

Research on the Competitiveness Evaluation of Cultural Tourism Industry in Jilin Province

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ABSTRACT

The combination of culture and tourism has become a future tourism trend. At the same time, due to the combination and adjustment of the Ministry of Culture and the Ministry of Tourism, the Porter Diamond Model is specially revised. At the same time, based on this model, analytic hierarchy process is used to construct 6 goals. A total of 40 indicators are used to evaluate the competitiveness of the cultural tourism industry. At the same time, the average data of the three provinces of Heilongjiang, Liaoning and Jilin in the northeast region in the past five years are selected to evaluate the competitiveness. The analysis shows that the synergy of the six elements of the revised Porter's diamond model will enhance the industrial competitiveness of local cultural tourism. Finally, from 6 aspects, it puts forward relevant countermeasures and suggestions, such as integrating production factors, establishing cultural tourism brands, developing industrial clusters, giving full play to enterprise talents, enhancing government intervention, and seizing development opportunities, so as to provide reference for formulating correct cultural tourism development strategies in the future.

Keywords: Cultural tourism; Porter's diamond model; AHP; competitiveness evaluation

1. BASIC SITUATION

Up to now, the development speed of my country's tourism industry has been greatly improved. Relevant data show that in 2020, under the severe epidemic environment, the number of domestic tourists in my country can still reach 2.88 billion, and the tourism revenue will reach 2,228.6 billion yuan. The comprehensive contribution of the national tourism industry to GDP is 1,912.8 billion yuan, accounting for 12% of the total GDP. Among them, Jilin Province received a total of 153.4223 million domestic, a decrease of 38.2% over the previous year. The total tourism revenue of Jilin Province for the year was 253.459 billion yuan, the domestic tourism revenue was 252.810 billion yuan, and the tourism foreign exchange income was 97 million US dollars. With the gradual optimization of the tourism economic structure and the changes in people's tourism needs, the integration of cultural tourism industry has become more prominent. The integration of cultural tourism shows that the tourism industry needs the cultural industry to provide more material resources, and the cultural industry needs the tourism industry more. To

provide more platform support for it, the two complement each other and integrate with each other. In view of this, in Jilin Province, a relatively weak tourism area in my country, it is necessary to conduct in-depth research to find the competitiveness of the cultural tourism industry and put forward practical countermeasures and suggestions to further enhance the integration and development of cultural tourism in Jilin Province, and then make up for The province's shortcomings in tourism.

2. THEORETICAL BASIS

China's cultural tourism is mainly divided into four aspects: the historical and cultural layer, the modern cultural layer, the folk culture layer and the moral and ethical culture layer. The development of cultural tourism in my country is also very important. Traditional culture, let the world know more about China. However, the research on cultural tourism is indeed the first to set foot in foreign countries, and it only began to enter the research of cultural tourism in 1976 ^[1], mainly because the opening of Western culture and the universality of tourism are earlier than that of China, due to the cultural

differences at home and abroad. Differences, the research results of foreign scholars tend to be cultural output: Let more people understand the local national culture through tourism, and further achieve cultural dissemination. But domestic scholars are more on the basis of culture to reform the tourism model, while paying more attention to the economic effects brought by tourism.

In the comparison of the competitiveness of a wide range of tourism industries, domestic scholars have innovated on the famous model framework and established a competitiveness evaluation model. For example, Liu Lixia (2015) used the GEM model to evaluate the cluster competitiveness of Tianjin's tourism industry^[2]. Cheng Qian (2015) evaluated the competitiveness of cultural tourism and creative industries in 16 cities in the Yangtze River Delta based on the Porter diamond model from the perspective of niche^[3]. Gan Junwei (2017) used the DEMATEL model to implicitly analyze the factors affecting the competitiveness of Sichuan-Tibet tourism industry from three aspects: product, supporting conditions and management^[4]. Zou Quan (2018) uses the input-output theory to establish the evaluation index system of the IO model to study the tourism competitiveness of 31 provinces and cities across the country^[5] and so on. Different models play a key role in different laboratories.

In terms of research methods, domestic scholars have also made many explorations in the evaluation and analysis methods of the tourism industry. For example, Pan Haiyan (2013) used the SWOT method to conduct an in-depth analysis of the development advantages, disadvantages, opportunities and challenges of cultural tourism in Henan Province^[6]. Wang Qian (2016) constructed an AHP model to study the competitiveness evaluation system of the cultural tourism industry in Jilin Province from the perspective of the value, system, uniqueness and ductility of the cultural tourism industry^[7]. Sun Ling (2017), based on AHP fuzzy analysis, studied the tourism competitiveness evaluation model of imperial mausoleums in my country from the value of scenic spots. Through the research, it was found that the modern cultural tourism industry has a single tourism product, low quality of practitioners, and insufficient customer source market development. Through the above expression of current conditions and development conditions^[8]. Wang Shuai (2019) used the time-series global principal component analysis to evaluate the tourism competitiveness of 11 provinces and cities in the Yangtze River Economic Belt by starting with the three parts of market-factor-environment^[9]. Zhang Mingyue (2019) used the principal component analysis method to construct an evaluation index system for the tourism development level of the Yangtze River Economic Belt from three levels of tourism demand, tourism supply and tourism support, and measured the tourism development level of 11 provinces and cities in the Yangtze River Economic Belt^[10].

3. THE FORMATION OF RESEARCH METHODS

Since this paper aims to study the competitiveness of cultural tourism in Jilin Province, when competitiveness is the main entry point, it will face the difficulty of many indicators. But it is difficult to analyze the combination of qualitative and quantitative. Therefore, through the screening of multiple analysis methods, the analysis of hierarchy process (AHP) was finally used for related research. This theory was only introduced into my country in 1982. Xu Shubai of Tianjin University published the first paper in my country that mainly introduced AHP [11]. Since then, the method has been widely used.

4. CONSTRUCTION OF MULTI-LAYER ANALYSIS STRUCTURE MODEL

4.1 Porter Model Correction

In Porter's diamond model, Porter believes that the competitiveness of a particular industry in a country mainly depends on the joint effect of six aspects. That is, production factors, demand conditions, related and supporting industries, corporate strategic structure and competition, and government and opportunities. In this study, in my country's cultural tourism, the influence factor of the government should be the key factor. Therefore, in this study, there are 5 key elements, and only one chance element is an auxiliary element, that is, the Porter diamond model is modified (Figure 1).

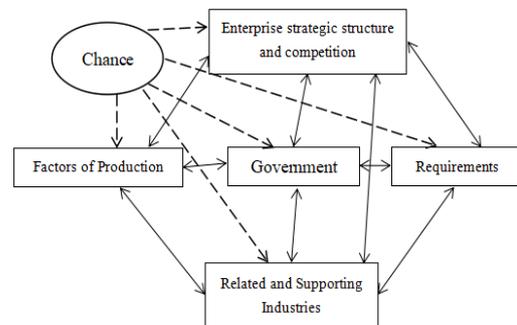


Figure 1 Michael Porter diamond Model(revise)

4.2 Construction of indicator system

This study adopts the AHP method, and proposes a total of 40 indicators in 6 criterion layers, and these indicators correspond to each major indicator in the criterion layer. In particular, when indicators are selected, they are mainly based on close correspondence with the elements of the previous layer, and indicators that can obtain all data through search or calculation are selected for analysis, so as to avoid analysis errors caused by human factors as much as possible. The specific selection index system is shown in Table 1.

4.3 AHP Judgment Matrix Construction and Weight Calculation

Since the process of constructing the judgment matrix in AHP is subjective, in order to avoid the deviation of data analysis caused by human subjective opinions, this time, the Delphi method is used to score the indicators of each criterion level.

After the AHP judgment matrix is obtained, the SPSSAU software is used to analyze the competitiveness evaluation index system of Jilin Province's cultural tourism industry. Finally, the maximum characteristic root λ_{max} and consistency of each judgment matrix are calculated through multiple steps such as column normalization, index CI, and finally obtain the consistency ratio CR by querying the corresponding average random consistency index RI. The calculated weights are consistent (Table 1).

Consistency check pass conditions: If all judgment matrices $CR < 0.10$, it proves that the consistency of all judgment matrices is acceptable, which means that the consistency test is passed.

Table 1 λ_{max} , CI, CR values and consistency test results of the judgment matrix

Judgment Matrix	λ_{max}	CI	CR
A	6.457	0.091	0.073
B1	5.268	0.067	0.06
B2	2	0	0
B3	1	0	0
B4	2	0	0
B5	2	0	0
B6	1	0	0
C1	2	0	0
C2	3.054	0.027	0.052
C3	3.074	0.037	0.071
C4	4.16	0.053	0.06
C5	3.054	0.027	0.052
C6	4.212	0.071	0.079
C7	4.177	0.059	0.066
C8	5.261	0.065	0.058
C9	2	0	0
C10	2	0	0
C11	2	0	0
C12	2	0	0
C13	4.217	0.072	0.081

5. SELECTION OF COMPARATIVE SAMPLES, DATA PROCESSING AND ANALYSIS OF EVALUATION RESULTS

5.1 Selection of comparative samples

Jilin Province is located in the northeast region, in the center of the three eastern provinces, with Heilongjiang Province in the north and Liaoning Province in the south. Therefore, the relevant indicators of Heilongjiang Province and Liaoning Province and Jilin Province were selected for comparison. At the same time, Heilongjiang Province started earlier than Jilin Province in terms of ice and snow tourism, and has more research results than Jilin Province in terms of cultural tourism; while Liaoning Province's economic development is faster than Heilongjiang and Jilin Province, and there are more seaside ports in Dalian for Liaoning. The province brings more economic benefits, so with strong economic support, Liaoning Province has made faster progress in cultural tourism than Heilongjiang and Jilin provinces. In view of the above characteristics, it is more appropriate to select Heilongjiang Province and Liaoning Province as the comparison samples of Jilin Province.

5.2 Data selection

When the AHP was used in this study, in order to avoid over-subjectivity and the deviation of the final results caused by data errors, the Delphi method was adopted in terms of subjectivity, and the authoritative and objective data were pursued. The data are mainly from Statistical Yearbook and Statistical Bulletin of the Three Provinces 2016-2021 and Provincial Departments of Culture and Tourism, the provincial government issued a total of data reported in each year and so on. Mainly refer to the actual data of each indicator in the past 5 years from 2016 to 2020, and then average the data of each indicator in 5 years. In order to ensure the objectivity of the data, all soft indicators for which data cannot be obtained are discarded in this indicator selection.

5.3 Data dimensionless processing

After arranging the data, since the units of each indicator are different, and the order of magnitude of the same unit is also different, there will be great errors in the subsequent score evaluation and score ranking. Therefore, it is necessary to perform dimensionless processing on each known original value. This processing adopts the standardized processing method. The specific formula is as follows: $S_i = (X - \text{Mean}) / \text{Std}$

5.4 Evaluation Results

The specific expression of the competitiveness evaluation value:

$$E = \sum_{i=1}^n W_i S_i$$

First, the standardized data is weighted by the weight of the D-type indicators to obtain the corresponding D-type index evaluation, then the D-type index score is

weighted by the C-type index weight to obtain the B-type index evaluation, and finally the B-type index score is passed through A The class indicator weights are weighted to obtain the final score, which is then ranked (Table 2).

Table 2 The evaluation scores of cultural tourism industry competitiveness in Heilongjiang, Jilin and Liaoning provinces

Criterion level ₁	Criterion level ₂	Jilin	Heilongjiang	Liaoning
Factors of Production	Human Resources	-0.232	-0.129	-0.145
	Natural Resources	-0.040	-0.029	-0.025
	Knowledge Resources	-0.065	-0.048	-0.039
	Capital Resources	-0.046	-0.060	-0.062
	Infrastructure	0.176	0.010	-0.045
	Score	-0.014	-0.017	-0.021
	Ranking	1	2	3
Requirements	Domestic demand	-0.282	-0.355	-0.289
	Foreign demand	-0.126	0.132	0.156
	Score	-0.048	-0.026	-0.016
	Ranking	3	2	1
Related and Supporting Industries	Supporting industries	-0.069	-0.170	-0.171
	Score	-0.010	-0.0237	-0.0239
	Ranking	1	2	3
Enterprise strategic structure and competition	Industry competition	0.578	0.097	0.013
	Business Management	-0.295	-0.158	-0.174
	Score	0.049	-0.011	-0.028
	Ranking	1	2	3
	Government Implementation	0.100	0.024	0.009
Government	Government Guarantee	-0.304	-0.160	-0.177
	Score	-0.048	-0.032	-0.039
	Ranking	3	1	2
	Chance			
Chance	Economic Level	-0.381	-0.276	-0.221
	Score	-0.102	-0.074	-0.059
	Ranking	3	2	1
	Overall ratings	-0.173	-0.1837	-0.1869
	Overall ranking	1	2	3

6. RELEVANT COUNTERMEASURES AND SUGGESTIONS

(1) Integrate production factors and strengthen

resource construction. The indicators of production factors are interdependent and restrict each other. It is necessary to strengthen the connection between various resources, which are closely linked. In terms of human resources, it is necessary to strengthen the introduction of

high quality college students, and pay attention to the employment situation of college students majoring in tourism management in the province. In terms of natural resources, the quality of natural resources such as air quality and water quality is guaranteed to be of high quality, and the quality of natural resources is guaranteed.

(2) Establish a cultural tourism brand, strengthen precise positioning, create a provincial level cultural tourism industry brand, find local cultural tourism characteristics, and establish a compelling cultural tourism brand to attract enterprises. Homes come to invest and attract investors to participate in the construction of local cultural tourism.

(3) Develop industrial clusters and build a complete industrial chain Can the development of the cultural tourism industry be inseparable from the support of relevant supporting industries? Each industry should build its own several industrial clusters, integrate resources, and fully support the development and upgrading of the cultural tourism industry.

(4) Give full play to enterprise talents and guide healthy management The healthy development of enterprises is inseparable from enterprise management and entrepreneurial talents, especially for enterprises centered on culture and tourism, they should give full play to entrepreneurial talents and formulate new strategic decisions to promote enterprise development.

(5) Strengthening government intervention and establishing strategic awareness The development of cultural tourism is inseparable from government intervention. Only the active guidance and strong support of the government can maximize regional characteristics and promote the development of cultural tourism. Therefore, the government must not only economically pass Government funding or attracting investors to invest to help the coordinated development of the cultural tourism industry.

(6) Seize development opportunities and promote economic growth Opportunities are rare, so we must seize all opportunities to promote regional economic development. my country has now entered a moderately prosperous society in an all round way, and is heading towards the road of realizing the great rejuvenation of the Chinese nation. The economic level directly reflects the overall development of the region. Now the country has given an open economic development policy, seized development opportunities, ensured the steady improvement of the economic level, and improved the comprehensive benefits. Only then can the full synergistic effect of all industries and resources be brought into play, and the regional culture can be realized. Comprehensive development of tourism industry.

7. CONCLUSION

This research mainly uses the analytic hierarchy process to analyze the competitiveness evaluation of the three northeastern provinces and regions through the revision of Porter's diamond model, draws corresponding conclusions through the final competitiveness evaluation scores, and gives countermeasures and suggestions in line with my country's national conditions through the conclusions. .The main limitations of this study are: ① This study only studied the development of cultural tourism in three provinces in Northeast China. There are 7 regions in China. In the future, more research methods can be used to analyze the development of cultural tourism in more regions. ② The indicators selected this time are all hard data indicators that can be directly obtained, and all soft indicators are discarded, and the soft indicators themselves will also affect the results. Therefore, it is hoped that in the future, soft indicators can be added to diversify the analysis. , to further discuss the development of the regional cultural tourism industry.

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