Analysis on Updated Results of Benchmark Land Price in Small Towns — A Case Study of Downtown in Xichong County, Nanchong City

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Abstract. As an important constituent of Chinese urban land price system, benchmark land price is the basis of land price evaluation in China. Taking downtown of Xichong County, Nanchong City as an example, this paper calculates the benchmark land price in the downtown of Xichong County by combining the land classification ranking and benchmark land price. According to the analysis of the updated results, the benchmark land price in Xichong County at each level is as follows: commercial land > residential land > industrial land, and 2017 > 2011. Based on the comparison of the standard land price of some counties in Nanchong, commercial land: Langzhong > Nanbu > Xichong; Residential land: Langzhong > Xichong > Nanbu; Industrial land: Langzhong > Xichong > Nanbu. The updated benchmark land price results of Xichong County are basically consistent with the local social and economic development level, and the standard price of industrial land meets the requirements of relevant documents. Therefore, the updated results of benchmark land price in Xichong County are scientific and reasonable.

1. Introduction
Benchmark land price refers to the basic standard land price of state-owned land in cities and towns. That is, in accordance with the scientific assessment methods, according to various land types, land transactions and real income in towns, the average price of commercial land, industrial land, and housing land in land range at different levels or homogeneous areas is assessed in a certain period[1]. It reflects the general level and spatial distribution of urban land price. According to benchmark land price, the country implements macro control and management of land prices in the real estate market. Meantime, it is also the basic standard for the state to levy the tax on land use and participate in the distribution of urban land revenue[2] [3]. The rapid economic development in small towns accelerates the pace of urbanization in China. In recent years, with the promotion of the new rural construction, urban and rural integration, new industrialization and major construction projects, the economic level in the county has been continuously improved. Particularly, land transactions have become increasingly active, and rural construction land circulation has been increased. Therefore, it is particularly important and urgent to determine the scientific and reasonable benchmark land price of small towns[4] [5], which is a unified criterion and key work to coordinate the price of all kinds of land parcels[6].

2. Regional survey
Xichong County is located in the center by north of Sichuan Basin, the watershed between the Jialing River and the Fujiang River. The geographic position is in 30°52′04″~31°15′07″N and 105°36′04″~
106°24′07″E[7]. It is in the back zone of the Jialing River and the Fujiang River, and belongs to shallow hilltopography. The terrain is high in the northwest and low in the southeast. The mountains range from north to south, and the altitude is 256–889 meters, belonging to the middle subtropical humid climate zone of Sichuan Basin. The update area of urban standard land price in Xichong County is 17.79 km², including the built-up area and the planning area. Xichong County is under the administration of Nanchong city, Sichuan Province. The abundant labor force and low land price create a good development condition for the industrial diffusion in Nanchong City and the industrialization development in Xichong County.

3. The methods and purpose of urban benchmark land price updating in Xichong County

3.1. Methods
According to Regulation for Gradation of Urban Land (GB/T 18507-2014), the land grading factors that affect land types (commercial, residential, and industrial) are selected to calculate the factor action score[8]. According to the weight determined after grading various factors by several experts, the factor function scores are superimposed in the coordinate network of the entire grading range. According to the total score after the superposition, the total score frequency curve method is adopted to preliminarily divide the land grade based on the score frequency histogram, and the land grade is verified by the differential income of land. According to Regulation for Valuation of Urban Land (GB/T 18507-2014), in the benchmark land price assessment, according to the land price data of the real estate market in Xichong County, the principle and method of land price calculation are employed to calculate the sample land price of the land use type in each grade and the benchmark land prices at all levels with the classified land level as the unit.

3.2. Purpose
With the establishment of the objective model of the socialist market economic system reform in China, the system reform of the paid use system of urban land has been continuously deepened, which not only realizes the land ownership and the rural collective land ownership economically, but also promotes the clarification of the land property right and forms market circulation by continuous decomposition. This effectively enhances the effective management of land resources and the efficient use of land assets. Land value and land price management should be based on scientific urban land grading and evaluation. The important significance and function of urban land grading and benchmark land price evaluation are as follows: (1) Conducive to maintaining the normalization, institutionalization and healthy development of land market management; (2) Promote the implementation of the overall land use planning; (3) Enhance the implementation of the national macro-control policy.

Urban land price is the inevitable outcome of urbanization and economic development, which is determined by the scarcity and non-mobility of land. As a fixed production factor, the land has formed a dynamic market. Strengthening land price management and control is not only an important prerequisite to ensure the rational and orderly development of urban land, but also a vital means to regulate land transaction and manage the land market. In addition, scientific and reasonable formulation and updating of benchmark land price are an intensive and efficient use of land, and the important basis for tax collection and calculation of land value. Therefore, it is very important and necessary to scientifically and reasonably define land price.

4. Results and Analysis

4.1. Connotation, basic condition and expression of benchmark land price
The dynamic land quality grade and land price change with time and affect land factor and land price[9]. Therefore, the results of grading and evaluation should be determined on a unified date so as to ensure the comparability of sample land prices and results[10]. Considering the base data requirements for formulating annual land price index, the urban land grading and valuation reference date of Xichong County is set at January 1st, 2017.
Taking into account the convenience and availability of the benchmark land price results, the benchmark land price evaluation unifies urban land development degree as “Six-accessible to and one-leveling ” beyond the parcel according to the actual condition of Xichong County. The use year of various types of land in Xichong County is set as the statutory maximum age according to Land Management Law of the People's Republic of China, namely, land use year: 40 years for Commercial land, 70 years for residential land, and 50 years for industrial land. In accordance with parcel control index of Overall Planning of Xichong County, combined with the investigation and measurement of commercial, residential and industrial land samples in Xichong County, the average volume rate of the updated benchmark land price is 1.8, the average volume rate of residential land is 1.8, and the average volume rate of industrial land is 1.

4.2. Analysis of the benchmark land price update results

4.2.1 Analysis of benchmark land price level of different land types With the change of land location, land prices of various land types at different levels show obvious changes, and the land price decreases from the center to the outside. These changes are mainly caused by not only differences in the prosperity and infrastructure of the region, but also market factors. Generally, the grade boundaries of the benchmark land prices in different land types in a town are different because of the different degrees of the influence factors of each land type. As shown in Table 1, the levels of land in Xichong County: commercial land>residential land>industrial land.

| Use            | Class | Value (RMB/m²) | Area (m²) |
|----------------|-------|----------------|-----------|
| Commercial land| I     | 3150           | 1110161.5 |
|                | II    | 2070           | 3640780.2 |
|                | III   | 1260           | 3932223.5 |
|                | IV    | 825            | 9113642.7 |
|                | I     | 1455           | 3291192.2 |
|                | II    | 1080           | 4300880.3 |
| Residential land| III   | 825            | 3482593.7 |
|                | IV    | 540            | 6721141.7 |
|                | I     | 450            | 1077517.3 |
|                | II    | 330            | 3593962.7 |
|                | III   | 225            | 6066661.1 |
|                | IV    | 142            | 7058661.8 |

Generally speaking, the land price of commercial land is most sensitive to the location condition[11]. Urban commercial land price in Xichong County changes in the range of 825~3150 CNY/m². Compared with residential land and industrial land, the changing amplitude of commercial land is the largest at each level. The urban area is the commercial center of Xichong County, and the location factors (the prosperity of agglomeration factors and business services) are better. The revenue of commercial land is higher than that of residential land and industrial land. Most residential buildings are mainly built or renovated by self-raised funds, and the affordability of units and individuals is lower. The commercial housing market is not active enough. Most of the industrial enterprises in the town suffer loss, and the re-development ability is poor. Therefore, the price of residential land and industrial land is relatively low.

The variation range of benchmark land price of residential land is 540~1455 CNY /m². Land prices at various classes are smaller than commercial land and larger than industrial land. The first class residential land belongs to the commodity building in the central area. Therefore, the prices are significantly higher than the second, third and fourth classes of residential land. In the first and second classes of land, the benchmark land prices of commercial land and residential land vary greatly. As the
class falls, the gap becomes smaller. This is related to the sensitivity of different land types to the location of lands. The variation range of benchmark land price of industrial land is 142~450 CNY/m². The sensitivity of industrial land to land location is the lowest, and the industry is concentrated in industrial parks of Xichong County, and is remote from the center area. Therefore, the benchmark land price of industrial land is the lowest, and the variation range is the smallest. According to Notice on Promulgation and Implementation of the Lowest Price Standards of Industrial Land Transfer in China, the lowest standard of industrial land transfer in Xichong County is 84 CNY/m². In the benchmark land price update, the benchmark land price of the last class of industrial land in Xichong County is 142 CNY/m², which is higher than the minimum standard. Therefore, the benchmark land price of industrial land meets the requirements of the document.

4.2.2 Comparison with the previous benchmark land price level In the last round of benchmark land price assessment, the land volume rates of the three types of lands are as follows: the volume ratio of commercial land is 2.1, the volume ratio of residential land is 2.1, and the volume ratio of industrial land is 2.1. The base date of assessment is January 1st, 2011. Because of different volume rates of the two rounds of benchmark land price in Xichong County, in order to make the achievements of the two rounds more comparable, the connotation of the benchmark land price is unified. The benchmark land prices in the two rounds are converted to land price per floor area, and the results can objectively reflect the changes in the level of land use prices.

According to the comparative analysis of the two rounds of benchmark land price and floor price results, as shown in Figure 1, all kinds of land price per floor area in Xichong County have significantly increased. The growth rate of commercial land price decreases first and then increases. In particular, the growth rate of the fourth class of commercial land prices increases the most obviously, with an increase of 21.94%. The growth rate of residential land price gradually decreases with the decline of the class. The growth rate of the first class of residential land prices increases the most obviously, with an increase of 37.58%. The growth rate of industrial land price increases first and then decreases with the decrease of class. The growth rate of the second class of industrial land prices increases the most obviously, with an increase of 39.50%.

After the benchmark price formulation for five years in 2011, the social economy in Xichong County has steadily developed, which promotes the development of real estate market and drives the rise of the price level in Xichong County City. This is mainly reflected in the increase of all levels of land price per floor area of commercial land, residential land, and industrial land. Because of the adjustment of urban planning, the extension of the urban area, the enhanced intensity of land use, and the higher cost of land expropriation and house demolition in recent years, the cost of land acquisition is increased. Therefore, the price of the fourth class of commercial land changes the most obviously. Residential land price growth is most evident in the first class of residential land. Due to the rapid development of real estate market in Xichong County in recent years, which is the most obvious in the residential location (traffic and public infrastructure), the growth rate of the first class of residential land is the largest, and the growth rate of the second class of industrial land is the most obvious. In recent years, since the establishment of Industrial Park in Xichong County, the public facilities are further improved, which enhances the land curing degree and optimizes land location condition. Moreover, the industrial park is mainly located in the second class area with convenient transportation and favorable topographical conditions, and the growth rate of land price in the second class of industrial land is the most obvious.
4.2.3 Comparative analysis of benchmark land price level in different regions

The benchmark land price updates in different counties in Nanchong are basically synchronous with the horizontal comparison. By comparing the overall level of benchmark land prices in some counties in Nanchong, the difference in the overall regional analysis of benchmark land price in Xichong County is analyzed to judge the rationality of the overall level of benchmark land price. As a result of different volume rates in various counties, this paper calculates the land price per floor area to intuitively judge the price difference between Xichong County and other counties. Meantime, the overall land price level of four cities and towns is calculated according to the weighting of areas at each class.

As shown in Table 2, the commercial land Langzhong>Nanbu>Xichong, Langzhong is the county-level city of Nanchong County, and tourism has risen in recent years. Therefore, the price of commercial land is higher than that in Nanbu and Xichong. The price of commercial land in Xichong County is the lowest, and the business prosperity is slightly lower than that in the other two counties. The urban area is smaller, and the population is the least. As for residential land, land Langzhong>Xichong>Nanbu, the development of the ancient city in Langzhong promotes the rapid development of the real estate industry. The beautiful environment attracts most people settled here, and the real estate market in Xichong has become more active in recent years. For industrial land, Langzhong>Xichong>Nanbu, the establishment of Xichong Industrial Park has introduced a large number of industrial enterprises. The development of vegetable and fruit industry increases the processing enterprises of fruits and vegetables. Therefore, the benchmark land price of industrial land in Xichong is higher than that in Nanbu.

Table 2. The comparing the results of the part of county in Nanchong

| county  | commercial land | residential land | industrial land |
|---------|----------------|------------------|----------------|
| Langzhong | 1286           | 1034             | 463            |
| Nanbu    | 983            | 428              | 279            |
| Xichong  | 734            | 497              | 330            |

5. Conclusion

According to the statistical results, we can find the difference of benchmark in time and space in Nanchong County, and the necessity to update the benchmark price in Xichong. In the meantime, the research results show that the updating of the benchmark land price in Nanchong County is in line with the actual development of the local economy. The lowest price of industrial land conforms to the relevant regulations of the state. The update result of benchmark land price in Xichong County is scientific and rational, and the update results can provide a reference for latter research. The timely updating of benchmark land price has an inevitable connection with the regional economic development, and the rationality of the price also plays an important role in promoting the process of urbanization. However, the data collection and calculation in the benchmark land price update consume a great deal of manpower and financial resources. Therefore, the method of determining the benchmark land price needs to be further explored so as to provide more accurate and convenient ways to obtain scientific and reasonable results.

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