, the entry of collective commercial construction land into the market has broken the local government's monopoly on the supply of the land factor, and the market entities of the land factor are more abundant. Therefore, to make this market competition sufficient, it is also necessary for the government to do a good job in the relevant institutional arrangements for the entry of rural collectively-owned commercial construction land into the market. In addition, special attention should be paid to the low degree of marketization and many restrictions of the current homestead. Homestead is an important aspect of the government's implementation of the market-oriented reform of land factor, and it is imperative to deepen the reform of the homestead market. In general, since the market-oriented system of relevant rural land that can enter the market is not yet mature, the government should continue to explore and practice specific implementation methods.

In addition to the competition subjects, in terms of the supply of land factor, it is necessary to reduce the stronger intervention of the government. First of all, in addition to the requirements for reducing the allocation of non-public-welfare land, it is necessary to formulate the conditions and scope for allowing the government to allocate directly and gradually reduce the proportion of allocated supply in the supply of regional land factor. Secondly, although the bidding, auction, and listing system is a highly market-oriented supply method, there is still room for some local governments to operate, which is especially reflected in the process of corporate bidding. Therefore, the central government needs to take the initiative to improve the bidding, auction, and listing system. Finally, after the land is sold, the government must make the company strictly abide by the contract and monitor that the company must not delay the development and construction date or fail to comply with the planning and construction requirements in the contract.

#### ***4.3 Fostering a market with synergy and deepening government coordination***

In enhancing synergy, it is necessary to focus on strengthening synergy between governments. For the central and local governments, the traditional principal-agent relationship in the integration of the regional land factor market is no longer suitable for the requirements of the new era and new scenarios. Specifically, the original principal-agent requirement of the times was to improve the economic level. However, since the 19th National Congress of the Communist Party of China, the requirements in the new era and new conditions have more often referred to the adequacy and balance of regional and field development, and the original principal-agent mechanism has been unable to adapt to the demands of the new situation. Therefore, in addition to formulating regional development goals as a whole, the central government also needs to re-formulate other incentives and constraints in the principal-agent mechanism and build a principal-agent mechanism under new scenarios. This requires the mechanism to aim at the in-depth integration of the regional land factor market so as to promote the overall development of the region, reduce the weight and status of economic indicators in the comprehensive performance evaluation, and emphasize the level of local government's cooperation with the development of the regional land market is reflected in the performance of the government. In terms of financial power and power of affairs, it is necessary to rationally adjust the proportion of central and local income distribution and expenditure structure so that local governments no longer regard scarce land as a golden cave for local fiscal revenue. In terms of supervision, it is far from enough to rely solely on the central government to hold local governments accountable. It is also possible to rely on peer-level supervision, people's congress supervision, and public supervision and combine explicit monitoring through document data with implicit field investigations for evaluation.



Regarding the multi-party local governments in the region, it is necessary to take the common interests as the foundation, deepen their awareness of the community of interests, break their *one acre and three parts of land* mindset, and *promote the local interest relationship from conflict of interests to complementary interests and integration of interests* (Wang Hongmei, Xing Hua & Wei Renke, 2016), so that local governments realize that the realization of the current regional land factor market integration is conducive to the upgrading and optimization of the industrial structure of each administrative region. In the future, with the help of the integration of the land factor market for regional coordinated development, each administrative region will gradually become a development community and a community of interests by virtue of its connected geographical location, long history of exchanges, and today's interest integration and cooperative development. Based on these common interests, the central government and the multi-party governments in the region are continuously integrated to seek flexible and diverse cooperation and win-win models, to resolve the contradiction between the overall development of the region and the local self-development, and reverse effect on reducing regional land mismatch and industrial duplication, strengthen the synergy of land policies, and achieve unified planning, unified principles, and unified testing.

## 5. Conclusion

In order to achieve better and faster coordinated development of the region, the land factor carrying transportation, industry, and natural resources must be effectively allocated. However, this goal requires the government to be proactive in gradually removing the obstacles to the integrated development of the land factor market in the region. Discussing the influence of the government on the integration of the regional land factor market is conducive to analyzing and pointing to how the promising government in practice plays its role and how to coordinate with the regional land factor market so as to provide guidance on how to promote the integration of the regional land factor market. It provides a realistic path and responds to the needs of the market-oriented reform of land factor. This enriches the research content of this proposition to a certain extent. At the same time, outside the Yangtze River Delta and Pearl River Delta regions, the Beijing-Tianjin-Hebei region is selected as an example to broaden the scope of the research area of this proposition, which can provide some theoretical reference for other regions to solve problems involving government behavior in the process of implementing the goal of regional land factor market integration. Not only that, although this paper takes the integration of the regional land factor market as the research object, it also deepens the understanding of the theory of the relationship between the government and the market and the coordinated development of the region. In fact, thinking about how the government is effective and how to coordinate with the market in the integration of the regional land factor market means that the perspective of regional development has changed from the economic field to the management field, more specifically, from the economic development concept to the national governance concept, which is an important manifestation of striving to modernize the national governance system and governance capacity. In a word, from the perspective of government behavior, this paper puts forward the idea of promoting the integration of the regional land factor market to contribute to the coordinated development of the region and the realization of good governance in the region.

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