DOI: 10.6981/FEM.202009_1(9).0006

Preliminary Study on Spatial Distribution Structure of Rural Tourist Areas in Wenzhou City

Weiyue Ji

School of Shanghai University, Shanghai, China.

Abstract

Exploring the spatial distribution structure characteristics of rural tourism destinations is helpful to understand the actual state of rural tourism development in this area, and it can provide important reference value and guiding significance for the formulation of targeted countermeasures for the sustainable development of rural tourism in the area. This article takes 24 rural tourist attractions in Wenzhou City as research objects, using GIS, GPS, Google Earth and other software, as well as geographical spatial analysis methods such as nearest neighbor index, geographical concentration index, and accessibility, to analyze the spatial distribution pattern of rural tourism in Wenzhou City. Quantitative analysis of degree, degree of balance and degree of access were used to reveal the spatial distribution of rural tourist attractions in the region. The results show:

① The distribution of Wenzhou rural tourism sites in the whole city shows an aggregate form. ② From the district (county) scale, the agglomeration distribution of rural tourism sites in Wenzhou City is relatively obvious. ③ The degree of traffic access in rural tourist areas in Wenzhou is not satisfactory.

Keywords

Rural Tourism; Spatial Structure; Sustainable Development; Wenzhou City.

1. Introduction

With the development of society and the continuous improvement of people's living standards, more and more urban residents hope to return to nature in order to relieve the pressure of body and mind. Rural tourism, which extends from modern tourism to rural areas, appears in the life of the world. At the same time, more and more rural residents continue to rush to the metropolis in the tide of urbanization, which also leads to the phenomenon of rural hollowing and farmers' concurrent employment, which hinders the development of rural economy. Coordinated development of urban and rural areas once became the focus of attention of the relevant government departments [1]. However, it is proved by theory and practice that rural tourism is effective way to solve such problems [2]. Speeding up the sustainable development of rural tourism in rural areas can not only protect the local natural environment, but also contribute to the construction of ecological civilization. In addition, it is also conducive to the development of rural economy. To explore the spatial distribution and structural characteristics of rural tourism sites is helpful to understand the actual state of rural tourism development, and to put forward targeted development for the sustainable development of rural tourism in this area the development of rural tourism can be effectively solved.

How to correctly analyze the spatial structure characteristics of rural tourist destinations has attracted widespread attention in academia and industry. Scholars Smith used mathematical and geographical methods to describe the spatial layout of tourist destinations and analyze the relationship between tourist destinations and tourist facilities [3]. Nilsson think that the spatial distribution of rural tourism is mainly affected by rural environment, and define the concept of rural tourism including farm tourism [4]. Saxebna and other scholars have expounded the

DOI: 10.6981/FEM.202009 1(9).0006

influence of community attitude on the development of rural tourism[5]. Dianne Dredge constructed three kinds of tourism destination spatial structure pattern [6]. The relationship between leisure activities and geospatial structure is discussed by Christaller [7]. Chinese scholars Xiantang Xu and others quantitatively characterized the spatial distribution of leisure rural and rural tourism in China, and explored the possible influencing factors [8]. Liu and others used GIS spatial analysis and geographical measurement to study and analyze the spatial pattern of tourist destinations[9]. Bihu Wu and other scholars also explored the spatial pattern of rural tourist destinations around cities in China [10]. Aijuan Hu discusses the spatial distribution of agricultural leisure tourism and the structure of tourism circle in Hangzhou from the angle of supply and demand [11]. Xue Qin also put forward the optimization countermeasures for the spatial distribution structure of rural tourism in China[12].

Through consulting the relevant literature, it is found that experts and scholars generally adopt the research method of combining qualitative inquiry and quantitative analysis, which broadens the depth and breadth of academic research by using multidisciplinary knowledge and methods at the same time. By using software such as GIS, GPS, Google Earth, proximity index, geographical concentration index, accessibility and other geospatial analysis methods, this paper makes a quantitative analysis of the spatial distribution pattern, equilibrium degree and accessibility degree of rural tourism in Wenzhou the spatial distribution of scenic spots. It is hoped that it can provide reference value for optimizing the spatial pattern of rural tourism in Wenzhou.

2. Definition of Rural Tourism

Rural tourism has been developing for more than 30 years, but the concept of rural tourism is still not defined.

Many scholars believe that rural tourism is a form in which local farmers provide food and accommodation for tourists, so that tourists can carry out tourism activities in the rural natural environment. Some experts define rural tourism as a multi-level leisure activity, including not only leisure tourism based on rural natural environment, but also natural ecotourism out of tourists' own special interests, health recreation tourism, popular science education tourism, cultural experience tourism and so on. There are even scholars who believe that rural tourism is tourism that occurs in rural areas [13]. Jingming He and Lihua Li believe that rural tourism takes place in rural areas and attracts rural natural and human resources [14]. Gang Lin and Peiji Shi analyzed 20 definitions with high recognition by quantitative analysis [15]. Finally, the concept of rural tourism is summarized: it refers to the leisure experience activities which occur in the rural area space with the help of natural or human resources such as rural pastoral scenery, agricultural production activities and farm customs and habits.

3. Overview of Rural Tourism in Wenzhou City

Wenzhou is located in Zhejiang Province, China, Wenzhou City has jurisdiction over 11 counties and urban areas, respectively Lucheng, Ouhai, Longwan three districts; Ryan, Yueqing two cities; Yongjia, Cangnan, Pingyang, Taishun, Wencheng and Dongtou six counties. Total land area 11784 square kilometers, urban area 1082 square kilometers, sea area 11000 square kilometers [16]. At present, the development of rural tourism in Wenzhou has the following three characteristics:

3.1. Rapid development

The rural tourism in Wenzhou started in the mid-1990s, and the form of rural tourism began to develop from the rural restaurants with the characteristics of simple rural areas which can only provide food and accommodation [17]. With the increase of urban residents' demand for rural

DOI: 10.6981/FEM.202009 1(9).0006

tourism, they gradually expand to the experiential activities such as viewing and picking, which rely on the extension of rural agricultural resources. Finally, the rural tourism in Wenzhou has developed into a modern rural tourism form which integrates food, housing, travel, shopping, entertainment and experience. Wenzhou City in 2019 ushered in a "bumper harvest" of tourism development in Wenzhou City, Wenzhou's tourism economic indicators and the number of tourists have handed over "more than 100 million" good results ——The annual number of visitors at home and abroad reached 103.76 million, an increase of 16.0 percent over 2016; the total annual tourism revenue reached 115 billion yuan, an increase of 19.8 percent over 2016 [18]. These data witnessed the vigorous development of rural tourism in Wenzhou.

As is known to all, Wenzhou has unique traffic location advantages. Wenzhou's road, trunk railway, aviation and other traffic network development is relatively perfect [19]. The territory has a total of Yongtaiwen and other 4 highways, 104 national highways and 58 provincial roads and other domestic highways; Yongtai with mild Wenfu two main railway; It also has Longwan International Airport located in Longwan City, with many air lines. All these superior traffic conditions enable Wenzhou to eventually become an important hub city, and the rapid development of rural tourism in Wenzhou can be realized.

3.2. Rich resources

Wenzhou not only has unique natural resources, especially in the township and county areas, but also has a large number of undeveloped and unused original rural resources. In addition, Wenzhou has a long history and colorful cultural resources. It can be said that Wenzhou rural tourism resources are quite rich, which provides a rare and important condition for the development of Wenzhou rural tourism and the development of rural economy. In terms of natural resources, Wenzhou has three national scenic spots, Yandang Mountain, Nanxi River and Baizhang River, as well as two nature reserves, Nanlule Island and Wuyan Ridge. Wenzhou tourist attractions occupy an area of more than 1/4 of the city's land area. In addition, Wenzhou has preserved a large number of ancient ancient villages, beautiful environment, profound cultural heritage, the most representative of Nanxi River ancient village culture, Taishun Langqiao culture and so on.

In the aspect of cultural resources, in addition to the historical and cultural tourism resources, such as Bao Gong Dian, Yongjia Siling and Liu Ji, which are popular with tourists, Wenzhou also has many other distinctive folk festival cultures, such as Wenzhou drum words, Yongjia Kunqu song, Ryan rattan dance and other intangible cultural heritage, of course, there is also Wenzhou local characteristics of food culture, such as Taishun's "hundred family banquet "," eat five brown "," Acorus calamus wine" and so on.In addition, there are some popular Wenzhou folk skills, such as Yueqing Huangyang wood carving, ou embroidery, ou plastic and so on[20].

3.3. Variety

At present, the rural tourism industry in Wenzhou can be classified into four categories according to the service content: delicious, good, leisure, agricultural and sightseeing, and folk culture [21]. Delicious delicacies, such as "Lingshang people" in Yongjia County, are a form of developing rural tourism by taking the "food" demand of tourists as the starting point and relying on. Leisure vacation can be divided into two categories: the main function of providing accommodation service and the function of providing sports and leisure service, such as the family hotel around Nanxi River scenic spot. Provide sports and leisure services such as Yueqing City White Stone Swimming Pool. Agricultural sightseeing type is a kind of rural tourism form which relies on rural natural resources for viewing, picking, vacation and other activities, such as Ouhai Baiyun Mountain Agricultural sightseeing Park, Ruian District Tongpu cauliflower base and other agricultural sightseeing spots. Folk culture is a form of rural tourism which integrates the functions of agricultural production and popular science education. By allowing tourists to experience agricultural production activities, they can experience the joy of farmers

DOI: 10.6981/FEM.202009 1(9).0006

in leisure and increase their agricultural knowledge at the same time. Such as Yongjia County Da Ruoyan Town Li Tou Village.

4. Spatial Distribution of Rural Tourism in Wenzhou

4.1. Source and processing of data

Based on the current situation of rural tourism in Wenzhou, this paper selects the following 24 rural tourist attractions as research samples and obtains Table 1. The selection of rural tourist attractions is mainly based on the demonstration sites (districts) selected by the state over the years (until the end of December 2019): ①National leisure agriculture and rural tourism demonstration counties and demonstration sites (nine batches). ②National leisure agriculture and rural tourism star demonstration enterprises (parks)(nine batches). The rural tourism demonstration site is a typical demonstration unit of rural tourism selected by the National Tourism Administration and the Ministry of Agriculture according to the unified standard. Wenzhou rural tourism demonstration site as the research object of this paper, can make the research based on persuasion. In addition, China's well-known professional tourist sites (Ctrip, where to go, flying pigs, Tu Niu net) search Wenzhou rural tourist attractions as a reference. Combined with the information published by the government and industry, through screening, weight removal, the final determination of Wenzhou rural tourism demonstration site as a research sample.

Table 1: January-December 2019 Wenzhou rural tourist attractions statistical table

Urban	Quantity	Name of scenic spot		
Lucheng District	1	Zhejiang Agricultural Ecological Farm		
Ouhai District	3	Baiyun Mountain Agricultural Tourism Park		
		Chuitai Mountain Ecological Farm		
		Caoping Shan Agricultural Leisure and Tourism Park		
Longwan District	2	Yonghe lianqing Culture Park		
		Risheng Leisure Culture and Tourism Park		
Ruian City	4	Yalin Modern Agricultural Park		
		Ancient Chinese wooden movable type printing culture village		
		Rongxiang Farm Culture Park		
		Tongpu rape base		
Yueqing City	1	Nengren Tea Professional Cooperative		
Yongjia County	3	Lingshang Renjia		
		Nanxi River Scenic Area		
		Yuanye Garden Farm		
Cangnan County	1	Sun Moon Lake Farm		
Pingyang County	2	Ouping Agricultural Comprehensive Development Co., Ltd (Happy Farm)		
		Bofeng Agricultural Development Co., Ltd .(Water Baidu leisure farming park)		
Taishun County	1	Nature Eco-Agriculture Experiment		
Wencheng County	6	Landing Lake Leisure Farm		
		Xianren Ecological Leisure Farm		
		Landscape Orchard Farm		
		Fengnong Modern Agricultural Ecological Park		
		Qiulaohan leisure farm		
		Fengzuo Flower Industry Park		
Dongtou County	0			

4.2. Analysis of Spatial Distribution Characteristics of Rural Tourism

The spatial attribute data of 24 sample points are queried by Google Earth, and the spatial distribution map of rural tourist attractions in Wenzhou is drawn with the help of GPS online

ISSN: 2692-7608 DOI: 10.6981/FEM.202009 1(9).0006

tools and GIS technology (Fig 1). In this paper, the nearest point index, geographical concentration index and accessibility index are used to analyze the spatial structure of rural tourism in Wenzhou from three aspects: spatial distribution, spatial equilibrium and accessibility.

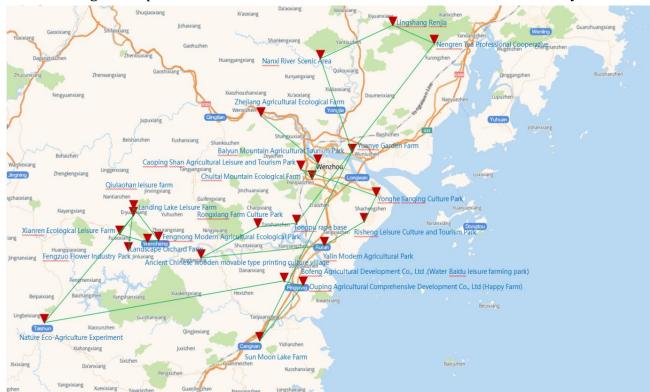


Figure 1: Spatial Distribution of Rural Tourist Attractions in Wenzhou City

4.2.1. Analysis of Spatial Distribution Characteristics of Rural Tourism

The nearest neighbor index is a geographical index that can effectively express the degree of proximity between points in the region in the geographical space of the region. In the model, the two concepts of theoretical nearest distance and practical nearest distance are mainly involved. Among them, the theoretical nearest distance r can be obtained by using formula 1 according to known conditions; the actual nearest distance is measured by measuring the distance between each point in the study sample and the nearest point, after the statistics are completed, the average values of these distances are calculated, this is the actual nearest distance rI. In a random state, the formula for calculating the nearest distance can be expressed as follows[22]:

$$r = \frac{1}{\sqrt[2]{\frac{n}{A}}} = 2\frac{1}{\sqrt{D}}$$

$$R = \frac{\mathbf{r}_{I}}{\mathbf{r}}$$
(2)

$$R = \frac{\mathbf{r}_{\mathbf{I}}}{\mathbf{r}} \tag{2}$$

If the value calculated R the ratio is equal to 1, that is, the actual nearest distance of the study sample is equal to the theoretical distance, then the spatial structure distribution type of the region belongs to the random type; if R calculated value is greater than 1, that is, the actual nearest distance of the study sample is greater than the theoretical distance, then the spatial

DOI: 10.6981/FEM.202009 1(9).0006

structure distribution type of the area belongs to the uniform type; f the R is less than 1, that is, the actual nearest distance of the study sample is less than the distance, then the spatial structure distribution type of the area belongs to the condensed type.

Table2: Wenzhou City, the most adjacent index statistics

Scenic spots	Corresponding proximity	Distance (m)	Distance (km)
Zhejiang Agricultural Ecological Farm	Ouping(Happy Farm)	4847.91	4.85
Baiyun Mountain Agricultural Tourism Park	Chuitai Mountain Ecological Farm	4956.41	4.96
Chuitai Mountain Ecological Farm	Caoping Shan Agricultural Leisure and Tourism Park	4644.64	4.64
Caoping Shan Agricultural Leisure and Tourism Park	Chuitai Mountain Ecological Farm	4644.64	4.64
Yonghe lianqing Culture Park	Risheng Leisure Culture and Tourism Park	9396.37	9.40
Risheng Leisure Culture and Tourism Park	Yonghe lianqing Culture Park	9396.37	9.40
Yalin Modern Agricultural Park	Tongpu rape base	8850.63	8.85
Ancient Chinese wooden movable type printing culture village	Rongxiang Farm Culture Park	14438.47	14.44
Rongxiang Farm Culture Park	Tongpu rape base	10035.08	10.04
Tongpu rape base	Yalin Modern Agricultural Park	8850.63	8.85
Nengren Tea Professional Cooperative	Lingshang Renjia	18320.03	18.32
Lingshang Renjia	Nengren Tea Professional Cooperativ	18320.03	18.32
Nanxi River Scenic Area	Zhejiang Agricultural Ecological Farm	25379.14	25.38
Yuanye Garden Farm	Baiyun Mountain Agricultural Tourism Park	10753.45	10.75
Sun Moon Lake Farm	Bofeng (Water Baidu leisure farming park)	19997.42	20.00
Ouping (Happy Farm)	Bofeng (Water Baidu leisure farming park)	4847.91	4.85
Bofeng (Water Baidu leisure farming park)	Ouping(Happy Farm)	4847.91	4.85
Nature Eco-Agriculture Experiment	Fengzuo Flower Industry Park	35396.37	35.40
Landing Lake Leisure Farm	Qiulaohan leisure farm	3448.93	3.45
Xianren Ecological Leisure Farm	Fengzuo Flower Industry Park	5670.69	5.67
Landscape Orchard Farm	Fengnong Modern Agricultural Ecological Park	3128.57	3.13
Fengnong Modern Agricultural Ecological Park	Landscape Orchard Farm	3128.57	3.13
Qiulaohan leisure farm	Landing Lake Leisure Farm	3448.93	3.45
Fengzuo Flower Industry Park	Xianren Ecological Leisure Farm	5670.69	5.67
Average ne	10100.82	10.10	

The known land area of Wenzhou A=11784 km2, total factor points nA=24, and the theoretical nearest distance rA=11.08. This paper uses Google Earth and GPS online tool measurement software to measure rural tourist attractions in Wenzhou City, and obtains Table 2, and then use the Excel to calculate and analyze., The actual nearest neighbor distance between rural tourist attractions in Wenzhou City is rI= km.10.10. Therefore, the nearest index R=0.91<1, that is ,24 rural tourist attractions in Wenzhou City show the distribution characteristics of agglomeration in the whole city. According to the size of the value, we can infer that the degree of agglomeration is not high.

4.2.2. Analysis of the degree of spatial equilibrium

4.2.2.1 Geographical concentration index

In order to study and analyze the spatial distribution of rural tourism in Wenzhou, this paper analyzes the data by using geographical concentration index. The results of the operation of the geographical concentration index reflect the degree of agglomeration and dispersion of the research samples in the region, and the use of this index can more intuitively express the distribution state of the research samples in the region. Expressed by formula [23]:

DOI: 10.6981/FEM.202009_1(9).0006

$$G = 100 \times \sqrt{\sum_{i=1}^{n} \left(\frac{X_i}{T}\right)^2}$$
 (3)

The analysis of the results of the geographical concentration index can be expressed as follows: The larger the G value of the calculated G is, the more concentrated the distribution of rural tourist attractions in the area, and the smaller the calculated G value, the distribution of rural tourist attractions in this area tends to be scattered.

Urban Total Sort Country tourism total (T) Proportion (X_i/T) $(X_i/T)^2$ **Lucheng District** 1 5 0.04 0.00174 3 Ouhai District 3 24 0.13 0.01563 Longwan District 2 4 24 0.08 0.00694 Ruian City 4 2 24 0.17 0.02778**Yueqing City** 1 5 24 0.04 0.00174Yongjia County 3 3 24 0.13 0.01563 5 **Cangnan County** 1 24 0.04 0.00174 **Pingyang County** 2 4 24 0.08 0.00694 **Taishun County** 1 5 24 0.04 0.00174 Wencheng County 6 1 24 0.25 0.06250 **Dongtou County** 0 6 24 0.00 0.00000

Table 3: Wenzhou City District (County) Concentration Index Statistics

Available in Table 3, total number of rural tourism in Wenzhou T=24, common districts (counties) n=11. Based on the statistical and computational functions of the Excel, the actual geographical concentration index of rural tourism in Wenzhou is finally obtained G=37.73.

Assuming that the 24 rural tourist attractions in Wenzhou are equally distributed in each district (county), the theoretical value of the average number of rural tourist areas in each district (county) should be 24/11=2.18. From this we can draw a conclusion: from the scale of each district and county in Wenzhou, the characteristics of the agglomeration and distribution of rural tourism in Wenzhou are very obvious.

4.2.2.2 Unequilibrium index

In order to more accurately reflect the state of spatial agglomeration of rural tourist destinations in Wenzhou, this paper cites the imbalance index to further verify the above analysis results. Here, the imbalance index is used to explore the uniformity of rural tourist attractions in Wenzhou City[24].

$$S = \frac{\sum_{i=1}^{n} Y_i - 50(n+1)}{100n - 50(n+1)} \tag{4}$$

According to the literature consulted, there are the following analysis rules: S is a value between $0\sim1$; if S=0, the pilot tourist attractions are evenly distributed in each region; if 1, the pilot tourist attractions are all concentrated in one region; In addition, the larger the S value, the greater the degree of imbalance, the more uneven the distribution of pilot tourist attractions in the region.

From Table 4, there are 11 districts in Wenzhou, that is, the total number of districts (counties) n = 11, using the Excel to calculate, the proportion of the total number of pilot tourist attractions in each region is obtained, arranged according to the fractional value from large to small, The 4

100.00

ISSN: 2692-7608

DOI: 10.6981/FEM.202009 1(9).0006

Yi, and the unbalanced index S=0.44>0.Combined with the results of the geographical concentration index of rural tourist attractions in Wenzhou, the unbalanced index of scenic spots once again verifies that the distribution of rural tourist attractions in Wenzhou is an unbalanced result. From the table, Wenzhou rural tourist attractions are mainly concentrated in Wencheng County and Ruian City. The total number of tourist attractions in the two places accounts for 41.67 percent of the total number of tourist attractions in the city, followed by Ouhai District and Yongjia County. The total number of tourist attractions also accounted for more than 25 percent of the city.

Urban	Total	Sort	Country tourism total (T)	Proportion (X_i/T)	Y_i		
Wencheng County	6	1	24	25.00	25.00		
Ruian City	4	2	24	16.67	41.67		
Ouhai District	3	3	24	12.50	54.17		
Yongjia County	3	3	24	12.50	66.67		
Longwan District	2	4	24	8.33	75.00		
Pingyang County	2	4	24	8.33	83.33		
Lucheng District	1	5	24	4.17	87.50		
Yueqing City	1	5	24	4.17	91.67		
Cangnan County	1	5	24	4.17	95.83		
Taishun County	1	5	24	4.17	100.00		

24

Table 4: Wenzhou City District (county) disequilibrium index statistics

4.3. Accessibility analysis

0

6

Dongtou County

The accessibility index can be used to express the degree of traffic connectivity between various tourist attractions in Wenzhou. The results of the accessibility index can reflect the average distance between one tourist attraction in Wenzhou's regional network and the shortest distance to all other tourist attractions. In other words, if the calculated accessibility index value shows higher, The longer the average distance from the tourist attraction to other tourist attractions, the worse the accessibility. The accessibility of rural tourist sites can also reflect the accessibility of the site, so we can use accessibility to directly evaluate the accessibility results [25].

$$A_i = \frac{\sum_{i=1}^n D_{ij}}{n} \tag{5}$$

0.00

In the calculation results, the accessibility index has the following points: The smaller the value of the Ai calculation results, the higher the accessibility of the point, the higher the accessibility of the tourist attraction and other tourist attractions; if the value of the Ai calculation results is greater, The lower the accessibility of the point, the worse the accessibility of the tourist attraction and other tourist attractions.

According to Table 5, the results of the accessibility index of 24 rural tourist destinations in Wenzhou 49.44km. Only 9 tourist attractions in Wenzhou City are higher than the average level calculated, accounting for 37.5% of the total level. It can be seen that the overall accessibility of rural tourist attractions in Wenzhou City is not good, and it is also said that the accessibility of tourist attractions in Wenzhou City is not high. In the calculation results, the best accessibility is Rongxiang Agricultural Culture Park in Ruian District, located in a good traffic location in Ruian City, and the worst tourist attraction is the natural ecological agriculture test site in

DOI: 10.6981/FEM.202009 1(9).0006

Taishun County, located in Taishun County. Relative traffic is poor, but the accessibility index of the two reaches 2.3 times.

Table 5: Statistics on accessibility index of rural tourist attractions in Wenzhou

Scenic spots	Accessibility index	Sort
Rongxiang Farm Culture Park	36.07	1
Tongpu rape base	36.57	2
Ancient Chinese wooden movable type printing culture village	37.57	3
Caoping Shan Agricultural Leisure and Tourism Park	37.99	4
Chuitai Mountain Ecological Farm	38.09	5
Yalin Modern Agricultural Park	39.39	6
Baiyun Mountain Agricultural Tourism Park	39.82	7
Bofeng(Water Baidu leisure farming park)	41.96	8
Ouping(Happy Farm)	43.75	9
Yuanye Garden Farm	45.18	10
Zhejiang Agricultural Ecological Farm	45.45	11
Risheng Leisure Culture and Tourism Park	46.57	12
Fengnong Modern Agricultural Ecological Park	46.72	13
Landscape Orchard Farm	48.24	14
Yonghe lianqing Culture Park	48.70	15
Landing Lake Leisure Farm	50.08	16
Qiulaohan leisure farm	50.32	17
Fengzuo Flower Industry Park	52.76	18
Sun Moon Lake Farm	53.19	19
Xianren Ecological Leisure Farm	53.30	20
Nanxi River Scenic Area	57.37	21
Lingshang Renjia	73.81	22
Nengren Tea Professional Cooperative	80.68	23
Nature Eco-Agriculture Experiment	83.01	24

5. Conclusion

For a long time, Wenzhou has been famous at home and abroad for the title of "Chinese Jew" and the economic development form of "Wenzhou Model". What is not known is that Wenzhou has unique natural tourism resources in addition to occupying the superior transportation location of our country. As a brother city of Hangzhou, Wenzhou should grasp its own development advantages and the current trend of rapid development of rural tourism, and develop Wenzhou's rural tourism rapidly.

In this paper ,24 rural tourism demonstration sites with high recognition in Wenzhou are taken as the research objects, and the spatial distribution structure characteristics of rural tourism in Wenzhou are quantitatively analyzed. The results show that the distribution of rural tourist attractions in Wenzhou is relatively concentrated and uneven, mainly concentrated in Wencheng County, Ruian City, Ouhai District and Yongjia County, and the other seven regions are only scattered. In addition, the accessibility between the attractions is not ideal, the best and the worst even reached 2.3 times the gap. It can be seen that the spatial distribution pattern of rural tourism in Wenzhou is still worthy of optimization.

In view of the characteristics of the spatial distribution structure of rural tourism in Wenzhou, it is suggested that Wenzhou improve the uneven distribution of rural tourist attractions. For those areas with good rural tourism development, it is hoped that the steady development trend can continue, while adopting the strategy of interregional cooperation [26]. It can not only create Wenzhou's own rural tourism image, but also improve the popularity of Wenzhou's

DOI: 10.6981/FEM.202009 1(9).0006

rural tourism. For those areas with poor rural tourism development, such as Dongtou County, Taishun County. Dongtou County is known as "100 Island County", beautiful scenery, island tourism resources rich [27]. Not only has the characteristic natural landscape resources such as "island strange, reef beauty, beach good, fish fresh, ecological excellent", but also has the unique condition of carrying out various kinds of sea sports, ornamental and other unique experiential projects, and has very considerable tourism development potential. Taishun is known as "the hometown of China's Langqiao", there are 958 bridges [28]. It can be seen that Taishun County has a high cultural inspection value of Langqiao. It is hoped that the government can invest some manpower and material resources to make the spatial pattern of rural tourism in Wenzhou more balanced and realize the coordinated development of rural tourism and even urban and rural economy in the whole city.

Of course, while optimizing the spatial structure of rural tourism in Wenzhou, we should pay attention to the construction of urban infrastructure, especially the perfection of traffic network in cities. On the existing basis, the government should speed up urban planning and construction in urban areas, increase investment in funds, improve traffic conditions in urban areas of Wenzhou City, especially in slow-growing villages, and improve regional accessibility, such as speeding up the construction of the Longwan International Airport upgrading project; actively improving the transport and carrying capacity of railway trunk lines in Wenzhou City; and strengthening the construction of road networks by opening some direct-through buses dedicated to urban and surrounding scenic spots. In particular, Taishun County, Yongjia County, Wencheng County and other small county areas with underdeveloped transportation undertakings should vigorously develop basic transportation. In this way, through the construction of traffic network to promote the expansion of the spatial distribution of rural tourism in Wenzhou, promote the rational and balanced layout of regional rural tourism, and the realization of regional integration.

In addition, it is suggested that Wenzhou rural tourism should pay attention to the cultivation and introduction of talents in the process of development and planning, and always bear in mind that it is very necessary to build a professional team. If the rural tourism industry wants to be stronger and bigger, it must not only rely on the strong support and support of the government, but also the professional guidance of the industry experts[29]. In addition, the quality of the reception staff in the rural tourist areas of Wenzhou should be guided and trained accordingly [30].

In a word, it is hoped that through the research and study of this paper, we can play a certain guiding role in the development of rural tourism in Wenzhou, and at the same time, we can develop and plan rural tourism in other municipal areas. In the research ideas to provide certain enlightenment significance.

Finally, due to the difficulty of data collection, this paper selects 24 representative rural tourist attractions in Wenzhou as the research object of the article. This paper does not consider the impact on the results of the study to some extent within the scope of the study. In addition, in the analysis and processing of data, the data are rounded to retain decimal steps, which has some interference with the accuracy of the data. Therefore, this paper needs further study in many aspects.

Acknowledgements

On the completion of the paper, I would like to sincerely thank all the teachers, professionals, friends and family who gave me great support and selfless help!

First of all, I would like to thank my instructor. In the writing process of this paper, from the topic selection, conception, organization materials to the whole process of writing, revising and

DOI: 10.6981/FEM.202009 1(9).0006

completing the paper, teacher Chen gave careful guidance and put forward many valuable opinions and help to this paper.

Secondly, I would like to thank my family and friends for their support and encouragement, give me the motivation to learn, in my most difficult time, give me help; in my most helpless time, give me care; in my most lost time, Give me hope.

Finally, I hereby declare that in the course of the research and writing of this paper, due to the limited ability and energy of the author, the consideration of some problems is not comprehensive enough, many aspects of the research are not deep enough, deeply feel their own shortcomings and academic depth, I hope readers will understand.

References

- [1] Hongxing Gao, Jing Cheng, Chun Xu, Aina Yu: Thinking on the Construction of Rural Tourism Service Standardization—Taking Yongjia County of Wenzhou as an example, China Standardization, (2018) No. 2,p.21~24+29.
- [2] Na Liu, Yun Pan: Discussion on the Reform of Teaching Methods of Tourism Resource Planning and Development, Education Modernization, Vol.47(2017)No.4,p.76~77.
- [3] Smith L J: tourism decision-making and analysis methods (China Tourism Press, Beijing 1991).
- [4] Nilsson P A: Staying on farms-an ideological background, Annals of Tourism Research, Vol.29 (2002) No.1, p.7~24.
- [5] Saxena G,Libery B: Developing integrated rural tourism:Actor practices in the English/Welsh border, Journal of Rural Studies,VOL.26(2010),p.260~271.
- [6] Dianne Dredge: Destination place planning and design, Annals of Tourism Research, Vol. 26 (1999) No. 4p. 91~93.
- [7] Christaller Walter: Some considerations of tourism location in Europe: The peripheral regions underdeveloped countries-recreation areas, Paper in regional science, Vol.12(1964)No.1,p.95~105.
- [8] Tie Wang, Pengfei Yu: Characteristics and Influencing Factors of Spatial Differentiation of State-level Rural Tourist Places in Shandong Province, Economic Geography, Vol.36 (2016) No.11, p.161 ~168.
- [9] Jian Liu, Yingchang Li: An Analysis of the Spatial Structure of Leisure Agriculture and Rural Tourist Attractions in Shanxi Province, Measurement Geography Agricultural Resources and Zoning in China, Vol.38(2017)No.7,p.108~114.
- [10] Bihu Wu, Zhuowei Huang, Xiaomeng Ma: Spatial Structure of Rural Tourism in the Surrounding Cities of China Geoscience, (2004)No.6,p.757~763.
- [11] Aijuan Hu: Study on the Structure Layout and Development Model of Leisure Agriculture —— Taking Hangzhou as an Example, Ecological economy, (2011)No.1,p.104~107.
- [12] Xue Qin: on Spatial Distribution Pattern and Optimization of Rural Tourism in China, Agricultural Modernization Research, (2008)No.6,p.715~718.
- [13] Junhui Lu: A Study on the Countermeasures of Rural Tourism Development in Wenzhou, (Ph.D., Zhejiang University of Technology, China 2009).
- [14] Jingming He, Lihua Li: Discussion on the Concept of Rural Tourism, Journal of Southwest Normal University, (2002)No.5,p.125~128.
- [15] Gang Lin, Peiji Shi: Understanding of the concept of rural tourism —— based on quantitative analysis of 20 rural tourism concepts, Development Research, (2006) No.6, p. 72~74.
- [16] Yifan Zhou: A Study on the Role of Grass-roots Government in the Development of Rural Tourism, (Ph.D., Jiangxi University of Finance and Economics, China 2017).
- [17] Jing Yang: Practical Research on Economic Development of Rural Leisure Tourism in China —— Taking Wenzhou City as an example, Journal of Chifeng University, Vol.32(2016)No.2,p.72~74.
- [18] Information on: http://wztjj.wenzhou.gov.html.

DOI: 10.6981/FEM.202009 1(9).0006

- [19] Ligan Dong: A Study on the Present Situation of the Construction of Beautiful Countryside in Wenzhou City, (Ph.D., Promoting Countermeasures Zhejiang Ocean University, China 2017).
- [20] Zailai Yan: The Influence of Rural Cultural Industry on Rural Economic Development ——Taking Wenzhou City as an example, Journal of Chifeng University, Vol.32(2016)No.6,p.73~75.
- [21] Shanyi Jiang: A Study on Government Behaviors in the Development of Rural Ecotourism in Wenzhou City, (Ph.D., China Guangxi Normal University, China 2014).
- [22] Stephen L J: Tourism Analysis: A Handbook, (Long man Group, London 1989).
- [23] Zhen Wang, Jianguo Zhang, Menghan Shen: A Study on Spatial Layout Characteristics and Optimal Path of Hangzhou Rural Tourism Area, Agricultural Resources and Zoning in China, Vol.38 (2017) No.7, p.94~100.
- [24] Lei Zhu, Jing Hu, Xiantang Xu, Dajun Liu, Wang Juan: on Spatial Distribution Pattern and Causes of China's Tourism Poverty Alleviation Areas, China Population Resources and Environment, Vol.26 (2016) No.11,p.130~138.
- [25] Xianhong Bian: Spatial Structure of National AAAA Tourism Area in the Yangtze River Delta, Economic Geography, (2007) No.1,p.157~160.
- [26] Jia Liu, Jie Zhang, Chaolin Gu: Study on Space Competition and Regional Cooperation in Tourism Planning——Taking six ancient towns in Jiangnan as an example, Human Geography, (2005) No.3,p.79~83.
- [27] Fangqiang Wu: A Study on the Transformation and Upgrading of Rural Tourism in Dongtou District, Wenzhou City, (Ph.D.,Zhejiang Ocean University, China 2017).
- [28] Han Zhou: A Study on China's Historical and Cultural Villages under the Trend of New Urbanization, (Ph.D., Zhejiang Ocean University, China 2016).
- [29] Vink. E. Dramstad, Wendy. J. Jerrystad, Xu Lingyun, Gao Jia: Landscape Ecology as a Framework, for Sustainable Landscape Planning Chinese Gardens, Vol.32(2016)No.4,p.16~27.
- [30] Shuzhen Zou, Gengying Jiao: on the Training of Rural Tourism Practitioners in the Context of New Rural Construction, Academic Journal of Education, (2008) No. 9, p. 76~78.