

# Research on the Construction of Leading Industry Selection Indicators for Characteristic Towns in Southwest China

Gaohai Wu and Wei Wu<sup>(⊠)</sup>

School of Logistics, Chengdu University of Information Science and Technology, Chengdu,
China
384899278@gg.com

**Abstract.** Characteristic towns in southwest China have the characteristics of relying on characteristic resource endowments, good location conditions, high visibility, strong driving ability of industrial innovation, etc. This paper analyzes the leading industry selection direction of characteristic towns in southwest China based on the benchmark theory of mature leading industry selection: pay attention to the characteristic resource endowments, location conditions, industrial advantages of towns in southwest China, and also pay attention to sustainable development, and put forward a set of leading industry selection indicators suitable for characteristic towns in southwest China.

**Keywords:** Southwest China · Characteristic town · Leading industries · Evaluation indicators

# 1 Introduction

As an important starting point to promote the construction of new urbanization, characteristic towns have been favored by all parts of the southwest region and set off a construction boom. However, in the process of construction, problems such as eagerness for success, unclear positioning, and blind development appeared. It is not uncommon, and the fundamental reason is the lack of support from characteristic leading industries. Therefore, it is very important to select and cultivate the leading industries of characteristic towns and how to choose them. Based on this background, this paper aims to explore a set of evaluation indicators suitable for the selection of leading industries in characteristic towns in Southwest China, hoping to provide reference for other characteristic towns.

# 2 Theory

#### 2.1 Characteristic Town Connotation

Notice of the General Office of the National Development and Reform Commission on Establishing a High-quality Development Mechanism for Characteristic Towns and

Characteristic Small Towns points out that characteristic towns refer to based on certain resource endowments or industrial bases, different from administrative towns and industrial parks, using about 3 square kilometers of land space (including about 1 square kilometer of construction land), building a large industry in a small town in differential positioning and field segmentation, gathering high-end elements and characteristic industries, and having the distinctive charm of characteristic culture, characteristic ecology and characteristic buildings, to create an efficient entrepreneurial circle. The livable living circle, the prosperous business circle and the beautiful ecological circle have formed an innovation and entrepreneurship platform with special and strong industries, convergence of functions, small and beautiful forms, and new and living mechanisms.

# 2.2 Theoretical Basis of Leading Industry Selection

The concept of leading industry is from the national level, which refers to the important industries in the national economic system, and the leading industries have three obvious characteristics: First, the characteristics of comparative advantages, and the leading industries have relative comparative advantages in resources or production costs; Second, the characteristics of relevance, the leading industry has a strong forward-backward or horizontal and vertical correlation in the industrial system, and the development of the leading industry can produce a strong driving and influencing role in the development of the regional industrial system; The third is the driving role of the economy, and the driving effect of the leading industry on economic development is mainly expressed through the driving force of the income level of residents [1].

The most influential benchmarks for the selection of leading industries in the world are Hirschmann's benchmark based on the principle of industrial correlation intensity, Rostow's benchmark based on the theory of economic growth stage, the "Shinohara two benchmarks" proposed by Japanese scholar Shinohara, and the "comparative advantage" benchmark of Hexcha-Olin [2], as shown in Table 1.

# 3 Brief Introduction to Characteristic Towns in the Southwest Region

According to the administrative division of the country, the southwest region includes the five provinces of Sichuan, Chongqing, Yunnan, Guizhou and Tibet. Due to the unique geographical location of the Tibet Autonomous Region and the small number of characteristic towns, the author decided to study the 58 characteristic towns in the first and second batches of characteristic towns in Si chuan, Chongqing, Yunnan and Guizhou provinces announced by the Ministry of Housing and Urban-Rural Development By summarizing and sorting out the types of characteristic towns and leading industries, the characteristics of characteristic towns in Southwest China are analyzed.

benchmark	Basis	Main content	
Rostow benchmark	Stagesof economicgrowth	From the perspective of economic development, it is pointed out that the leading industry has a strong driving effect on the economic development of the entire region and its surrounding areas. There are two benchmarks: first, it has a high growth rate and a significant scale; second, it can drive the economic growth of other sectors	
Hirsemann benchmark	Strength of industry linkages	Industries with high industrial relevance will have strong posterior, forward, and side correlations for other industries. Choosing these industries as the leading industries can promote the development of the entire industry.	
Shinohara II Benchmark	Income elasticity and rising productivity	Pay attention to the input factor productivity of the industry and the impact of the industry on the national economic development. Includes income elasticity and productivity growth benchmarks	
Benchmark of comparative advantage	Feature density	Each country's advantage in international trade comes from the fact that it has taken advantage of relatively abundant factors of production or resources than other countries. Focusing on the development of those industrial sectors that can make full use of comparative advantages can form an industrial structure that can make full use of domestic advantages.	

Table 1. Benchmark theory for leading industry selection

# 3.1 Types of Characteristic Towns and Leading Industrial Distribution in Southwest China

# The Distribution of Characteristic Towns in the Southwest Region

In the information table on the promotion of characteristic towns released by the Ministry of Housing and Urban-Rural Development, the characteristic towns are divided into 6 major functional types, namely: industrial development, historical and cultural, tourism development, ethnic settlement, agricultural service and commercial circulation. Type occupancy is shown in Fig. 1.

The Distribution of Leading Industries in Characteristic Towns in Southwest China According to the types of characteristic towns, the types of leading industries can be divided into five categories: tourism, manufacturing, food processing, agriculture, forestry, animal husbandry and by-fisheries, and others. The typedistribution is shown.

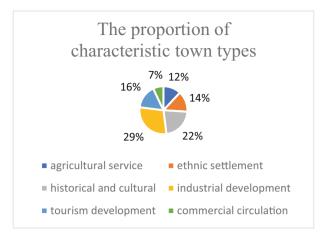


Fig. 1. Proportion of characteristic towns in the southwest region

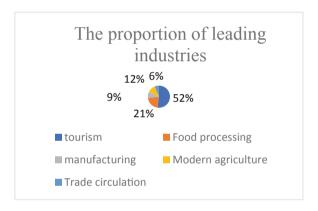


Fig. 2. Proportion of leading industries in the southwest region

# 3.2 Analysis of the Characteristics of Characteristic Towns in Southwest China

According to Figs. 1 and 2, in general, the leading industries in the characteristic towns in the southwest region are mainly food processing industry and tourism, and manufacturing and trade circulation industries account for the smallest proportion. The specific features are as follows:

(1) Rely on their own characteristic resource endowments. Characteristic resource endowments include natural resources and human resources, and in the characteristic towns of the southwest region, the proportion of historical and cultural, tourism development and ethnic settlement is 52%, corresponding to 52% of the tourism industry in the leading industry, and the development of tourism relies on the support of local natural resources and human and historical resource endowments.

- (2) The location conditions are relatively favorable. Although the overall location and traffic conditions in the southwest region are not as good as those in the eastern region, among its characteristic towns, industrial development and commercial circulation account for more than one-third, and the key elements of industrial development and commercial circulation development are convenient transportation and superior geographical location, which shows that the location conditions of characteristic towns in southwest China are relatively good.
- (3) The town is generally well-known and the market demand is large. Most of the characteristic towns in the southwest region are thousand-year-old towns, historical towns or internet red towns, with high popularity and greater attraction to domestic and foreign tourists, so their direct or potential market demand is larger.
- (4) Strong driving ability of industrial innovation. Food processing industry, manufacturing and agriculture, forestry, animal husbandry and fishery accounted for more than 40%, these major industries are inseparable from the support of advanced technology and high-tech enterprises, especially manufacturing and modern agriculture, the level of science and technology requirements are relatively high.

# 4 Construction of Leading Industry Selection Indicators for Characteristic Towns in Southwest China

# 4.1 Benchmark Analysis of Leading Industry Selection

The leading industry of characteristic towns in the southwest region should first consider its own characteristic resource endowments, and choose industrial development that can match its own resources. Secondly, consider the location conditions of the town, and make full use of the convenience brought by the transportation location to develop leading industries. Then we must consider the advantages of the industry, such as its own industrial base, scientific and technological level, market demand and economic benefits, and choose industries with obvious advantages to cultivate development. Finally, it is necessary to pay attention to the sustainable development conditions of the industry in the local area, and select industries that can be rooted in the sustainable development of the local area. Therefore, the industrial selection of characteristic towns in southwest China needs to follow the characteristic resource benchmark, location condition benchmark, industrial advantage benchmark, and sustainable development benchmark.

#### (1) Benchmark of characteristic resources

The characteristic resource benchmark means that the industrial development of characteristic towns should be based on unique resource endowments. Characteristic resources include natural resources and human resources, which are the characteristics of characteristic towns and an important condition for the industry to maintain competitive advantages. Huangguoshu Town in the city and Luodai Ancient Town in Chengdu, Sichuan are both due to their unique natural or humanistic resources, and their tourism has developed rapidly.

(2) Location condition benchmark Location and traffic conditions are the basic conditions for the development of characteristic towns. Good location and traffic conditions enable the development of the region to have advantages that other regions do not have. With these advantages, it can enhance the attractiveness of the region, thereby providing talent and financial support for the development of the industry. For example, Zhutuo Town, Yongchuan District, with its convenient transportation and location, has made the paper industry develop rapidly

# (3) Industrial advantage benchmark

The benchmark of industrial advantage is to judge the basic level and development potential of each industry in the characteristic town from the perspective of the industry itself, including industrial scale, scientific and technological level, market demand and economic benefits, and the industry with the above industrial advantages should be selected as the leading industry.

# (4) Benchmarks for sustainable development

Sustainable development benchmark refers to the characteristic town in the industry needs to have the power of self-development and renewal, to ensure that the characteristics can be maintained and maintained, the characteristic town is through the industrial cluster, the integration of industry and the city to achieve the sustainable development of the industry and the town, so the development of the leading industry of the characteristic town requires the development of a characteristic town around a characteristic subject, including a variety of industrial categories, can be interrelated to drive the characteristic industrial chain, driving the small town industry, economy, society comprehensive improvement and development. In addition, the essence of sustainable development lies in green, low-carbon environmental protection, and pays attention to the harmonious development of man and nature.

#### 4.2 Indicator Construction

According to the leading industry selection benchmark determined by the above analysis, a hierarchical index system is constructed: 1 target layer + 4 criterion layers + 10 index layers (Table 2).

Target layer (A)	Guideline layer (B)	Indicator layer (C)	Evaluate the content
Selection of leading in dustries in characteristic towns in southwest China (A1)	Featured resources (B1)	Natural resource endowments (C1)	The level of support for industrial development of characteristic natural resources
		Endowment of Human Resources (C2)	The development value of human resources industry.

Table 2. Characteristic town selection index of southwest region

(continued)

 Table 2. (continued)

Target layer (A)	Guideline layer (B)	Indicator layer (C)	Evaluate the content
	Location conditions (B2)	Convenient transportation conditions (C3)	The conditions of external traffic connection in the small town where the characteristic town is located
		Geolocation criteria (C4)	Whether the geographical location is located at special nodes such as border crossings and inland transportation hubs
	Industrial advantage (B3)	Industryscale (C5)	Evaluation of the industry base, reference value added contribution rate [3]
		Technological level (C6)	Driving ability of industrial innovation, referring to the proportion of high-level talents and high-tech enterprises in the industry [4]
		Market demand (C7)	Regional sales share and influence [5]
		Economic benefits (C8)	The level of economic benefits of the industry, the profit rate and employment absorption rate of the reference industry [6]
	sustainable development (B4)	Industrial chain extension capability (C9)	The front, back and side of the industry
		Green and low-carbon development (C10)	Industry's GDP consumption of 10,000 yuan, GDP of 10,000 yuan of water consumption [6]

# 5 Conclusions

Based on the most influential international four leading industry selection benchmark theory, this paper summarizes and analyzes the main characteristics of the characteristic towns in southwest China through the inductive analysis of 58 national characteristic town types and leading industries in the four southwest provinces, and determines the four leading industry selection benchmarks on this basis: characteristic resource benchmark, location condition benchmark, industrial advantage benchmark and sustainable development benchmark, and finally constructs the leading industry selection index of the characteristic town in southwest China.

# References

- Renyi. Research on industrial selection and cultivation path of characteristic towns[D]. Northwest University, 2018.
- 2. Liu hongmei, Li yujian. A review of regional leading industry research[J]. Science of Science and management of science and technology, 2004(12):91–94.
- 3. Wang qing. Research on the development of characteristic industries in underdeveloped areas of southwest China[D]. Chongqing Normal University, 2011.
- Wu yizhou, Chen Qianhu, Zheng xiaohong. Index system and evaluation methodofdevelopmentlevel of characteristic towns[J]. Planner, 2016, 32(07):123127.
- 5. Lin feng. Selection, cultivation and introduction of "vitality" industries of characteristic towns[J]. China Real Estate, 2017(08):20–23.
- 6. Zhao hui, Bu zehui, Ma shengbin, Wang Yue. Study on industrial selection of interval intuition fuzzy multi-attribute characteristic town based on improved dietet and topsis [J]. Ecological Economics, 2020, 36(06):95–101.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

