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The Experience of Foreign Land Readjustment for China's Construction Land Consolidation

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Abstract At present, China is facing rapid economic and social development as well as the shortage of land for construction. In fact, various countries and regions are faced with similar problems in the process of urbanization and industrialization, and the land readjustment is often adopted for construction land consolidation to promote economical and intensive land use and solve the supply and demand conflict of construction land. Based on the land readjustment experience of Germany, Japan, China Taiwan and South Korea, we perform a comparative analysis on the implementation background, concept, purpose, procedures and core principles, and borrow ideas from their experience, in order to provide a reference for China to adopt suitable land readjustment tools during construction land consolidation.

Key words Foreign land readjustment, Experience, Construction land consolidation

1 Introduction

There are differences in the system, national conditions and resources between the overseas countries and regions, but in the rapid development process of urbanization and industrialization, they are also faced with similar problems such as shortage of land for urbanization, land acquisition contradiction, uneconomical land use within city and insufficient government investment in infrastructure. To solve these problems, these countries and regions establish a land use pattern for urban development through legislation-land readjustment, significantly different from government's expropriation of land for supply. It is called land readjustment in Germany, land consolidation and zoning in Japan and South Korea, and urban land consolidation in China Taiwan. With the continuous advance of new urbanization of China, the urban-rural dual structure is facing the breakthrough, and the transfer of rural collective construction land is gradually put on the reform agenda. Land readjustment is seen as an efficient way to ensure the needs of land for public services and facilities, and promote efficient and intensive construction land use; it can reasonably promote the efficient consolidation and full utilization of urban and rural construction land. In this paper, we perform a comparative analysis on the implementation background, concept, purpose, procedures and core principles of land readjustment in Germany, Japan, China Taiwan and South Korea, in order to provide a reference for China to adopt suitable land readjustment tools during construction land consolidation.

2 Germany

Since the land problems shifted from the fragmentation of agricultural land to the regional development imbalances and deterioration of ecological environment, Germany's land readjustment has gone through the following four stages: combination of agricultural land (from the 16th century to the 19th century); rural infrastructure improvement (from the early 20th century to World War II); integrated rural consolidation (from World War II to the early 1970s); comprehensiveness land readjustment (from the early 1970s). Strictly speaking, Germany's land readjustment is a way to obtain the urban construction land, different from traditional eminent domain or voluntary exchange through the property market. Its initial purpose was to improve production conditions and agricultural quality in order to meet the requirements of mechanized farming. Subsequently, with the economic development, the plots were redistributed for construction. Now, it turns to strengthening the protection of the natural environment and landscape and improving people's living environment. Germany's land readjustment can be roughly divided into four stages: (i) preparation: data collection and collation; selection of land consolidation area; comprehensive coordination of existing plans; preliminary planning of agricultural structure; soliciting opinions from relevant departments; design and implementation of planning scheme after being approved by the government; (ii) planning and designing: specific planning; construction design; (iii) implementation: construction of public facilities and major projects; division and readjustment of new plots; measuring according to the new plots or setting out based on the boundary site coordinates of the new plots; (iv) ending: summarizing and collating the land consolidation data; delivering the cadastral data to Cadastral Agency and Land Registration Agency; holding the completion ceremony. In the land readjustment procedures, the core principle is to let every participant get the compensation claims equivalent to the original land

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value. The new land compensation should take into account the factors having a real impact on land to ensure the proper land value increment; the land compensation is first, followed by monetary compensation, and participants can decide their own compensation; the persons who acquire land compensation should take responsibility for the maintenance and management of fruit trees, bushes, relics, monuments, woods, fences, etc., preserved for the purpose of protecting natural resources and maintaining landscape.

3 Japan

Japan's land consolidation and zoning originated from Germany, aiming to resolve conflicts between rapid growth of the city and the lack of infrastructure in accordance with the limited land and financial conditions. It is essentially a way to advance the development of residential area by combining infrastructure building and residential land readjustment. Through a series of precise calculations, it derives the incremental value of various plots before and after the implementation of the project, adjusts the size and location of plots to obtain equal rate of returns, and uses part of income from investment to balance investment in infrastructure to achieve "self-funding". On the basis of protecting the rights and interests of land owners, Japan's land consolidation and zoning aims to carry out urban planning, channel social capital into infrastructure and increase the effective supply of urban land by consolidating the land being used uneconomically in the urbanized areas. Its procedures can be divided into eleven stages: (i) overall planning by the government; (ii) current land ownership study; preparing the control plan for the implementation areas; (iii) framing the control plan; (iv) surveying; preparing the specific implementation plan; holding the meeting between land owners and lessees; (v) approving and implementing the plan; (vi) establishing Land Zoning and Consolidation Community Committee; (vii) readjusting and redesigning the plots; (viii) developing and submitting the new land plan; (ix) infrastructure building; approving the land readjustment plan; (x) implementing the new designated land plan; (xi) transferring the infrastructure to the management departments; re-registration of property rights. The core principle is to use one part of the land for the construction of public infrastructure such as roads, parks and parking lots, and use the other part for the balance of funds. After balancing the project funds, the remaining part of land is returned to the original land owners.

4 Taiwan

Since the late 1950s, Taiwan's economy has developed by leaps and bounds, and it had completed the first modernization and started the second modernization by 2001. In this context, the regional population swarmed into city, and urban land use problems became increasingly prominent, so the land consolidation was high on the agenda. Taiwan's urban land consolidation can be defined as follows: In accordance with the urban planning program, a certain range of land in urban areas is readjusted and rearranged for

the establishment of a variety of public facilities, and after deducting the land for public facilities and the land required to offset the project costs, readjustment expenses, loan interest and other costs provided by laws, the original land is grouped into the land with neat shape by land division and exchange, and reassigned to the original land owners. The land after being readjusted can be immediately available for construction use. In decades of continuous development, Taiwan's land consolidation target shifted from simple cadastral management to cadastral management coupled with allocation of necessary public facilities, and then to an important means of access to the land for public facilities, reflecting different positioning of urban land consolidation at different stages of development in Taiwan. In general, Taiwan's land consolidation can be divided into ten stages: (i) selection of readjusting areas; (ii) formulation, checking and ratification of readjustment plans, and announcements; (iii) measuring, surveying and land price check and estimate; (iv) compensation for demolition of land improvements and construction; (v) burden computation; (vi) assignment design; (vii) claim cleanup; (viii) cadastral readjustment; (ix) exchange and settlement; (x) financial settlement. The core principles include the principle of the minimum area for distribution, the principle of land distribution based on original order, the principle of combined distribution, the principle of common land distribution, and the principle of dominating public land and the land for offsetting costs. After being involved in the urban land consolidation, the distributable land area is calculated as follows:

The distributable land area after urban land consolidation = the area before readjustment – general burden area – main street burden area – side street burden area – expense burden area.

The calculation methods include area-based computing method, evaluation-based allocation approach, and compromise allocation computing method.

5 South Korea

With the industrialization and urbanization process, South Korea has experienced the evolution from the land consolidation and zoning implemented through land exchange (1960 – 1979), to public development characterized by overall acquisition and expropriation (1980 – 1987), and finally to the coexistence of land consolidation and zoning and public development (1988 – present). The land consolidation and zoning project based on land exchange is to use the land exchange, division and combination to ensure the provision of land for public facilities, expansion of housing supply and consolidation of land for city streets, without changing the land right relations; public development project is a land development mode adopted by the government or public agency to sell or lease the land to those in need after the acquisition or expropriation, development and consolidation of land, and building houses in accordance with the laws. Through the land exchange and division, South Korea's land consolidation and zoning project aims to develop and supply residential land, and provide public infrastructure. The public development projects adapt to the central

government's housing supply plan with the purpose of rapidly and effectively developing inexpensive residential land. The land consolidation and zoning project can be divided into four stages: (i) determining the scope of land development; (ii) framing the land use plan; (iii) allocating the land for public infrastructure and the land for offsetting development costs; (iv) redistributing the remaining land to the original land owners within the implementation areas according to the original ownership proportion. The implementation of public development projects can be divided into four stages: (i) determining the residential land development areas; (ii) land acquisition; (iii) land development and residential land supply; (iv) development project management. In the process of South Korea's land consolidation and zoning, the core principle is that land owners' 30% of land is used for construction of public facilities, and 10% of land is sold to pay for consolidation costs. The land is used to take part in exchange, division and combination, and it does not involve land compensation, but a portion of land revenue will be reserved for public housing subsidies. The land for public facilities, in conjunction with the land for offsetting the project costs of land consolidation and zoning, is borne by the land owners in accordance with the amount of their land. In the public development projects, the land within residential land development areas and the construction land for rental and public housing shall be provided to those in need at the price less than actual cost. The ordinary residential land and the land for public facilities shall be provided at the cost price to "agreement transferees"; the separate residential land and the public facility land for commercial profit shall be provided at the highest bid price to land buyers.

6 Lessons and recommendations

6.1 Land readjustment is an effective way to solve the contradiction between human and land in development Despite different national conditions and different definitions of land readjustment, all countries readjust land in the context of protecting land owners' rights and interests, aiming to carry out urban planning, channel social capital into infrastructure and increase the effective supply of urban land by consolidating the land being used uneconomically in the urbanized areas. By reserving the "land for offsetting costs" or taking other land distribution measures, the economic value of inefficient land is activated, and the funding problems for land readjustment are resolved.

6.2 Clear ownership is conducive to land ownership readjustment and value distribution Whether it is in Germany, Japan, China Taiwan, or South Korea, land has clear property rights, and if China carries out the land readjustment project, the land exchange and ownership change during the process of consolidation is bound to affect the interests of land users. Therefore, it is necessary to clarify the relationship between land ownership readjustment and land income distribution, and link the distribution of benefits after readjustment with the readjustment work, to fully

mobilize the enthusiasm of stakeholders for participation, and promote just and equitable land development.

6.3 Sound laws and regulations are important to the implementation The land readjustment in Germany, Japan, China Taiwan and South Korea all starts from the development of relevant laws. They use the rule of law to restrain and guide management, and form a complete legal system of land management. The land readjustment activities currently implemented in China, are all the operating procedures established based on local conditions, and the government lacks clear land consolidation policies and regulations, so there is great maneuverability in the specific operation. To make land readjustment work smoothly, it is necessary to lay down the relevant laws and regulations concerning land consolidation, and make clear provisions on the content, objectives, procedures, planning, funding sources as well as punitive measures about land consolidation.

6.4 Diversified financing channel is an important guarantee for the implementation of land readjustment Each country has many financial measures for land readjustment. The single channel of funding has become a major obstacle to the smooth construction land consolidation in China. The governments provide limited funds for construction land consolidation, and banks and other financial departments have weak ability to take risks, affecting the investment in consolidation and implementation process. In addition, the land readjustment input and output are mismatched, which also deepens the difficulty in financing operation. Therefore, we can learn from the experience of various countries to establish a variety of financing channels through "land for offsetting costs" for fund balance and financing risk reduction, in order to ensure the smooth implementation of land readjustment.

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