An Analysis of Spatial Distribution Differences in Rural Leisure Tourist Destination Resources in Liaoning Province

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Abstract From the perspective of tourism resources elements, we use abundance and geographic concentration methods to analyze the spatial distribution differences in the resources of 149 rural leisure tourist destinations in Liaoning Province. The results show that most of Liaoning's rural leisure tourist destination resources are mainly concentrated in the central, southern and eastern regions of Liaoning Province; in the main category of rural leisure tourism resources, water scenery, geological landform and mountain ecosystem concentrate, while agricultural resources and rural scenic view present balanced distribution; rural leisure tourism resources are highly concentrated in Shenyang, Dalian, Anshan, Benxi, Liaoyang and Dandong.

Key words Rural leisure tourist destination resources, Spatial distribution, Liaoning Province

1 Introduction

In recent years, as rural tourism and leisure tourism flourish, the tourist destination relying on beautiful rural scenery, is highly popular with people who pursue aesthetic, physical and psychological pleasure. It referred to herein as "rural leisure tourist destination". Currently, there is no explanation about the definition of rural leisure tourist destination in academia. Since rural leisure tourist destination combines rural tourist destination with leisure tourist destination, the academia's definition of rural tourist destination can provide a reference for defining rural leisure tourist destination. Li Jianfeng maintains that rural tourist destinations are the rural areas that cause tourists to travel in rural areas, and can meet the travel needs of tourists; rural tourist destination can be as large as a town or a rural area with uniform resource characteristics, or as small as a village. Ren Ning argues that rural tourist destination is a rural destination relying on natural and human rural tourism resources to carry out rural tourism activities, with many facilities and great reception capacity. Han Fei *et al.* believe that rural tourist destination is a tourist destination in rural areas, which relies on characteristic rural tourism resources and has some tourist facilities. Gao Qian thinks rural tourist destination, with rural natural and cultural resources as attraction and urban residents as target tourist market, is an area that has a unique image and perfect regional management and coordination agencies, to enable tourists to make travel decisions. He Wenzheng *et al.* hold that rural tourist destination is a region, which relies on good tourism resources in rural areas and actively creates rural tourism as leading industry on the basis of the original rural production and life, to offer a variety of recreational activities and unique experience for visitors, and it has livable leisure environment and ecological leisure facilities. Based on the above definitions, this paper argues that rural leisure tourist destination, as an integrated region with tourism resources relying on rural ecological environment, characteristic agriculture and rural culture as the core attraction and with countryside scenic spots, countryside resorts, leisure farms and leisure farmhouses as the carrier, has some facilities and reception capacity after being developed, and aims to meet the tourists' needs for enjoying rural scenery, experiencing farm life, feeling local culture and enjoying rustic cuisine.

2 Types of rural leisure tourist destinations

Up to now, Liaoning Province has a total of 149 rural leisure tourist destinations, and the tourism resources that the province's rural leisure tourist destinations rely on can be divided into 5 main categories (agricultural resources, rural scenic view, water scenery, geological landform, and mountain ecosystem) and 14 kinds of resource elements (Table 1).

3 Abundance of rural leisure tourism resources

The abundance of rural leisure tourism resources can be measured using the sequence method. Firstly, based on statistical data, we use formula to calculate the absolute abundance index A and relative abundance index C of rural leisure tourism resources in Liaoning Province. On this basis, we calculate total abundance F of rural leisure tourism resources, and then sequence it according to the numerical size, in order to determine the spatial distribution of rural leisure tourist destination. The formula is as follows:

$$P_i = \frac{mm - \sum_{j=1}^{m} d_{ij}}{mn - n} \quad F = \sqrt{A \times C}$$

where P_i is the composite index of leisure tourism resource i; m is the number of city for comparison; n is the number of types of leisure tourism resources; $\sum_{j=1}^{m} d_{ij}$ is the sum of rank of m kinds of leisure tourism resources in city i.

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The results are shown in Table 2. As can be seen from Table 2, the rural leisure tourist destinations in Liaoning Province are mainly concentrated in central, southern and eastern regions (specifically in the city of Shenyang, Dalian, Benxi, Anshan, Liaoyang and Dandong), with the type and quantity of rural leisure tourism resources accounting for more than 60% of total provincial level. Clearly, these regions have considerable different types of rural leisure tourism resources and good geographical mix, thereby forming the rural leisure tourist destinations whose tourism resources can be fully exploited.

Table 1 Classification of rural leisure tourism resources in Liaoning Province

Main category of tourism resources	Resource elements	Number of tourist destinations
Agricultural resources	High-tech agriculture	12
	Manor farm	16
	Local specialty agriculture	18
	Fruit picking	16
Rural scenic view	Folk customs	9
	Featured houses	10
	Folk art	13
	New rural style	8
Water scenery	Lakes, reservoirs	12
	Sea	10
Geological landform	Karst cave	4
	Geothermal hot spring	7
Mountain ecosystem	Mountain forest land	14

Table 2 Abundance of rural leisure tourism resources in different cities of Liaoning Province

City	*F* value	Ranking	*A* value	*C* value
Shenyang	0.909	1	0.952	0.867
Dalian	0.902	2	0.948	0.859
Benxi	0.889	3	0.934	0.847
Anshan	0.874	4	0.936	0.817
Liaoyang	0.859	5	0.928	0.796
Dandong	0.841	6	0.889	0.796
Fushun	0.809	7	0.867	0.754
Jinzhou	0.805	8	0.869	0.745
Huludao	0.783	9	0.847	0.724
Tieling	0.78	10	0.854	0.712
Yingkou	0.779	11	0.816	0.743
Panjin	0.778	12	0.827	0.732
Fuxin	0.728	13	0.742	0.714
Chaoyang	0.713	14	0.721	0.705

4 Concentration degree of rural leisure tourism resources

Geographic concentration index G is an important indicator to measure the concentration degree of the object of study, and the formula is as follows:

$$G = 100 - (H/T) \times 100$$

where T is the total area of Liaoning Province (148000 km^2); H is the area of one region with one type of leisure tourism resource accounting for 50% of total leisure tourism resources in Liaoning Province; G is in the range $[0-100]$, and the greater the G value, the higher the concentration degree of rural leisure tourism resources.

In general, the concentration index of less than 50 means relatively dispersed distribution; the concentration index of 50 – 70 means balanced distribution; the concentration index of 70 – 90 means relative concentration; the concentration index of more than 90 means high concentration. The results are shown in Table 3. As can be seen from Table 3, in the five kinds of rural leisure tourism resources in Liaoning Province, water scenery, geological landform and mountain ecosystem are in a relatively concentrated state; agricultural resources and rural scenic view show balanced distribution; rural leisure tourism resources are highly concentrated in Shenyang, Dalian, Anshan, Benxi, Liaoyang and Dandong. The abundance and concentration analysis of rural leisure tourism resources comes to similar conclusions, and reveals the difference in spatial distribution of rural leisure tourist destinations in Liaoning Province.

Table 3 Concentration degree of rural leisure tourism resources in Liaoning Province

Types of tourism resources	Concentration areas	Concentration index
Agricultural resources	Shenyang, Dalian, Tieling, Panjin	68.27
Rural scenic view	Shenyang, Dalian, Dandong, Liaoyang	63.58
Water scenery	Dalian, Dandong, Jinzhou, Huludao	85.69
Geological landform	Benxi, Anshan, Chaoyang	82.31
Mountain ecosystem	Benxi, Anshan, Liaoyang	76.53

5 Conclusions

From the perspective of tourism resources elements, we use abundance and geographic concentration methods to analyze the spatial distribution differences in the resources of 149 rural leisure tourist destinations in Liaoning Province. The results show that most of Liaoning's rural leisure tourist destination resources are mainly concentrated in the central, southern and eastern regions of Liaoning Province; in the main category of rural leisure tourism resources, water scenery, geological landform and mountain ecosystem are relatively concentrated, while agricultural resources and rural scenic view present balanced distribution; rural leisure tourism resources are highly concentrated in Shenyang, Dalian, Anshan, Benxi, Liaoyang and Dandong.

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(From page 76)

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