

Research on Spatial Difference and Evolution of Industrial Agglomeration of Characteristic Towns in China: Evidence from Chinese Yangtze River Delta and Pearl River Delta

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Abstract:

As a new type of industrial innovation platform and an industrial agglomeration form combining industry with environment-friendly urban construction, characteristic town's construction is emerging in China in recent years. However, as a new thing, the relevant theoretical system has not yet been formed and provided the theoretical basis for policy making. To this end, this paper uses statistical and spatial economic geography research methods, analyzes industry agglomeration degree and speed, spatial correlation and difference of time-space evolution of the different types state-level characteristic towns in China's Yangtze River Delta and Pearl River Delta, it will help break through the administrative division limit, and is beneficial to analyze the relationship between characteristic towns and the overall economic development of the region based on the middle level, according to the inner link of the development of industry, in the context of regional economic integration. Compared with the previous research focus on characteristic town cases and evaluation index system, it is the beneficial attempt to promote the systematic development of existing research on the characteristic towns, is advantageous to the government management department to put forward certain operability countermeasures from the actual situation of the regional and industrial development, and also is a certain theoretical preparation for the future in-depth study on the inner mechanism of the characteristic towns and the regional development.

Keywords: *Industrial agglomeration, Spatial relations, Characteristic towns, Environmental Friendliness.*

I. INTRODUCTION

In 2016, it was clearly raised in China that it is needed to develop small towns with distinctive characteristics, integrated industries and cities, and full of charm [1]. The development of characteristic town is in a new period of opportunity. Characteristic towns have become the link to promote the new type of urbanization and coordinate the large and small towns development. Provinces and cities in China have introduced policies, and regions have set off a construction boom. Under the normal development of new economy, urbanization process of China has moved from pursuing speed only to pursuing speed and quality.

After “one village with one industry” and a large number of township and village enterprises gathering, the problems and the contradiction of industry system structure, the source of funds, talent introduction and ecological environment are becoming more and more prominent. The key to solve the problem lies in the industrial agglomeration effect and the impact of spatial correlation of the characteristic towns, which are very important to high quality and sustainable development of characteristic towns. As a new industrial development platform and innovation carrier, characteristic towns in China have a relatively shorter development period, and the relevant research and practice is relatively insufficient.

Therefore, this article will take the state-level characteristic towns in the Yangtze River Delta (YZD) and Pearl River Delta (PRD) as the objects, study the different types of industry agglomeration levels of characteristic towns, time and space differences and evolution characteristics, and expect to enrich the existing research results to the reasonable layout and regional integration development of characteristic towns from a new research view to provide the reference.

II. REVIEW OF LITERATURE

The characteristic towns prospered in Zhejiang province in China, regarded as the inevitable results of the development of massive economy and industrial agglomeration, the internal requirement of regional economy from investment-driven to innovation-driven, and an emerging industrial spatial organization form [2]. The typical form of economic and geographical agglomeration in China has experienced county economy, development zone economy, industrial agglomeration area and characteristic towns successively. As the fourth economic geography form since the reform and opening up, characteristic town is also one of the main economic geography forms in the new era [3]. Since July 2016, the Ministry of Housing and Urban-Rural Development of PRC (MHURD) has announced 403 characteristic towns of state-level in two batches, and 979 provincial-level characteristic towns have been announced by all provinces. City-level and county-level characteristic towns are also being actively created, with a total of more than 2,000 planned [4]. So the characteristic towns' number and scale have reached a new high, and the industrial agglomeration and spatial agglomeration of characteristic towns are bound to produce a certain degree of correlation.

From the early labor division theory, industry and market location theory, growth pole theory to the recent new economic geography theory, the research scope and methods of industrial agglomeration have shifted from local analysis to spatial analysis [5-7], providing a

theoretical basis for in-depth analysis of the situation of domestic characteristic towns under the new construction scale. Domestic scholars' research trends on industrial agglomeration in characteristic towns are shown in the following two aspects: First, they pay attention to the nature of industrial agglomeration in characteristic towns. The new normal economy makes it difficult for the original industrial development model to meet the current needs. The characteristic town provides the direction for the upgrading of the original industrial model and regional economic development [2], making it a distinctive and important carrier for the new industries development and growth [8]. The characteristic towns take industry and innovation as their essence and core [2]. It is emphasized that industrial agglomeration area or innovation agglomeration area has the spatial boundary. The second is to start to analyze the spatial distribution of characteristic towns. Domestic scholars try to use the spatial analysis method of economic geography to analyze the group characteristics of characteristic towns in Hangzhou [9], spatial distribution characteristics of state-level characteristic towns [10], spatial pattern and competitive advantage [11], and exploration of development potential evaluation methods [12].

As a summary, although existing studies have begun to focus on the industrial agglomeration and spatial relationship of characteristic towns, there is still a lack of studies on the combination of industrial agglomeration and spatial agglomeration of characteristic towns based on the nature of industrial characteristics of the towns, reflecting the integration of the towns and regional economic.

III. DATA AND METHODS

The research area covers Jiangsu Province, Zhejiang Province, Guangdong Province and Shanghai City, which represent the most developed economy and the largest and denser distribution area of characteristic towns in China. The state-level characteristic towns issued by MHURD in above mentioned area can be roughly divided into three types: 35 industrial characteristic towns (30 in YZD and 5 in PRD), 24 tourism characteristic towns (18 in YZD and 6 in PRD) and 6 agricultural characteristic towns (6 in YZD), and there are 65 characteristic towns in total.

This paper obtains the regional map of YZD and PRD from the National Basic Geographic Information Center (www.ngcc.cn), and draws on the data processing methods used by domestic scholars to study industrial agglomeration and regional agglomeration [12-15], and from China Statistical Yearbook (2016-2018), Jiangsu Statistical Yearbook (2016-2018), Shanghai Statistical Yearbook (2016-2018), Zhejiang Statistical Yearbook (2016-2018), Guangdong Statistical Yearbook (2016-2018), Basic State of Tourism Industry in Zhejiang Province (2016-2018), Statistical Bulletin on National Economic and Social Development in Jiangsu Province (2016-2018), Shanghai Tourism Industrial Statistical Yearbook (2016-2018) [16,17], and some relevant Websites: Chinese Characteristic Towns (www.tsxiaozhen.com), Chinese Characteristic Towns Cultivation (www.charmingtown.cn), Characteristic Towns (www.51towns.com), as well as the official website of characteristic towns of related provinces and cities and field survey data.

At present, the research methods of industrial agglomeration and spatial agglomeration in

China mainly include: Herfindahl-Hirschman Index (HHI), Location Quotient (LQ) and Moran's I [18,19]. HHI focuses on measuring industrial concentration, LQ on regional concentration, and Moran's I on spatial concentration. So this paper applies the above three research methods for multi-angle analysis.

3.1 HHI

HHI is a comprehensive index reflecting the degree of concentration of an industry in market, which is measured by the following formula:

$$HHI = \sum_{z=1}^n \left(X_z / X \right)^2 \quad (z=1,2,3\dots n) \quad (1)$$

In the formula, X_z refers to the total output of one industry in characteristic town z ; X refers to the total output of the industry in the whole province that the town is belonged. HHI value can represent the industrial centralization degree with the value scope of 0-1.

3.2 LQ

LQ can reflect whether one industry in one area has formed into professional degree and reflected spatial distribution, and formula is followed:

$$LQ = (x_{ij} / x_i) / (X_{ij} / X) \quad (2)$$

x_{ij} refers to the gross product of industry j in characteristic town i ; x_i refers to the GDP of characteristic town i , X_i refers to the total output of industry j ; X refers to the GDP in China. LQ can reflect industrial agglomeration level of the certain area, the higher LQ value, the higher regional industrial agglomeration degree. Generally speaking, if $LQ \geq 1$, it means one industry in the area is in high agglomeration state; if $0.5 \leq LQ < 1$, it means one industry in the area is in middle agglomeration state; if $0 < LQ < 0.5$, it means one industry in the area is in low agglomeration state.

3.3 Moran's I

Moran's I is frequently used to measure the spatial agglomeration of factors in the area as a whole and reflect the approximate degree of units in the spatial neighborhood [20-23]. The calculation formula is listed below:

$$I = \frac{n \sum_{i=1}^n \sum_{j=1}^n W_{ij} |X_i - \bar{X}| |X_j - \bar{X}|}{\sum_{i=1}^n \sum_{j=1}^n W_{ij} \sum_{i=1}^n |X_j - \bar{X}|^2} \quad (3)$$

X_i refers to GDP of characteristic town i ; X_j refers to GDP of characteristic town j ; $\bar{X}$ is the average of observation value; n is the total amount of characteristic towns; W_{ij} refers to the spatial weight matrix in binary system which is shown by 0 or 1 to define adjacent relation of spatial factors. The scope value of Moran's I is -1—1. The larger the absolute value of Moran's I , the larger the spatial correlation.

IV. RESULTS

4.1 The Industrial Agglomeration Degree of Characteristic Towns in YZD

4.1.1 HHI of Characteristic Towns in YZD

(1) HHI of industrial characteristic towns

The HHI value of the industrial characteristic towns in YZD ranges from 0.001089 to 0.015894 (as shown in TABLE I), indicating that the industrial characteristic towns in YZD have a low degree of industrial agglomeration. However, its HHI value showed an upward trend from 2015 to 2017, with an average annual growth rate of about 282.03%, which was obvious in 2016-2017.

(2) HHI of tourism characteristic towns

The HHI value of the tourism characteristic towns in YZD ranges from 0.000031 to 0.000036. The tourism characteristic towns in YZD appear very low industrial concentration degree, and the average annual growth rate is about 7.8% showing a slow growth speed. The year 2016 had the average annual growth rate of about 9.7%, and the year 2017 had the average annual growth rate of about 5.9%, which showed a slowdown in growth rate.

(3) HHI of agricultural characteristic towns

The HHI value of the agricultural characteristic towns in YZD is lower, that means the agricultural concentration degree is lower. And the decline of HHI indicates the concentration degree of agricultural characteristic towns keeps decreasing and even presents a negative growth trend, with the average annual growth rate of about -40.5%. In the high speed period of characteristic towns' development, the construction of agricultural characteristic towns is far inferior to the construction of industrial and tourism characteristic towns.

TABLE I. HHI of Characteristic Towns in YZD and PRD in 2015-2017

Year	YZD			PRD		
	industrial	tourism	agriculture	industrial	tourism	agriculture
2015	0.001089	0.000031	0.000017	0.000062	0.000052	-
2016	0.001482	0.000034	0.000015	0.001125	0.000104	-
2017	0.015894	0.000036	0.000006	0.0013	0.000136	-

TABLE II. LQ of Characteristic Towns in YZD and PRD in 2015-2017

Year	YZD			PRD		
	industrial	tourism	agriculture	industrial	tourism	agriculture
2015	0.176	0.013188	0.0019	0.033	0.003939	-
2016	0.192	0.01376	0.0018	0.134	0.004909	-
2017	0.576	0.016539	0.0011	0.136	0.004865	-

4.1.2 LQ of characteristic towns in YZD

(1) LQ of industrial characteristic towns

In 2015-2017, the LQ of industrial characteristic towns in YZD (as shown in TABLE II) is less than 1, but more than 0.5 in 2017. This indicates that from the perspective of regional industrial concentration, the industrial agglomeration degree of industrial characteristic towns in YZD was relatively low in 2015 and 2016, but the overall trend was accelerating

agglomeration, and a relatively significant moderate agglomeration was formed in 2017.

(2) LQ of tourism characteristic towns

In 2015-2017, the LQ of tourism characteristic towns in YZD is less than 0.5, it shows tourism concentration degree of the tourism characteristic towns in YZD was relatively low, but the average growth rate increased slightly from year to year which revealing an increasing trend, especially in 2016 and 2017 is about 20% with a large increase.

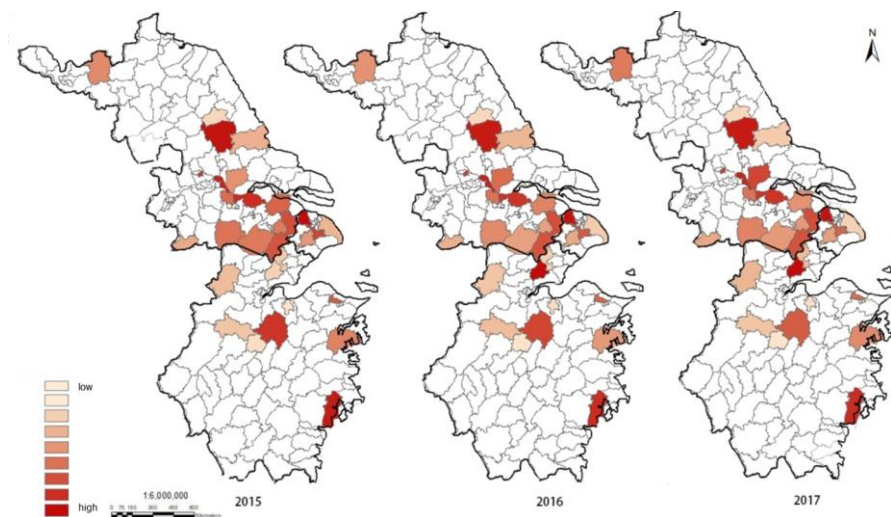
(3) LQ of agricultural characteristic towns

In YZD, the LQ of the agricultural characteristic towns is between 0 and 0.5, indicating that the agricultural agglomeration degree of the agricultural characteristic towns in YZD is low, and it presents a declining trend year by year, with a gradually larger decline.

TABLE III. Moran's I results of state-level characteristic towns in YZD

Characteristic Towns type	2015			2016			2017		
	Moran's I	Z-value	P	Moran's I	Z-value	P	Moran's I	Z-value	P
industrial	0.0953	46.196	0.00*	0.0977	46.710	0.00*	0.0056	13.10	0.00*
tourism	0.0443	22.154	0.00*	0.0479	23.850	0.00*	0.0520	25.58	0.00*
agricultural	0.0194	13.429	0.00*	0.0199	12.820	0.00*	0.0186	9.62	0.00*

Notes: $P < 0.01^*$; $P < 0.05^{**}$; $P < 0.1^{***}$



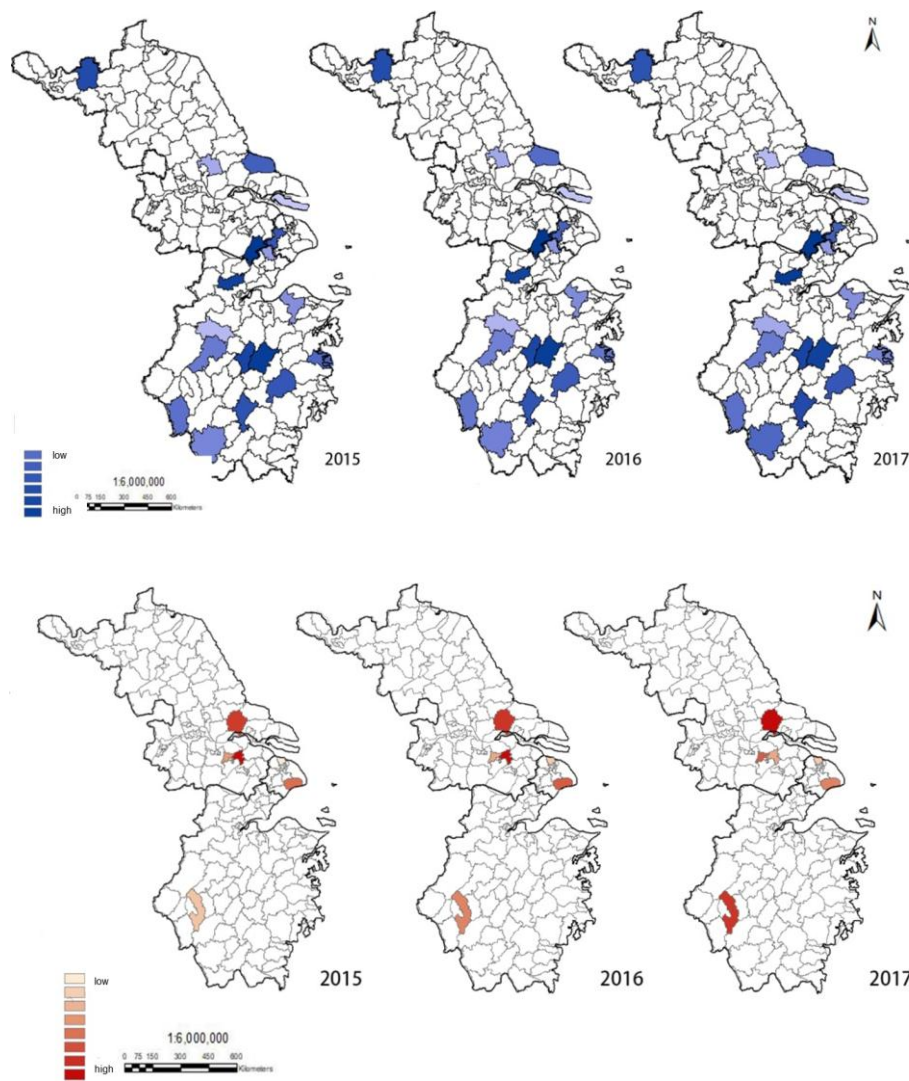


Fig 1: Temporal and spatial evolution of industrial, tourism and agricultural agglomeration of the characteristic towns in YZD

4.1.3 Moran's I of characteristic towns in YZD

Based on the above calculation results, this paper used software ArcGIS 10.2 to draw the industrial agglomeration evolution map for the three types of state-level characteristic towns in YZD.

(1) Moran's I of industrial characteristic towns

The global Moran's I of this industry-featured town in YZD showed steady improvement from 2015 to 2016 (as shown in TABLE III and Figure 1 for details). The global Moran's I was 0.09533 in 2015 and 0.0977 in 2016, with a small increase during the period. The global Moran's I was between 0 and 1, indicating that the industrial agglomeration among the industrial characteristic towns in YZD had a large spatial correlation and an increasing state with significant positive spatial change from 2015 to 2016 for $P < 0.5$.

(2) Moran's I of tourism characteristic towns

From 2015 to 2017, the global Moran's I of tourism characteristic towns in YZD showed a linear increase. It was 0.04436 in 2015 and 0.052054 in 2017. The spatial agglomeration correlation of tourism characteristic towns in YZD was larger and the spatial change was more obvious.

(3) Moran's I of agricultural characteristic towns

From 2015 to 2017, the global Moran's I of agricultural characteristic towns in YZD showed a trend of first rising and then falling. The global Moran's I in 2016 dropped to 0.018627 in 2017. The agricultural agglomeration of agricultural characteristic towns in YZD presents a spatial correlation and a spatial agglomeration trend, although the correlation is declining.

In addition to a few characteristic towns that have a rising trend of agricultural agglomeration, other agricultural characteristic towns are more likely to show a declining state, resulting in a continuous decline in the agricultural agglomeration overall level of agricultural characteristic towns in YZD. Among them, agricultural characteristic towns in Zhejiang province still show the trend of gathering and rising, and that in Jiangsu province decreases significantly.

4.2 The Industrial Agglomeration Degree of Characteristic Towns in PRD

4.2.1 HHI of Characteristic Towns in PRD

(1) HHI of industrial characteristic towns

The HHI value range of the industrial characteristic towns in PRD is 0.000062-0.0013 from 2015 to 2017 (as shown in TABLE I). The industrial agglomeration degree of characteristic towns in PRD is low, but its growth rate is fast. The annual growth rate of 2016 is about 1714.5% compared with the previous year, which is much higher than that of YZD, but its overall industrial agglomeration degree is still lower than that of YZD. In 2017, the average annual growth rate of the previous year was about 15.1%, with a sharp decline in the growth rate, but the overall level of industrial agglomeration increased.

(2) HHI of tourism characteristic towns

The HHI value of the tourism characteristic towns in PRD ranges from 0.000052 to 0.000136. From 2015 to 2017, the annual growth rate was about 61.7%, much higher than that of YZD. In 2016, the annual growth rate was about 100%, much higher than that of YZD. In 2017, the average annual growth rate was about 30.8%, which was still higher than that of YZD, while showed a decline like YZD. However, in general, the agglomeration degree of tourism characteristic towns in PRD was higher than that of YZD.

4.2.2 LQ of characteristic towns in PRD

(1) LQ of industrial characteristic towns

In 2015-2017, the LQ of industrial characteristic towns in PRD is 0.03-0.14, which indicates that the industrial concentration degree of the industrial characteristic towns in PRD is lower than that in YZD (as shown in TABLE II). However, the LQ average annual growth rate was about 103%, higher than the 80.9% of YZD. The growth rate was relatively faster, and the degree of agglomeration gradually improved, but the overall agglomeration level was still

relatively lower. From 2015 to 2016, the characteristic towns in PRD developed rapidly, with an average annual growth rate of about 306.1%, which was much higher than that in YZD, but the degree of agglomeration was lower than that in YZD, and the average annual growth rate dropped sharply.

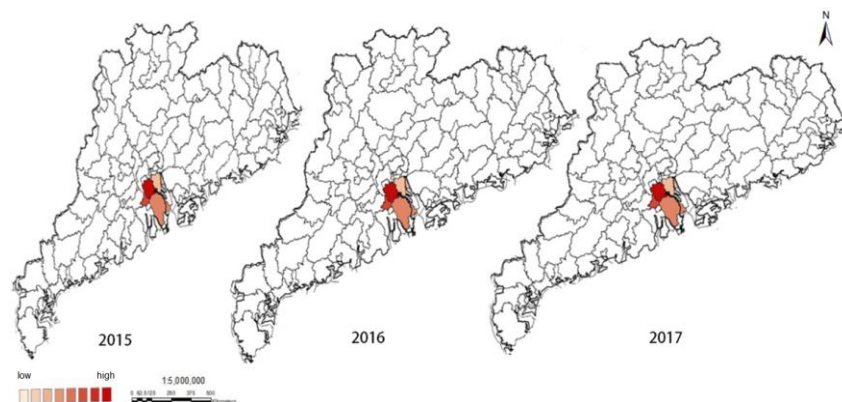
(2) LQ of tourism characteristic towns

The LQ of tourism characteristic towns in PRD is 0.003-0.004, which indicates that the tourism agglomeration degree of the tourism characteristic towns in PRD is lower than that in YZD. The agglomeration degree is gradually increased, but the overall agglomeration level is lower. From 2015 to 2016, the tourism characteristic towns in PRD developed rapidly, with an average annual growth rate of about 24.6%, much higher than that in YZD, while lower degree than that in YZD. After that, the average annual growth rate dropped significantly. However, the overall trend is on the rise, and the tourism agglomeration degree of the tourism characteristic towns is constantly improving.

TABLE IV. Moran's I results of state-level characteristic towns in PRD

Characteristic Towns type	2015			2016			2017		
	Moran's I	Z-value	P	Moran's I	Z-value	P	Moran's I	Z-value	P
industrial	0.0003	2.043	0.041**	0.0008	3.193	0.001*	0.0017	4.393	0.0001*
tourism	0.0351	20.036	0.00*	0.0288	18.139	0.00*	0.030	18.55	0.00*

Notes: $P < 0.01^*$; $P < 0.05^{**}$; $P < 0.1^{***}$



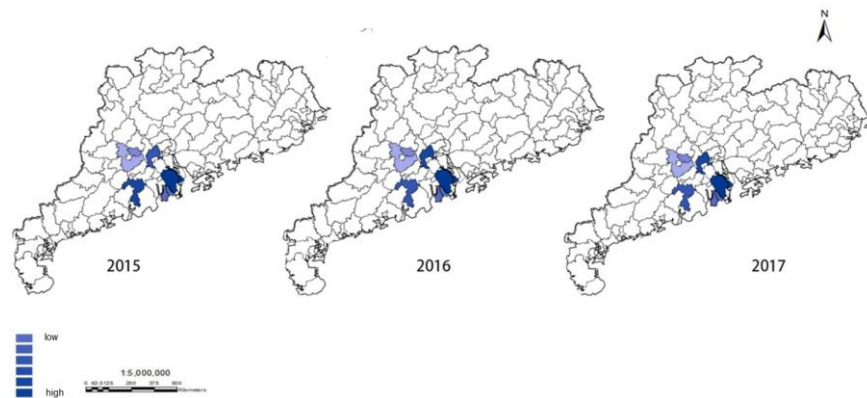


Fig 2: spatial and temporal evolution of industrial and tourism agglomeration in PRD

4.2.3 Moran's I of characteristic towns in PRD

(1) Moran's I of industrial characteristic towns

From 2015 to 2017, the global Moran's I of the industrial characteristic towns in PRD showed a rapid increase (as shown in TABLE IV and Figure 2 for details). The global Moran's I was 0.000393 in 2015 and 0.001711 in 2017, with a large increase during the period, indicating that the industrial agglomeration of industrial characteristic towns had a significant spatial correlation for $P < 0.5$ and presented a spatial clustering phenomenon.

(2) Moran's I of tourism characteristic towns

From 2015 to 2017, the global Moran's I of the tourism characteristic towns in PRD fluctuated up and down, and the fluctuation range was relatively significant. The global Moran's I declined from 2015 to 2016, making the global Moran's I change into 0.028873 in 2016 and then rise. However, the tourism characteristic towns in PRD showed a positive spatial correlation for $P < 0.5$ and $0 < \text{Moran's } I < 1$, and the tourism agglomeration of the tourism characteristic towns presents a phenomenon of spatial clustering on the whole.

V. DISCUSSION

Characteristic towns are a new form of industrial agglomeration and innovation in China in the new era, distributed in a large number of different regions and characteristic industries. With the continuous promotion of the construction of Chinese characteristic towns, the construction is from basic concept to preliminary practice and experience accumulation stage, and gradually becomes the irreplaceable application scenario of a new urbanization, promoting rural revitalization and environmental sustainable development, as well as the process of regional economic coordinated development. In essence, the characteristic towns are an emerging industrial spatial organization form with the endogenous characteristics of industry, complex functions, small but beautiful form, and new and lively mechanism, etc. It can be seen that industrial agglomeration is the foundation of the existence of the characteristic towns. YZD and PRD are the two regions with the most developed economy in China and the most densely distributed regions with state-level characteristic towns. Therefore, for the first time, this paper

conducts a multi-angle classification study of characteristic towns from the perspectives of industry, region, time evolution and spatial relationship, and obtains new conclusions different from previous research literature: (1) In terms of industry types, the characteristic towns in the service sector mainly focus on the characteristic tourism. Hence, this paper divides the characteristic towns into industrial, tourism and agricultural types. Characteristic towns conform to the 3A level construction standard of national scenic spots at least. Therefore, the construction of characteristic towns plays an important role in promoting rural economy and improving the environment of townships, especially a large number of characteristic towns with characteristic tourism as the main industry. (2) The calculation results of HHI and LQ show that the industrial agglomeration degree of industrial characteristic towns in YZD and PRD is on the rise, especially since 2016, when a large number of characteristic towns began to be built, but the overall industrial agglomeration level of industrial characteristic towns in PRD is lower than that in YZD. The HHI result of tourism characteristic towns in YZD is generally lower than that of PRD, but the LQ result is generally higher than that of PRD, which indicates that the tourism agglomeration of tourism characteristic towns in YZD presents a higher regional agglomeration, while that in PRD is more reflected in the difference with the surrounding industries. Although there are no state-level agricultural characteristic towns in PRD, the HHI and LQ calculation results of agricultural characteristic towns in YZD are decreasing year by year, indicating that agricultural characteristic towns are different from industrial and tourism characteristic towns, and their agricultural agglomeration trend is gradually weakening. (3) The results based on global Moran's I show that the spatial relationships of the industrial agglomeration of characteristic towns in YZD is transferring from positive correlation to weak correlation, industrial agglomeration of characteristic towns in YZD present a larger spatial differentiation, while the overall level of spatial correlation is higher than that in PRD. And the spatial correlation of the industrial agglomeration of characteristic towns in PRD dropped year by year, which means the industrial agglomeration of characteristic towns in YZD and PRD present different spatial distribution state. The spatial relationships of the industrial agglomeration of the tourism characteristic towns in YZD are continuously strengthened and the overall spatial correlation level is higher than that of PRD. Although the spatial correlation of the industrial agglomeration of the tourism characteristic towns in PRD fluctuates and declines to some extent, it still remains stable basically. The spatial relationships of the industrial agglomeration of the agricultural characteristic towns in YZD decrease rapidly after a small increase.

The novelty of this study lies in the analysis of the development features of China's state-level characteristic towns from the perspective of the combination of industry and regional, the dynamic evolution of time and space, and improving the existing research on characteristic towns. Previous studies mainly include the following aspects: The first is the theoretical research on the basic concept and development mode of characteristic towns, focusing on the future development direction of characteristic towns and the concept of development quality upgrading; The second is a case study of a certain characteristic town, focusing on the analysis of town planning and investment; The third is the research on the evaluation index system of the

characteristic towns construction, and at present, in addition to the national evaluation index system of characteristic towns, there are also many different evaluation systems that have not formed a theoretical consensus. The fourth is the research on the core leading enterprises of the characteristic towns, focusing on the analysis of the industry ecology inside the characteristic towns. It can be seen that since the construction of characteristic towns has only been emerging in China for more than three years, the existing research results have not yet formed a complete theoretical system. Different from the previous studies, this paper analyzes the industrial development of characteristic towns from the perspective of the combination of industries and regions, and takes YZD and PRD as the research objects, which are the regions with the closest connection to the regional economic development and the densest distribution of state-level characteristic towns in China. This study breaks the research and ideas limits on the administrative division, makes the research focus return to the characteristic towns promoting industry innovation as well as the essence of the integration of characteristics industry, surrounding towns and environmental development requirements. This is not only the innovative classification of emerging industrial agglomeration areas within the scope of traditional economic regions from the perspective of new theoretical research, but also conducive to the in-depth exploration of the integration mechanism between the industrial agglomeration of characteristic towns and surrounding regions and industries, which enriches the theoretical analysis of characteristic towns from the middle level perspective. At the same time, from the perspective of the evolution of time and space, this paper analyses the space and time distribution difference and evolution of industrial concentration of different types of characteristic towns, changes the previous study on the relationship and location distribution of characteristic towns in isolation and statically, provides theoretical support for the analysis of the interactive influence of regional layout and industrial agglomeration of characteristic towns, and provides a new research attempt for the further analysis of the relationships between the internal driving force and the external environment of sustainable development of characteristic towns. Meanwhile, the dynamic research on the industry and regional mesosphere is able to provide a more systematic research and comparative analysis. Especially under the background of regional economic development integration in YZD and PRD, the conclusions of this paper are more conducive to the relevant government administrative department to make the related countermeasures of the in-depth development of characteristic towns, promote the characteristic towns to highlight their respective industries characteristics, coordinate the regional layout and avoid redundant construction in YZD and PRD, and this paper also reflects the broader policy application and more timely practical significance.

The research of this paper is expected to play a role of offering a brick to attract jade. Because the characteristic towns have a short development period in China and are in the early stage of continuous construction and improvement, and the data volume and access channels are very limited, which greatly restricts the research in this paper. Future studies can constantly supplement data and build a more perfect evaluation index system, so as to deeply analyze the internal mechanism of the development of characteristic towns and the interaction between

internal and external influencing factors.

VI. CONCLUSION

As a summary, this paper carries out a comparative study on the classification of Chinese characteristic towns from multiple perspectives, such as industry, region, time evolution and spatial relationship for the first time, and gets four main dimensions conclusions. These conclusions can link the case analysis of characteristic towns with the macro evaluation from the middle level, and provide China's experience for studying the coordinated development of industrial agglomeration, small town construction and environmental protection in regions with a higher degree of economic integration.

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