



Research on the Development Status of Hot Spring Tourism Resorts in Northern Guangdong Mountainous Areas from the Perspective of Data Footprint

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Abstract. In the era of experience economy, tourists attach importance to experience satisfaction, and will truly feed back and share tourism consumption feelings and evaluations through online tourism platforms. The hot spring industry in Guangdong has developed early and has a large scale, accounting for a large share of the tourism industry in Guangdong and even the whole country. Conghua, Zhuhai, Longmen, Heyuan, Shaoguan, Yunfu, Meizhou and other places have many well-known hot spring resorts. Based on the hot spring industry in the mountainous areas of northern Guangdong, this paper selects four representative hot spring resorts as the research objects. With the help of the Rost text mining system, the paper observes the network data obtained from the Ctrip, and discusses the sustainable development strategies of typical hot spring tourist destinations in the mountainous areas of northern Guangdong in combination with the development trend of cultural tourism in the post epidemic Era.

Keywords: Hot Spring Tourism · Data Footprint · Rost text mining system · Mountainous areas in northern Guangdong

1 Introduction

Since 2020, the COVID-19 has had a significant impact on China's hot spring tourism industry. In the post epidemic era, the demand for natural health care continues to rise. The hot spring industry is increasingly integrated with the "online economy", and "platform innovation", "new media marketing", "innovative memory prevention and control of derivatives", "combination of health and nutrition" have become new terms hotly discussed by hot spring tourists.

Guangdong has huge geothermal resources reserves, ranking third in the country after Tibet and Yunnan, accounting for about 10% of the total. At present, 328 geothermal hot spots have been found, covering 21 cities in the province. Shaoguan has the most geothermal fields in the province, followed by Heyuan and Meizhou [1]. The geothermal temperature in the whole province is between 25.0 °C - 127.7 °C. Geothermal temperatures greater than 90 °C are distributed in Heyuan, Huizhou, Meizhou, Chaozhou,

Jieyang, Yangjiang and Zhongshan [2], while Shaoguan, Heyuan and Meizhou are the main components of the mountainous areas in northern Guangdong. The mountainous area in northern Guangdong is located at the junction of Guangdong, Jiangxi, Hunan and Guangxi provinces, including five prefecture level cities of Shaoguan, Heyuan, Meizhou, Qingyuan and Yunfu. With excellent ecological environment, rich natural resources, superior hot spring resources, rich folk customs and profound Hakka heritage, it has the advantages of developing hot spring cultural tourism.

Under the normalization of epidemic prevention and control, how can the hot spring industry in northern Guangdong find its own living space with the reconstruction of consumption and the reform of the industry? This paper selects the network data of four representative hot spring resorts in the mountainous areas of northern Guangdong for observation and research, and discusses the sustainable development strategies of typical hot spring tourist destinations.

2 Overview of the Research Area

The research objects of this paper are Guangdong Shaoguan Caoxi hot spring resort, Qingyuan Julong Bay natural hot spring resort, Yunfu Zen hot spring resort hotel, Meizhou Wuhua hot slime hot spring resort. The four hot spring resorts have distinctive characteristics and different selling points.

Located in Qujiang District of Shaoguan City, Caoxi hot spring resort enjoys a high reputation in terms of hot spring quality and hotel catering. Its superior geographical location near Nanhua Temple makes it the first choice for many Buddhists to rest. Hot spring resort products are cost-effective, and many social care measures have made it establish a good social image and win the reputation of local people. Julong Bay natural hot spring resort is located in Tangtang Town, Fogang, Qingyuan. It focuses on the development of business exhibitions, entertainment and other businesses based on "hot spring tourism". Various festival events are frequent, and it enjoys the reputation of "hot spring conference capital", the auto stunts introduced in recent years further enrich the night experience projects of tourists [3]. Zen hot spring resort hotel is located in Yunfu Xinxing County liuzu hometown tourism resort, relying on the IP influence of "liuzu Huineng" and focusing on the theme of "Zen culture", it cooperates with the surrounding tourism resources for comprehensive development and operation. There are architectural landscapes with a strong Zen flavor, rich and diverse meditation activities, and wonderful Zen culture live sound and painting ceremonies, all of which enable tourists to get an immersive experience. In particular, the protagonist of the night tour with the theme of Zen - "Sixth ancestor Yineng in Zen holy land", which takes the natural landscape as the background, takes the legendary life of the sixth ancestor Huineng as the main vein, and integrates the latest modern light and shadow technology [4]. Wuhua hot slime hot spring resort is located in Weilong village, Zhuanshui Town, Wuhua County, Meizhou, formerly known as Wuhua Tanghu hot slime villa. Its theme is hot spring mud bath culture [5].

3 Current Situation of Network Reputation of Representative Hot Spring Resorts in Northern Guangdong Mountains Based on the Analysis of Rost Text Mining System

In order to comprehensively understand the current situation of the network reputation of the four representative hot spring resorts in the mountainous areas of northern Guangdong and make a horizontal comparison, the evaluation of tourists is collected through Ctrip, etc., and the data is analyzed through the Rost text mining system. The deadline for data acquisition is January 18, 2022. The sorting results are shown in the Table 1.

Table 1. Summary table of Ctrip tourists' evaluation of four mountain hot spring tourism resorts in northern Guangdong Based on the analysis of Rost text mining system

Name of hot spring tourist destination	Proportion of positive emotions (Number of positive comments/Total number of evaluations)	High frequency characteristic words of tourist evaluation					
		Tourist evaluation feature words	Frequ-ency	Tourist evaluation feature words	Frequ-ency	Tourist evaluation feature words	Frequ-ency
Julong Bay natural hot spring resort	66.43% (920/1385)	Hot spring	594	Breakfast	210	Hygiene	114
		Room	381	Facilities	166	Dinner	114
		Hotel	369	Very good	154	Enjoy hot spring	114
		Service	257	Reception	142	Villa	114
		Environment	234	Buffet	117	Check in	110
Caoxi hot spring resort	58.12% (415/714)	Hot spring	356	Villa	122	Compare	65
		Room	198	Facilities	103	Very good	61
		Hotel	175	A little bit	80	Convenient	59
		Breakfast	155	Nanhua	74	Just so	54
		Environment	129	Service	72	Enjoy hot spring	53
Zen hot spring resort hotel	92.09% (291/316)	Environment	139	Worth	52	Enjoy hot spring	26
		Hot spring	137	Hotel	34	Next time	25
		Service	87	Beautiful environment	29	Recommend	24
		Very good	69	Comfortable	29	Water quality	23
		Clean	52	Feel	28	Scenery	21
Wuhua hot slime hot spring resort	73.91% (51/69)	Hot spring	42	Facilities	14	Compare	8
		Slime	25	Good	12	Service	8
		Scenic spot	16	The second time	11	Very good	8
		A little bit	15	Worth	9	Environment	7
		It 's not bad	15	Go again	9	Very	7

3.1 High Frequency Feature Word Analysis

The analysis of high-frequency characteristic words shows that “hot spring” has always been the core product and focus of tourists in hot spring tourism resorts. In terms of catering, Julong Bay natural hot spring resort attracts the most attention. Its “breakfast”, “dinner” and “buffet” forms leave a deep impression on tourists. The second is Caoxi’s “breakfast”. In terms of housing, tourists pay high attention to Julong Bay natural hot spring resort and Caoxi hot spring resort, followed by Zen hot spring resort hotel. In terms of services, Julong Bay natural hot spring resort and Zen hot spring resort hotel are the most concerned. In terms of environment, tourists pay as much attention to the landscape environment of Zen hot spring resort hotel as “hot spring”, which shows that the tourism and sightseeing function of this resort is very significant. Second, Julong Bay natural hot spring resort and Caoxi hot spring holiday resort. In terms of health, more tourists of Zen hot spring resort hotel have the perception of “cleanliness”. In terms of facilities, tourists pay high attention to Wuhua hot slime hot spring resort, Julong Bay natural hot spring resort and Caoxi hot spring resort.

3.2 Adjective Analysis

Most tourists think that the hotel rooms and hot spring pool environment of Julong Bay natural hot spring resort are “clean and hygienic”, but some tourists think that the hotel facilities are “old”, among which the tourists who check in the “main building” have more negative feedback, and the feedback in the “villa” area is slightly better. Buffet breakfast and dinner are “rich”, most tourists think the taste is “delicious”, while a few tourists think it is “unpalatable”. The “wonderful” driving performance has attracted much attention, which is an important part of night activities. Several service staff at the front desk have been named and praised by tourists for their “warm, thoughtful, considerate and proactive” service attitude, rapid check-in and “patient and detailed” answer to questions. Most tourists think the resort environment is “beautiful and quiet”. Tourists feel “comfortable” after experiencing the hot spring. Tourists who expect to come again “next time” are mostly moved by “service”. Many tourists find parking “convenient”. In terms of emotional expression, many people feel “happy”, while some people feel “disappointed”. On the overall evaluation, many tourists feel “satisfied, worthy, like and fun”, but there are also some “inconvenient and insufficient”, feeling “ordinary”.

Tourists mostly use “clean and sanitary” to describe the hot spring pool environment and hotel rooms of Caoxi hot spring resort. Tourists use “limpidity” to evaluate the water quality of hot springs and “relieving fatigue” to evaluate the curative effect of hot springs. Tourists believe that the hotel rooms, hotel facilities and hotel decoration are “old and backward”, but the ecological environment of the hot spring is “beautiful”. Although tourists use “convenience” to evaluate the accessibility of the tourist destination and think that the hotel infrastructure and appliances are “complete”, there are “not many options” for recreation. Most tourists pay attention to the “attitude” of the service personnel, and also enjoy the privacy brought by the “independent” entry of the hot spring, and think it is more hygienic. Some tourists use “comfortable” to evaluate the feeling of experiencing the hot spring project, and use “cheap and suitable” to evaluate the consumption level of the tourist destination. Tourists use “delicious” to evaluate the

catering in the tourist destination, and use “go again” to express their willingness to revisit. In terms of emotional expression, some tourists express “pity”, some tourists feel “happy”, and the overall awareness of tourists is “ordinary”. Many tourists said that they chose to stay in Caoxi because they wanted to go to the nearby “Nanhua Temple” to worship the Buddha.

Most tourists think that the hot spring water quality of Zen spring resort hotel is “clean”. The hotel environment is “beautiful, elegant, quiet and quiet”. Tourists give “first-class” high praise to the hotel environment and hotel services, and even think that it is “perfect” and “worth visiting”. There are many “lounges” in the hot spring area, which provide free fruits and drinks, and the service is “considerate”. Tourists feel “comfortable and enjoyable” during this holiday, the activities here are “interesting”, and tourists feel “satisfied and fun”, saying they want to “go again”. The surrounding scenic spot “Guoen Temple” is also paid more attention.

Before the renovation of Wuhua hot slime hot spring resort, many tourists felt that it was “deceiving and worthless”, the facilities were “obsolete”, they questioned the “hygiene” problem, and they were “nervous and afraid”, the service needed to be “improved”, the tourist destination was “remote”, the accessibility was low, the negative perception was relatively strong. However, some people feel “comfortable and interesting” and “novel” about hot mineral mud hot springs. After the renovation, the resort has taken on a new look, and the evaluation of tourists has turned to positive, but the number of evaluations is small, so there is no detailed analysis here.

Table 2. Segmented table of the proportion of tourists’ emotions in representative mountain hot spring tourism resorts in northern Guangdong

Emotional type	Julong Bay natural hot spring resort	Caoxi hot spring resort	Zen hot spring resort hotel	Wuhua hot slime hot spring resort	Emotional segmentation
Positive emotions	24.40%	25.35%	10.13%	18.84%	Commonly (5, 15]
	19.28%	15.97%	23.10%	18.84%	Moderate (15, 25]
	22.74%	16.81%	58.86%	36.23%	Height (25, +∞]
Neutral emotion	0.65%	0.70%	0.00%	0.00%	[5, 5]
Negative emotions	26.01%	32.08%	7.27%	17.48%	Commonly [-15, 5)
	3.29%	5.04%	0.32%	5.74%	Moderate [-25, -15)
	3.62%	4.06%	0.32%	2.87%	Height (-∞, -25)

3.3 Tourist Sentiment Analysis

From the perspective of tourists' emotions, Table 2 shows that Caoxi hot spring resort has the lowest proportion of tourists' positive emotions, while Zen spring resort hotel has the highest proportion of tourists' positive emotions, and is far ahead.

4 Comprehensive Analysis and Strategy

The online word-of-mouth evaluation of the four hot spring resorts based on the analysis of the Rost text mining system fully reflects the tourists' basic awareness of the hot spring quality, personnel service, facilities and equipment, experience projects, and tourism accessibility of each hot spring tourism resort. In addition, the hot spring experience, ecological climate and environmental style of the four resorts are well received, but the leisure and vacation settings, accommodation and reception facilities and other aspects are uneven.

Therefore, first of all, the hot spring resort should improve facilities and equipment and strengthen service quality. Except for Zen hot spring resort hotel, the other three resorts have been repeatedly reported to have outdated facilities, and the improvement is not obvious. Taking Julong Bay natural hot spring resort as an example, tourists directly advised other tourists not to stay in the main building. At the same time, in the display of online booking on wechat official account, it can be clearly seen that there are prominent wet water stains on the bathroom wall of the luxury hot spring single room in the main building. The combination of various messages causes tourists to have a poor impression of the hot spring tourist destination, which will inevitably affect tourists' tourism decisions. Especially under the normalization of epidemic prevention and control, we should pay more attention to the improvement of the health environment and the repair of facilities and equipment in the scenic spot, so as to improve the intuitive experience and impression of tourists from the hardware.

Secondly, hot spring resort should excavate core products and create the quality of supporting projects. High quality hot springs are the basis for the existence of all resorts. Each of the four hot springs has its own merits, and the "hot springs+" project development has been carried out around the hot springs. However, from the perspective of practice, the creativity of the Zen culture comprehensive cultural tourism project of the Zen spring resort hotel is the most distinctive. Relying on the IP of "liuzu Huineng", Zen architecture, Zen meditation activities, and Zen themed night tours have been recognized by tourists, however, the specific service landing quality is slightly different from the planning height, and tourists have a little doubt about its cost performance. Caoxi hot spring resort is characterized by catering. However, due to the single tourism products, "there are few amusement facilities and nothing to play" has become a key word of low reputation on the tourist network. Julong Bay natural hot spring resort has derived cultural and recreational experience projects on the basis of the "hot spring conference capital". However, in recent years, the above-mentioned aging problem of facilities is particularly serious, and the innovation does not keep pace with the times. Wuhua hot slime hot spring resort has unique hot slime resources, but its development innovation and popularity need to be improved. The four hot spring resorts should fully tap the surrounding tourism resources and give full play to the advantages of coordinated development. They should

not only adhere to the background of high-quality hot springs, but also refine the core features, continue to strengthen and innovate, and improve the quality of supporting projects, so as to realize the advantages of multi industry integrated development.

5 Conclusion

The four representative hot spring resorts in northern Guangdong have their own characteristics. At the moment of normalization of the prevention and control of the COVID-19, through the analysis of network data to obtain tourists' on-site experience, perceived preferences and factors that cause tourists' objections, we can obtain specific aspects of improving leisure and vacation settings, accommodation and reception facilities, and obtaining the focus of improving service quality.

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