

A Study on the Feasibility Evaluation Index System and Method of Characteristic Town Projects in Shaanxi Province, West China

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Abstract

A scientific and effective analysis of the feasibility evaluation of characteristic town projects is the premise and basis for the successful construction of high-quality characteristic towns in China. This paper adopts the principal component analysis method based on analytic hierarchy process (AHP). Through a systematic analysis of the characteristics and influence factors of high-quality development of characteristic towns in Shaanxi Province, West China, this paper constructs a feasibility evaluation index system. The most important and relevant evaluation indicators for the construction of characteristic towns in Shaanxi Province are obtained through a comparative analysis of the indicators in the four sample characteristic towns in Shaanxi Province.

Keywords

Characteristic Town; Feasibility Analysis; Analytic Hierarchy Process; Principal Component Analysis.

1. Introduction

At present, the construction of featured town projects is at a climax stage in China. Since 2016, Ministry of Housing and Urban-Rural Development, National Development and Reform Commission and Ministry of Finance in China have jointly issued the "Notice on the Development of Characteristic Towns" setting the goal of planning to build about 1,000 characteristic towns around the country by 2020. Subsequently, various ministries and commissions of the state as well as the local governments successively issued a number of policy documents to promote the construction of characteristic towns, and increased support for the construction of featured town projects with support policies and funds. The construction and development of characteristic towns has been highly valued by the state and local governments. The construction of high-quality characteristic towns will not only be of great significance to the regional economic development but also to the economic development of China.

In recent years, all parts of the country have actively built various types of characteristic towns with their own characteristics and conditions. At present, China has completed the construction of several batches of characteristic towns with a total number of 740, making huge achievements for local economic development, which has contributed to the new urbanization in rural China. Shaanxi Province, which is located in West China, has currently developed fourteen characteristic towns. However, a series of problems have emerged. in the course of developing the characteristic towns. For example, the positioning of the characteristic town is not clear enough. The excessive development has led to the low- quality characteristic towns, and high homogenization. The marketization is low under the local government's dominant leadership. There has been an over-focus on image projects. The overborrowing has increased the financial risks of local debt. There has also been excessive participation of real estate enterprises.

The feasibility study is the source control of the high-quality development of characteristic town construction project. Feasibility analysis is essentially the decision science applied in the project management. The feasibility analysis of the characteristic town construction project, which is the initial link in the project operation cycle, has crucial significance. Feasibility analysis research, as an

important basis for the follow-up development, is directly related to whether the characteristic town construction project in Shaanxi Province can be carried out smoothly and effectively. The quality of feasibility study directly determines the success or failure of the project to a certain extent. Therefore, the feasibility study provides a scientific and accurate basis for project decision-making. It is necessary to do a preliminary feasibility study on the decision-making of characteristic town construction project in Shaanxi Province.

The paper consists of five sections. The second section is literature review. The three section is an analysis of the development mechanism of high- quality characteristic towns. The third section is initial selection and construction of a feasibility evaluation index system for characteristic towns in China. The last section is Conclusions and recommendations.

2. Literature review

In recent years, the construction of characteristic towns in China has been in full swing, which has also led to the theoretical exploration. Some Chinese scholars have carried out the theoretical research on the planning, necessity, development mode, operation mode, construction status, construction experience, and construction effect evaluation of characteristic towns. Zeng and Ci (2016) analyzed the problems existing in traditional urbanization, and proposed that the characteristic town be an important carrier and development model of new urbanization. Sheng and Zhang (2016) tried to describe the characteristics, functions and construction problems of the characteristic town as a spatial industrial organization. Yan (2016) started from the diversification and analyzed the town governance, the platform and network of town operation mechanism, the normalization and localization of town innovation system, and the refinement and globalization of town performance evaluation. The characteristic town creates a track that brings about precise governance. Wu and Chen (2016) proposed a relatively complete set of indicators and assessment methods for the development of characteristic towns. Fu and Jiang (2017) explored the development model of Chinese characteristic towns from the perspective of embeddedness, and believed that the choice of characteristic town model must be rooted in the local culture and tradition. Wen and Jin (2017) constructed an evaluation model from the perspective of the core competitiveness of characteristic towns.

The developed countries have attached great importance to the feasibility evaluation of characteristic towns. Visvaldis and Ainhoa (2013) constructed a sustainable evaluation index for small town construction with 108 specific indicators from economic, social and environmental dimensions. Kashef (2017) proposes small town design standards based on evaluability, accessibility, sustainability, diversity and aggregation. Mayer et al. (2017) studied the sustainable development of characteristic towns and the evaluation of their sustainable development.

Throughout the research in this field, the research content of project feasibility evaluation in the initial stage of developing the characteristic town projects in China is relatively limited. This paper has undertaken a feasibility study of the characteristic town project in Shaanxi Province, establishes a scientific, systematic and practical index system and adopts an evaluation method of principal component analysis based on analytic hierarchy process, aiming at realizing the characteristic town project of Shaanxi Province from the Beginning to promote the steady progress and smooth implementation of the characteristic town construction.

3. An analysis of the development mechanism of high- quality characteristic towns

The characteristic town, which has become an important carrier for the new urbanization, economic transformation and upgrading in China, plays an important role in promoting supply-side structural reform, cultivating ecological civilization, coordinating the urban-rural development, and promoting the rural revitalization.

At the end of 2017, the Central Economic Work Conference proposed to “guide the healthy development of characteristic towns”. This is the first time that a characteristic town has appeared in

the central official documents, which further clarifies the future direction of the development of characteristic towns. In the process of constructing a characteristic town in Shaanxi Province, a number of outstanding towns have emerged. However, there have been some failed cases, which has brought about great losses to the local economic and social development. This paper provides a reference for constructing the feasibility evaluation index system of characteristic towns by analyzing the development of high-quality characteristic towns in Shaanxi Province and the factors affecting the success or failure of developing characteristic towns.

3.1 Characteristics of developing high-quality characteristic towns

The characteristic town, which emphasizes the combination of characteristic industries and urbanization, is an interactive integration of industrial development and urbanization. The key to a characteristic town is its “features”. Urban characteristics are determined by the specific environmental factors that exist in the development of cities and towns. These environmental factors include history, humanity, geography, transportation, climate, and industry. The characteristic town, which is a platform for the development of emerging industries and several traditional industries, is a new carrier for the integration between production and humanity.

The features of characteristic towns also put forward the requirements for the ways and approaches of developing and constructing the characteristic towns .

3.1.1 Protect cultivated land and make intensive development

In the process of developing a characteristic town, Shaanxi Province has set certain requirements for the ecological protection. For example, a certain amount of cultivated land needs to be allocated to the town residents for the development of primary industry. Therefore, it is important to protect the cultivated land and restrict the excessive industry development within a certain area.

3.1.2 Cultivate the industrial development and establish a support system

Characteristic towns need to attract urban and rural residents to settle down in the town, attract tourists to the town for sightseeing and leisure. So it is important to promote the industrial development to create employment opportunities and promote the sustainable development of all aspects of the town.

3.1.3 Coordinate urban and rural development

Although characteristic towns have some special feature, it is not independent. The original intention of its establishment is to promote the development of new urbanization. On one hand, it accommodates the surplus industry and population of the city. On the other hand, it attracts the urbanization of rural population and promote the development of the countryside. Therefore, the construction of the characteristic town needs to link urban and rural areas.

3.1.4 Improve infrastructure and living environment.

The characteristic town must have complete infrastructure and suitable living environment for the residents. Without these, it is difficult for the characteristic town to attract people to come to settle down.

3.1.5 Inherit culture and demonstrate distinctive features

Based on the unique features of natural landscape in the surroundings of characteristic town, the tourism industry can be developed and promoted. The creative industries can be introduced and encouraged. The brand of characteristic town can be nurtured and promoted to demonstrate local culture.. In the process of developing a characteristic town, it is highly important to inherit, protect and cultivate the unique culture of the characteristic town, which is of great benefit to the promotion of the characteristic town.

3.2 Factors affecting the development of high-quality characteristic towns

At present, the construction of characteristic towns has been strongly promoted by the Chinese government. In the process of constructing and developing characteristic towns, there are still some problems. For example, the theme of characteristic towns tends to be blurred. Excessive development and simple imitation have led to the waste of resources and inefficient investment. In order to guide the development of characteristic towns reasonably , in the year of 2017, National Development and

Reform Commission, Ministry of Housing and Construction, Ministry of Land and Resources and Ministry of Environmental Protection in China jointly issued special documents to further standardize the construction of characteristic towns and guide an orderly development of the high-quality characteristic towns. According to the general principles of developing characteristic towns, the development of high-quality characteristic towns are usually affected by the following factors:

3.2.1 Highlight the theme and focus on innovation

The purpose of developing characteristic towns in China is to promote industrial transformation and upgrading, which is closely related to technological innovation. The key to technological innovation are talents. Therefore, the characteristic towns in Shaanxi Province must create good environment to attract talents. It does not necessarily need to have an industrial base, but can attract talents through a pleasant living environment, thus driving innovation and entrepreneurship, such as Fund Towns, Dream Towns and so on, which rely on the gathering of professional talents. Therefore, the characteristic town must be suitable for talents to settle down with ample space for innovation and entrepreneurship. In addition to the good ecological environment such as air and water, it is necessary to have convenient and sound infrastructure such as information and transportation.

3.2.2 Sustainable industrial support

The spatial concentration of industry can lead to employment and population agglomeration, which is the basic condition that a town can sustain its development. The industries can be based on the local special natural endowments and resources, such as the mining industry on the basis of development and processing of mineral resources, the tourism and leisure industry on the basis of ecological and natural landscape advantages. They can also be one of the regional leading industries or the supporting industries of regional industry clusters.

3.2.3 Adhere to the marketization.

According to the experience of past few decades, most of the small towns and small town development models dominated by the local government- have failed in C because they mainly met the local governments' subjective wishes and assessment requirements, rather than the consumer needs or market rules. Therefore, it is difficult for these small towns to attract the commercial entities and residents. There have been many "hollow towns" or "ghost towns", resulting in the waste of investment and resources. To avoid this situation, a more effective way is to promote the development of the characteristic towns by following the rule of government guidance, the enterprises being the main entities and the market-oriented operation to invest, construct, operate and manage with more market-oriented investment mechanism and operation models, thereby reducing the invalid investment. The local government should focus on creating a good development environment to provide high-quality business services and public services for the enterprises.

3.2.4 Scientific and rational planning.

Although the size of characteristic towns is small, it is also important to make scientific and rational planning of urban space. The layout and site selection of characteristic towns should take into account the factors such as natural geographical conditions, surrounding urban radiation, the division of labour within industrial cluster, and convenient transportation access and so on. Functional division of labor and integration, rational arrangement of industry, transportation, ecology, life, public facilities and other layouts, promote the integration of underground planning and integrated management, are conducive to promoting the characteristic towns to take a development path of compact development and space saving. The rigidity and flexibility of space control should be balanced, and the red line space such as ecological environment protection should be strengthened with rigid constraints, but the space control such as commercial and residential areas should be flexible to adapt to market changes and unpredictability more effectively so as to promote the improvement and sustainable development of the urban ecological environment.

4. Initial selection and construction of a feasibility evaluation index system for characteristic towns in China

To carry out a feasibility evaluation of characteristic towns, it is necessary to develop certain feasibility evaluation criteria. They are also called an evaluation index system, which are the main factors of evaluating projects. The feasibility evaluation of characteristic towns must first determine the relevant indicators for a comprehensive evaluation based on the relationship between Shaanxi province and the characteristic towns. The relationship between these indicators is optimized. The quality of the indicator system construction will directly affect the results of feasibility evaluation. Therefore, the research on the indicator system is an important basis for the comprehensive evaluation of the feasibility of characteristic towns. It is not possible to rely solely on empirical judgment and qualitative analysis, and a more scientific quantitative method must be adopted. Based on the analysis of development needs of characteristic towns in Shaanxi Province, the authors have analyzed the characteristics of the characteristic towns in Shaanxi Province and assessed the success and failure factors of these characteristic towns. A suitable evaluation method has been used to construct a characteristic town evaluation index system.

4.1 The objectives and basic principles of creating an index system

To design a scientific evaluation index system of characteristic towns in China, it is important to define the overall evaluation objectives first. The goal of creating this evaluation index system is to achieve a comprehensive, objective and effective evaluation of the feasibility of developing characteristic towns. On the other hand, it provides the policy formulation tools for the development strategy of characteristic towns in Shaanxi Province. Whether the creation of a feasibility evaluation index system of the characteristic town project in Shaanxi Province is scientific and reasonable is directly related to the quality and practicability of the feasibility analysis. Therefore, it is necessary to clarify the principles of its construction before the creation of an indicator system.

The development of characteristic towns evaluation index system has been mainly based on the following principles.

1. Systematic. As a whole, the evaluation index system should reflect both economic innovation and service innovation of characteristic towns because the integrated development of economic innovation and service innovation is the trend of innovative development of characteristic towns.
2. Orientation. It is important to select the evaluation indicators based on the innovative development of characteristic towns.
3. Conciseness. The selected indicators should be simple and clear, highly generalized, independent and representative. It is necessary to reduce the number of indicators and use comprehensive indicators as much as possible to avoid repeated occurrence of indicators.
4. Stability. The content of indicators should remain relatively stable for a certain period of time so that they can be used to analyze the feasibility of characteristic towns in Shaanxi Province in a certain period of time.
5. Availability. The selection of evaluation indicators must take into account the availability of indicator data and the comparability of data sources.

4.2 The Establishment of Feasibility Evaluation Index System

There are many factors affecting the success and failure of the characteristic town project, which can be summarized as four aspects including industrial dimension, functional dimension, morphological dimension and institutional dimension (Wu et al., 2016). The factors are selected according to the above-mentioned dimensions affecting the development of high-quality characteristic towns in Shaanxi Province. Combined with the development factors of characteristic towns in Shaanxi Province, the corresponding secondary indicators were selected by taking into account the availability and comparability of various specific evaluation indicators so as to establish a complete feasibility evaluation index system of characteristic towns in Shaanxi Province.

According to the analytic hierarchy process, the factors affecting the feasibility of the characteristic town project in Shaanxi Province are summarized with a hierarchical structure as shown in Figure

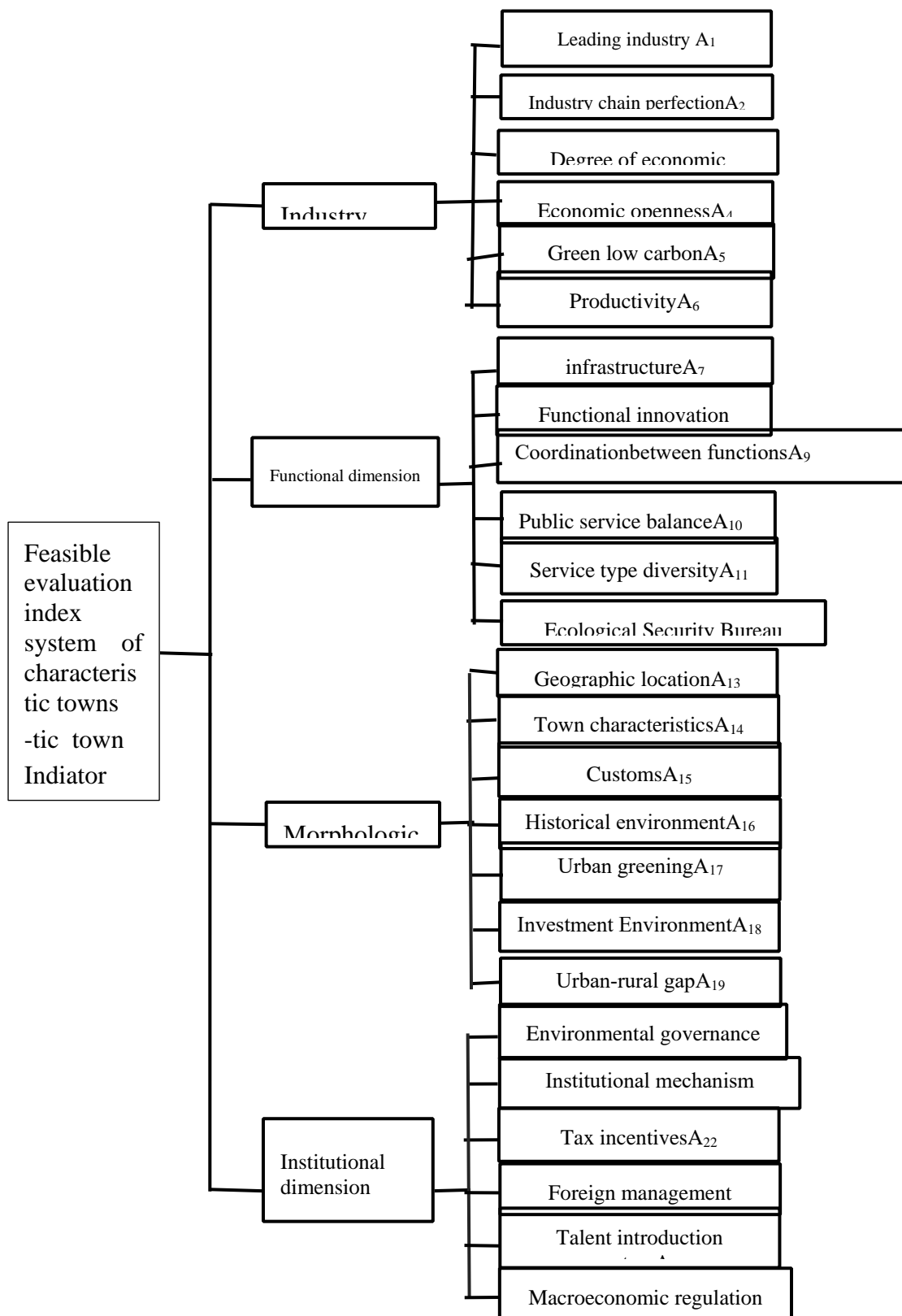


Figure 1 The feasibility evaluation index system of characteristic towns

4.3 Determination of weights

In order to quantify the decision-making judgment, a certain ratio scale is often used [16], and the commonly used scale of the analytic hierarchy method is shown in Table 1.

Table 1 Judging matrix scale assignment and its meaning

Importance judgment	Assignment
Object x_i is more important than y_j than y_j	9
Compared with object x_i and y_j , x_i is more important than y_j .	7
Compared with object x_i and y_j , x_i is obviously more important than y_j	5
Compared with object x_i and y_j , x_i is slightly more important than y_j	3
Object x_i is of equal importance compared to y_j	1
Object x_i is slightly less important than y_j than y_j	1/3
Compared with object x_i and y_j , x_i is obviously less important than y_j	1/5
Object x_i is significantly less important than y_j than y_j	1/7
Object x_i is significantly less important than y_j than y_j	1/9
Other intermediate values are between two adjacent	Other vues between 1/9 and 9 (2, 4, 6, 8, 1/2, 1/4, 1/6, 1/8)

4.4 Scores and ranking of feasibility evaluation indicators for each characteristic town

This paper selects the first batch of characteristic towns approved by Ministry of Housing and Urban Development announced by the Ministry of Housing and Urban Development in 2016. The four towns in the first batch of characteristic towns approved by the state are respectively Tangyu Town and Tongchuan City, Lantian County, Xi'an City, Shaanxi Province. Zhaojin Town, Yaozhou District, Qingmuchen Town, Ningqiang County, Hanzhong City, Wuquan Town, Yangling District, as shown in Figure 2.

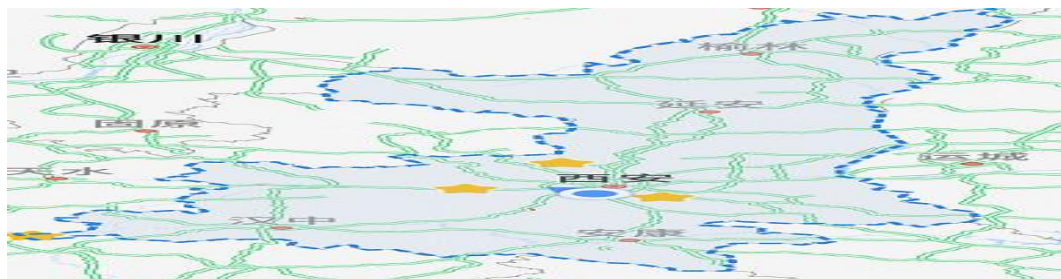


Figure 2 Regional distribution of four characteristic towns in the first batch of Shaanxi Province

According to the investigation of the four small towns in Shaanxi Province and the actual development of the characteristic towns, the results of comparing each index in the four characteristic towns were compared.

Table 2 Results of the comparison of leading industries

A1	Tangyu	Zhaojin	Qingmuchen	Wuquan	Ranking
Tangyu	1	1	1	1	0.25
Zhaojin	1	1	1	1	0.25
Qingmuchen	1	1	1	1	0.25
Wuquan	1	1	1	1	0.25

Table 3 Results of the improvement of the industrial chain

A2	Tangyu	Zhaojin	Qingmuchen	Wuquan	Ranking
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Tangyu	1	3	1	1	0.2905
Zhaojin	1/3	1	1/5	1/3	0.0858
Qingmichuan	1	5	1	1	0.3331
Wuquan	1	3	1	1	0.2905

Table 4 Results of the comparison of economic openness

A3	Tangyu	Zhaojin	Qingmichuan	Wuquan	Ranking
Tangyu	1	1	1	1	0.25
Zhaojin	1	1	1	1	0.25
Qingmichuan	1	1	1	1	0.25
Wuquan	1	1	1	1	0.25

Table 5 Results of the comparison of economic development degrees

A4	Tangyu	Zhaojin	Qingmichuan	Wuquan	Ranking
Tangyu	1	1	1	5	0.3125
Zhaojin	1	1	1	5	0.3125
Qingmichuan	1	1	1	5	0.3125
Wuquan	1/5	1/5	1/5	1	0.0625

Table 24 Results of the comparison of foreign business management systems

A23	Tangyu	Zhaojin	Qingmichuan	Wuquan	Ranking
Tangyu	1	1/2	1/3	1	0.1571
Zhaojin	2	1	1	1	0.281
Qingmichuan	3	1	1	1	0.3191
Wuquan	1	1	1	1	0.2428

Table 25 Results of the comparison of talent introduction systems

A24	Tangyu	Zhaojin	Qingmichuan	Wuquan	Ranking
Tangyu	1	1/2	1	1	0.1945
Zhaojin	2	1	3	2	0.4258
Qingmichuan	1	1/3	1	1/2	0.1484
Wuquan	1	1/2	2	1	0.2312

Table 26 Results of a two-two comparison of macroeconomic regulation policies

A25	Tangyu	Zhaojin	Qingmichuan	Wuquan	Ranking
Tangyu	1	1/3	1	1/4	0.1166
Zhaojin	3	1	2	1	0.3404
Qingmichuan	1	1/2	1	1/3	0.1391
Wuquan	4	1	3	1	0.4039

4.5 Principal Component Analysis Based on Analytic Hierarchy Process

Principal component analysis based on analytic hierarchy process effectively solves the problem of the absence of constructing indicators and the subjective problem of determining weights. Principal component analysis based on analytic hierarchy process also reduces the dependence on experts and the requirements of decision makers' ideological and ethical issues. It does not require decision makers to have a deep understanding of the overall situation, but only needs to have an accurate understanding of each indicator. Even if there is a certain deviation in the comparison of indicators, it will not have a big impact on the final result [16].

4.5.1 Data source

Numerical information is required for principal component analysis to study actual problems. At present, it is difficult to obtain the numerical information of the feasibility index system of the

characteristic town project in Shaanxi Province, and some indicators have no way to be numerically represented. Therefore, we first provide numerical information by means of analytic hierarchy process. Based on the feasibility evaluation index system of the characteristic towns in Shaanxi Province determined by the analytic hierarchy process as shown in Figure 1, we use the results of the comparison of the indicators in the characteristic towns of Shaanxi Province based on the results of a pair of indicators. The results from 2 to 26 are summarized in Table 27.

Table 27 Scores of feasibility evaluation indicators for characteristic towns in Shaanxi Province

Evaluation index	Tangyu	Zhaojin	Qingmichuan	Wuquan
A1	0.2500	0.2500	0.2500	0.2500
A2	0.2905	0.0858	0.3331	0.2905
A3	0.2500	0.2500	0.2500	0.2500
A4	0.3125	0.3125	0.3125	0.0625
A5	0.3000	0.3000	0.3000	0.1000
A6	0.1170	0.3961	0.0908	0.3961
A7	0.2500	0.2500	0.2500	0.2500
A8	0.1237	0.3712	0.0745	0.4306
A9	0.1357	0.3190	0.1595	0.3858
A10	0.1815	0.2428	0.1968	0.3788
A11	0.2804	0.3120	0.2804	0.1272
A12	0.1561	0.1662	0.4912	0.1865
A13	0.3000	0.3000	0.3000	0.1000
A14	0.2804	0.3120	0.2804	0.2720
A15	0.3120	0.2804	0.2804	0.1272
A16	0.0799	0.3929	0.3490	0.1781
A17	0.2500	0.2500	0.2500	0.2500
A18	0.3050	0.2769	0.1132	0.3050
A19	0.2500	0.2500	0.2500	0.2500
A20	0.2500	0.2500	0.2500	0.2500
A21	0.1461	0.3048	0.1584	0.3908
A22	0.1272	0.2804	0.3120	0.2804
A23	0.1571	0.2810	0.3191	0.2428
A24	0.1945	0.4258	0.1484	0.2312
A25	0.1166	0.3404	0.1391	0.4039

4.5.2 Data Analysis

Principal component analysis was performed on the data in Table 27.

(1) Standardize raw data

(2) Establish a correlation coefficient matrix between indicators

1.003	.a	.969*	.969*	-.759	-.497	-.840	-.880	-.994**	.910	.396	.969*	.314	.970*
	.204	-.656	-.500	-.320	.911	-.915	-.288	.030	-.145	-.860			
.0031	.a	-.243	-.243	-.650	-.740	-.546	-.442	-.027	-.410	.509	-.243	-.938	-.177
	-.623	-.368	.798	-.305	-.383	-.129	-.147	-.990*	-.484				-.512

.969*	-.243	.a	1	1.000**	-.576	-.302	-.680	-.744	-.957*	.984*	.262	1.000**	.536
	.984*	.327	-.485	-.398	-.509	-.960*	-.793	-.244	.069	.103	-.714		
.969*	-.243	.a	1.000**	1	-.576	-.302	-.680	-.744	-.957*	.984*	.262	1.000**	.536
	.984*	.327	-.485	-.398	-.509	-.960*	-.793	-.244	.069	.103	-.714		
-.759	-.650	.a	-.576	-.576	1	.826	.989*	.964*	.777	-.421	-.580	-.576	.379
	-.630	.232	.872	.565	-.308	-.474	.949	.364	.137	.751	.976*		
-.497	-.740	.a	-.302	-.302	.826	1	.818	.679	.461	-.162	-.921	-.302	.475
	-.274	-.102	.980*	.877	-.199	-.351	.673	-.195	-.357	.800	.705		
-.840	-.546	.a	-.680	-.680	.989*	.818	1	.977*	.847	-.539	-.608	-.680	.247
	-.716	.109	.888	.618	-.166	-.597	.975*	.312	.056	.660	.983*		
-.880	-.442	.a	-.744	-.744	.964*	.679	.977*	1	.904	-.613	-.433	-.744	.161
	-.803	.198	.772	.458	-.162	-.616	.997**	.482	.218	.564	.999**		
-.994**	-.027	.a	-.957*	-.957*	.777	.461	.847	.904	1	-.891	-.322	-.957*	-.275
	-.978*	-.099	.619	.419	.244	-.868	.933	.393	.082	.168	.884		
.910	-.410	.a	.984*	.984*	-.421	-.162	-.539	-.613	-.891	1	.176	.984*	.679
	.952*	.425	-.354	-.329	-.639	.965*	-.671	-.178	.120	.277	-.578		
.396	.509	.a	.262	.262	-.580	-.921	-.608	-.433	-.322	.176	1	.262	-.248
	.168	.458	-.904	-.984*	-.110	.415	-.452	.547	.693	-.556	-.454		
.969*	-.243	.a	1.000**	1.000**	-.576	-.302	-.680	-.744	-.957*	.984*	.262	1	.536
	.984*	.327	-.485	-.398	-.509	-.960*	-.793	-.244	.069	.103	-.714		
.314	-.938	.a	.536	.536	.379	.475	.247	.161	-.275	.679	-.248	.536	1
	.452	.660	.318	.079	-.921	.613	.088	.160	.283	.884	.206		
.970*	-.177	.a	.984*	.984*	-.630	-.274	-.716	-.803	-.978*	.952*	.168	.984*	.452
	1	.154	-.454	-.291	-.372	.894	-.841	-.411	-.106	.037	-.775		
.204	-.512	.a	.327	.327	.232	-.102	.109	.198	-.099	.425	.458	.327	.660
	.154	1	-.173	-.568	-.899	.573	.121	.798	.906	.482	.215		
-.656	-.623	.a	-.485	-.485	.872	.980*	.888	.772	.619	-.354	-.904	-.485	.318
	-.454	-.173	1	.892	-.068	-.524	.778	-.139	-.352	.708	.789		
-.500	-.368	.a	-.398	-.398	.565	.877	.618	.458	.419	-.329	-.984*	-.398	.079
	-.291	-.568	.892	1	.266	-.558	.490	-.554	-.737	.431	.471		
-.320	.798	.a	-.509	-.509	-.308	-.199	-.166	-.162	.244	-.639	-.110	-.509	-.921
	-.372	-.899	-.068	.266	1	-.678	-.079	-.493	-.630	-.747	-.197		
.911	-.305	.a	.960*	.960*	-.474	-.351	-.597	-.616	-.868	.965*	.415	.960*	.613
	.894	.573	-.524	-.558	-.678	1	-.679	.038	.344	.174	-.588		
-.915	-.383	.a	-.793	-.793	.949	.673	.975*	.997**	.933	-.671	-.452	-.793	.088
	-.841	.121	.778	.490	-.079	-.679	1	.441	.163	.509	.993**		
-.288	-.129	.a	-.244	-.244	.364	-.195	.312	.482	.393	-.178	.547	-.244	.160
	-.411	.798	-.139	-.554	-.493	.038	.441	1	.949	.174	.472		
.030	-.147	.a	.069	.069	.137	-.357	.056	.218	.082	.120	.693	.069	.283
	-.106	.906	-.352	-.737	-.630	.344	.163	.949	1	.147	.215		
-.145	-.990*	.a	.103	.103	.751	.800	.660	.564	.168	.277	-.556	.103	.884
	.037	.482	.708	.431	-.747	.174	.509	.174	.147	1	.602		
-.860	-.484	.a	-.714	-.714	.976*	.705	.983*	.999**	.884	-.578	-.454	-.714	.206
	-.775	.215	.789	.471	-.197	-.588	.993**	.472	.215	.602	1		

According to the correlation coefficient matrix above, A2 (industrial chain improvement) and A24 (macro-control policy), A7 (infrastructure construction) and A17 (town greening), A12 (eco-safety rationality) and A18 (investment environment) can be obtained. The group indicators are significant at the 0.05 level, so these indicators have obvious correlations for the feasibility evaluation of characteristic town projects in Shaanxi Province; A1 (leading industry), A4 (economic development degree), A5 (green low carbon), A10 (Public Service Balance), A11 (Service Type Diversity), A13 (Geography), A15 (Customs), A20 (Institutional Innovation) are all related to each other and also consider characteristics. Basic evaluation indicators for the feasibility of small town projects; A6 (production efficiency), A8 (functional innovation drive), A9 (inter-function coordination), A21 (environmental governance policy), A25 (macro-control policy) indicators exist between each other. The obvious correlation, which is related to the continuous and high-quality development of the characteristic town project, is an indispensable evaluation indicator.

5. Conclusions and recommendations

Through the above analysis, the paper draws the following conclusions. First, the feasibility evaluation of characteristic towns is essentially the adaptation of the characteristic town and its carrier--Shaanxi Province, whether Shaanxi Province is suitable for developing characteristic towns, construction what type of characteristic town is determined by the economic development status of the province, primary industries, the location of cities, the green low carbon and other factors. Second, it is necessary to systematically understand the characteristic towns in a comprehensive way, avoid mistakes and incorrect understanding of the characteristic towns, and enable people to adopt targeted, scientific and reasonable management methods when constructing characteristic town projects. When making decisions on characteristic town construction projects, it is important to undertake feasibility studies before making scientific decisions.

In order to make the scientific decision-making of characteristic town construction and avoid causing major losses to the economic and social development in Shaanxi Province, this paper has formulated the decision-making procedure and feasibility evaluation of the characteristic town project for the government agencies at all levels in Shaanxi Province, West China. Shaanxi Province can evaluate the regional advantages and the foundation of developing characteristic towns based on geographic location, leading industries, customs and other indicators, so as to determine whether the development direction of the characteristic town project is feasible. At the same time, when making decisions, it is necessary to consider indicators that have a close relationship with the future development direction of the project, and it is necessary to focus on increasing investment in these areas.

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