

Research on the High-quality Development Tactics of Rural Tourism in Jinhua City Based on Digital Footprint

Jia Wu

Xingzhi College of Zhejiang Normal University, Jinhua, China

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Abstract: In the context of rural revitalization, promoting the high-quality development of rural tourism is an important proposition of era in China. The construction of beautiful villages in Zhejiang Province has achieved remarkable results. This paper takes Jinhua, an excellent representative of central Zhejiang, as an example to analyze the rural tourism development situation based on the digital footprint theory. The results show that: The tourist market of Jinhua's rural tourism mainly come from Jinhua County, Zhejiang Province and the Yangtze River Delta region. The average stay of tourist is 1-2 days and it is more concentrated from April to June. Natural and human resources are highly recognizable by tourists which are highly satisfied. On this basis, the high-quality development tactics of rural tourism in Jinhua are discussed from the perspectives of customer source market exploring, product and service improvement, and sustainable development.

1. Introduction

Under the background of China's rural revitalization strategy, how to promote the high-quality development of rural tourism has become a major concern[1]. Homogeneous and low-level supply of rural tourism products and services can no longer meet tourists' demands for high-quality and efficient tourism experience. Digital footprint is the travel-related information left by people in various online applications and smart terminals. This information can reflect the consumption phenomenon and behavioral trajectory of users [2]. Therefore, the study of digital footprint can analyze tourist behavior and explore the needs of tourists. Based on the digital footprint, this paper uses the travel notes of Ctrip tourism websites, analyzes the current situation of Jinhua's rural tourism development, finds out the existing problems and puts forward countermeasures for the high-quality development of Jinhua's rural tourism.

2. Research Design

2.1. Overview of Jinhua City

Jinhua is located in the central part of Zhejiang Province, including cities of Lanxi, Dongyang, Yiwu, Yongkang and counties of Wuyi, Pujiang, Pan'an. In 2020, the city received a total of

118.16 million tourists and achieved a tourism income of 129.86 billion yuan. Four cities and three counties mentioned above have all been selected as the top 100 counties with comprehensive strength in national county tourism economic in 2021. Pujiang County has been awarded the title of "China's Most Beautiful Rural Tourism Destination", and three villages of Jinhua have been selected into the second batch of "National Rural Tourism Key Villages". At the same time, a number of townships have been selected as provincial-level tourist style towns and rural tourism industry cluster districts, which have shaped the "golden card brand" of rural tourism of Jinhua. The development of Jinhua's rural tourism has entered a new stage, which fully reflects the high-quality development of Jinhua's rural tourism industry trend.

2.2. Tourism Digital Footprint Collection

This study used the travel notes published on Ctrip tourism website as the data source, these dates are collected from July 1st, 2019 to June 30th, 2021 by Octopus software. The collected database was cleaned by rules as follows: advertisements and repeated texts, pure picture texts and texts with missing contents were eliminated. Finally 135 relatively complete travel notes were retained. Use ROST CM6.0 software to segment the collected text and count high-frequency words, and use network semantic analysis and sentiment analysis.

2.3. Sample Characteristics and Data Analysis

2.3.1. Tourists Origin Analysis

The tourists visiting the rural areas of Jinhua are mainly from Zhejiang Province and Jinhua area, accounting for 62.71%. The Yangtze River Delta region is the main force of Jinhua's rural tourism market outside the Zhejiang province, accounting for 28.81%. According to the travel notes, tourists from Beijing, Dalian, Shenyang and other places far away take Zhejiang Province as a tourist destination, and Jinhua is a node on their tourist routes.

2.3.2. Travel Time and Travel Days Analysis

According to Figure 1, it can be concluded that the seasonal fluctuations of rural tourism in Jinhua are relatively large, and the peak time appeared in May and October, among which the May Day and National Day Golden Weeks are the main ones. Tourists mainly travel from April to June, accounting for 35.55%, followed by October-December, accounting for 32.56%. Jinhua has a typical subtropical monsoon climate, with moderate temperatures in spring and cool in autumn, but hot in summer and cold in winter, so spring and autumn are the best travel periods for rural tourism.

It can be seen from Figure 2 that the mostly travel days is 1-3 days, accounting for 87.4%. Less than 14.2% tourists traveled for more than 4 days. This is highly correlated with travel origin market. By analyzing the data, it can be seen from Figure 3 that tourists in Zhejiang Province prefer short-distance travel. The average travel days of tourist from Jinhua area is 1.4 days, and from Zhejiang province and the Yangtze River Delta area are about 3 days.

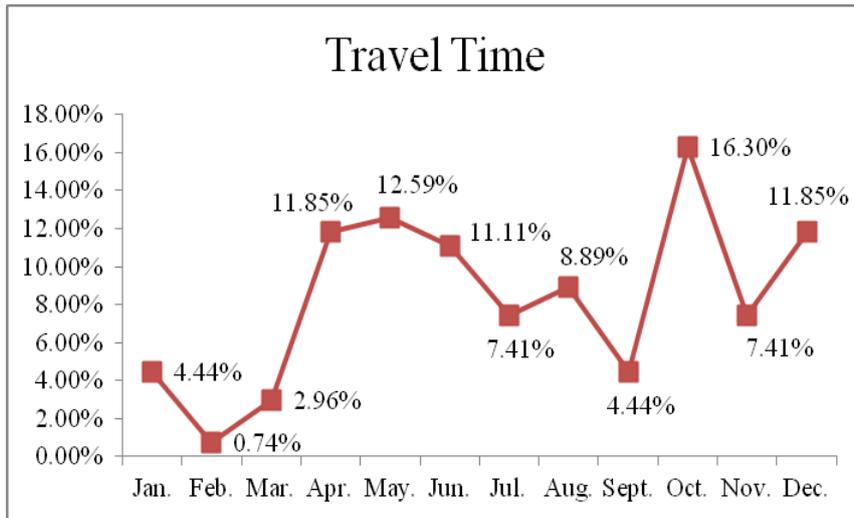


Figure 1: Travel time statistics

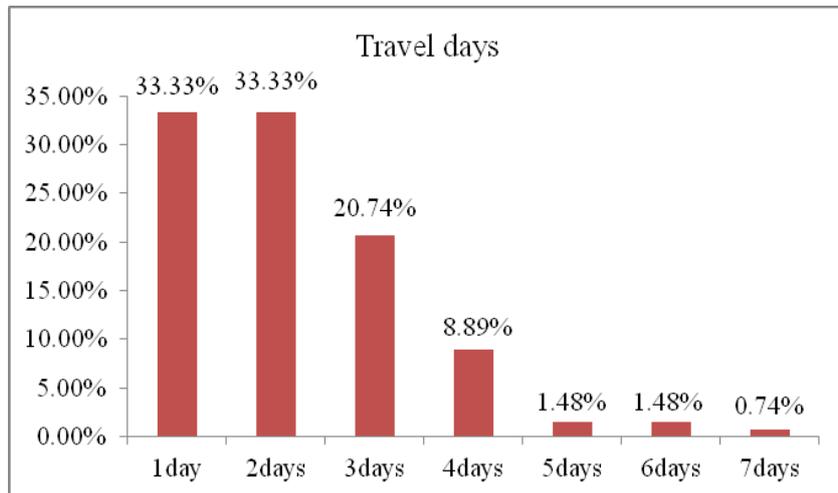


Figure 2: Travel days statistics

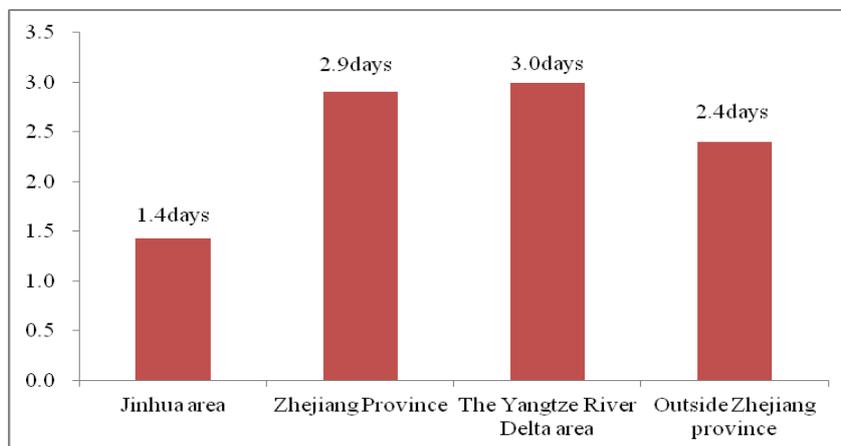


Figure3: Travel days-tourist origin correlation analysis

2.3.3. Transportation Analysis

As showed in Figure 4, it can be seen that the main transportation for tourists coming to Jinhua is self-driving car, accounting for 71.8%, followed by two public transportation: bus and train. Tourists from Jinhua, Zhejiang Province and the Yangtze River Delta mainly travel by car. In terms of public transportation, tourists from Shanghai and Jiangsu Province prefer trains while tourists from Zhejiang province prefer buses.

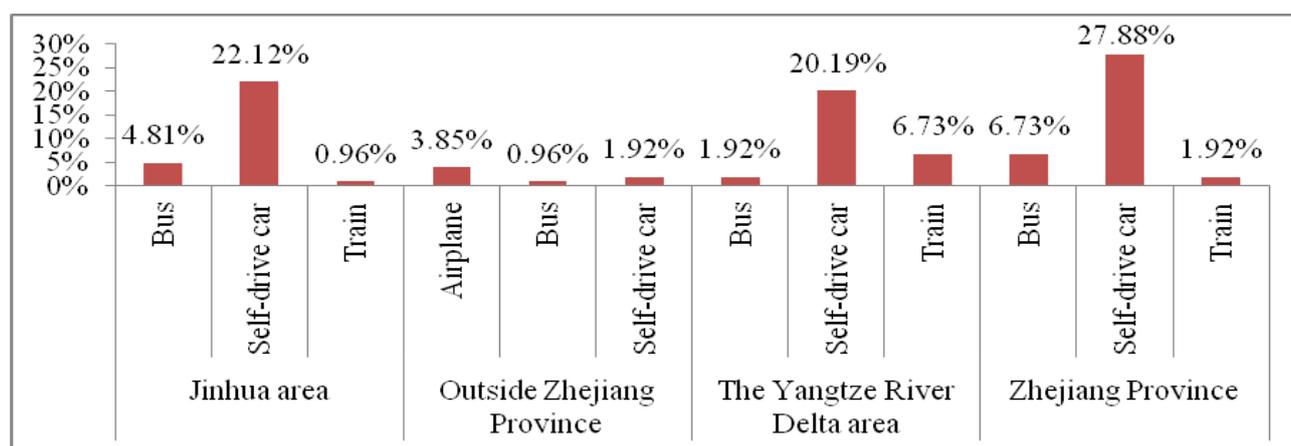


Figure3: Transportation-tourist origin correlation analysis

2.3.4. Companionship and Expenditure Analysis

Companionship. Traveling with friends ranked first, accounting for 36.51%, followed by couples (21.43%) and families (19.05%), individual trips take up only about 10%. In parent-child travel, mothers travel alone with their children also accounted for a certain proportion (10.32%).

Expenditure. According to statistics, the per capita expenditure of rural tourism within 500 yuan accounts for about 50%, the highest proportion is within 200 yuan (35%), 500-1000 yuan and 1000-2000 yuan are 18.33% respectively. Jinhua's rural tourism market mainly consists of short-distance tour with short travel days, which makes the per capita expenditure of rural tourism low. According to the calculation of the Zhejiang Provincial Cultural and Tourism Statistics Center, the per capita expenditure of rural tourism in Zhejiang Province was about 282 yuan per person during the "May Day" holiday in 2021. Considering the price premium on holidays (assuming 20%), the per capita expenditure of rural tourism in Jinhua is basically the same as that in Zhejiang Province. It is exciting that the per capita expenditure above 1,000 yuan accounted for 26.66%, indicating that the economic consumption potential of Jinhua rural tourism is huge.

2.4. High-frequency Words in Rural Tourist Attractions Analysis and Social Semantic Network Analysis

By using ROST CM 6.0 software, we extract high-frequency words of rural tourist attractions (Table 1) and generate the social semantic network analysis map (Figure 5).

According to word frequency from high to ground as showed in Table 1, It can be seen that the most visiting rural tourist attractions are Hot Spring Resort in Wuyi Country, No.1 Fairyland in South China, The Double-Dragon Cave Scenic Spot, Jinyuan Ancient Folk House Museum, Zhuge Bagua Village, Shibawo Scenic Resort, Lingjiangyuan Forest Park, Jinhua Mountain Scenic Spot, Wushi Village and Yuyuan Village.

As showed in Figure 5, The central node words of the network show that "Jinhua", "Zhejiang", "scenic spots", "places", "landscapes", "features" and "scenic spots" are the core words, and tourists still pay more attention to the development of scenic spots in rural tourism. Words such as "time", "kilometer" and "departure" indicate that tourists focus on time and distance of travel. "Pan'an" and "Wuyi" are the main nodes of Jinhua's rural tourism. Words such as "culture", "history", "architecture", "nature" and "characteristic" are close to the high-frequency word "Jinhua", indicating that the natural and humanistic resources of Jinhua's rural tourism are highly recognizable in the minds of tourists. Jinhua rural tourism has obvious local characteristics. "Hotel" and "ticket" are close to the high-frequency word "scenic spot", indicating that tourist attractions located in rural areas are popular with tourists, and tickets and accommodation are more concerned by tourists.

Table 1: High-frequency words of rural tourist attractions

Sequence	Words	Frequency	Sequence	Words	Frequency
1	Hot Spring Resort in Wuyi country	206	11	Guodong Scenic Spot	49
2	No.1 Fairyland in South China	109	12	Huaxi Scenic Spot	39
3	The Double-Dragon Cave scenic spot	87	13	Songxi Village	35
4	Jinyuan Ancient Folk House Museum	80	14	Yanfu temple	26
5	Zhuge Bagua Village	67	15	Zhizhe temple	25
6	Shibawo Scenic Resort	62	16	Henglu Village	24
7	Lingjiangyuan Forest Park	56	17	Wulongxia Scenic Spot	18
8	Jinhua Mountain Scenic Spot	55	18	Shuixiakong Scenic Spot	17
9	Wushi Village	52	19	Jinlin Fingered Citron Cultural park	15
10	Yuyuan Village	50	20	The Double-Dragon Hydropower Station	15

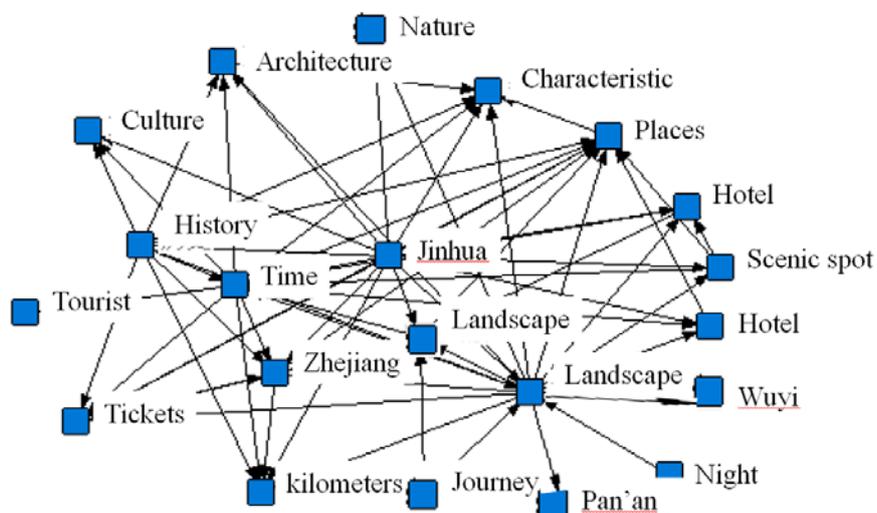


Figure 5: Social semantic network analysis map of rural tourism

2.5. Rurality Analysis

Most studies believe that rurality is mainly reflected in two aspects: natural original appearance and cultural core. As showed in Tab.2, the natural landscape of villages in Jinhua characterized by words "forest", "waterfall", "mountain road", "stream, stream", "canyon" and "tea garden". In terms of cultural attraction, it is characterized by "architecture", "old or ancient streets", "ancestral halls" and "residential houses", and has the historical flavor of ancient and classic atmosphere.

Table 2: High-frequency words of rurality(Top 40)

Sequence	Words	Frequency	Sequence	Words	Frequency
1	History	156	21	scenery	41
2	culture	156	22	stream	40
3	homestay	142	23	canyon	38
4	architecture	138	24	Climbing	37
5	taste	104	25	tea garden	37
6	feature	92	26	Memorial temple	37
7	nature	89	27	Humanities	36
8	Folk residential	89	28	cultural relics	35
9	Ancient village	86	29	arts	33
10	forest	68	30	Historical	33
11	style	52	31	rivulet	31
12	waterfall	51	32	creek	29
13	Old street	49	33	Ancient	28
14	ancestral hall	48	34	classic	27
15	landscape	46	35	natural	26
16	Ancient city	45	36	the aged	26
17	Mountain road	45	37	cliff valley	26
18	Ancient street	43	38	health care	26
19	Mountains and rivers	42	39	simple	25
20	fresh air	41	40	enviroment	25

2.6. Tourists Satisfaction Analysis

Implement sentiment analysis on travel notes, the results are as follows: there are a total of 257 positive emotions, accounting for 65.72%; a total of 38 neutral emotions, accounting for 19.94%; and a total of 56 negative emotions, accounting for 14.32%. In the experience of Jinhua rural tourism, tourists' positive evaluations words including "nice, comfortable, happy, worthy, happy, cool, fun, exquisite" are in the majority and negative evaluations words including "tired, afraid, regretful, missed, worried, expensive" are in the minority. Since most tourists have driven the car by themselves, there would be a "tired" experience in driving and playing. The itinerary was relatively tight and the weather changes had resulted in the failure to see the expected attractions and taste the local food which left the tourist with "regrets" feelings. "Expensive" is mainly reflected in the prices of hotels and homestays but not obvious in tickets and meals.

3. Conclusion

In this study, researchers find that Jinhua's rural tourism origin market mainly come from Jinhua County, Zhejiang Province and the Yangtze River Delta region, self-driving car and train are the main transportation. Traveling with friends topped the list, followed by couples and families. Tourists travel seasons concentrate mainly on spring and autumn, with obvious seasonal characteristics. The average travel days are mainly 1-3 days, and the per capita expenditure of more than 1,000 yuan accounts for more than 25%. The consumption potential of rural tourism is huge. High-frequency words and social network analysis show that the unique natural and human resources of Jinhua countryside are the core attractions, and the scenic spots in the countryside are really popular. Sentiment analysis shows that tourists are generally satisfied, with more positive evaluations than negative evaluations.

4. Revelation

First, according to the characteristics of rural tourism tourists, we should continuously expand the Yangtze River Delta region and long distance markets. For people from Shanghai city and Jiangsu province where has prosperous economy and convenient transportation, guidance services for self-driving tours should be provided. For the long-distance market, it is necessary to take advantage of the beautiful countryside in Zhejiang Province and integrate it into the rural tourism development strategy of Zhejiang Province.

Second, Jinhua are rich in rural tourism resources, but they are scattered and cannot be connected in series. Regional linkages should be formed, with Pan'an and Wuyi as nodes, to create long-term tourism routes and to deeply tap the potential of the tourism market.

Third, according to the online travel notes, scenic spots are high-frequency words. In the context of holistic tourism, the countryside has also become a major scenic spot. We should promote the creation of rural A-level scenic spots. Although the surrounding rural tourism has become a tourism norm, the service supply capacity in accommodation, catering, shopping and other aspects needs to be improved. In terms of seasonality, we will continue to explore tourism products and special festivals in spring and autumn. At the same time, it is a good idea to seize the peak summer travel period for teachers and students to develop study tourism products, parent-child tourism products, and create new scenes such as rural night scenes, camping and bonfire parties etc.

Fourth, Pay attention to the green development of rural tourism and continuously improve the connotation of rural culture. It should be noted that the green ecological environment and historical and cultural connotations of Jinhua villages have become the core in attracting tourists. The high-quality development of rural tourism should not only need to protect the ecological environment, create a green ecological landscape, but also need to inherit local culture, such as the restoration of ancient architecture and historical and cultural blocks, the development of local food culture and special folk festivals.

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