

Terrain Image Perception of Ice and Snow Tourism Destination Based on Web Text Analysis

-- A case study of six ski resorts in Chongli

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ABSTRACT

Under the background of the data age, tourists' perception based on Internet expression is of great significance to the shaping of destination image, and good destination terrain image has also become the key to attract tourists. Taking the six ski resorts in Chongli as an example, this study analyzes the destination cognitive image, destination emotion and overall destination image perception of the relevant data through Web text data mining. The results show that: from the perspective of cognitive image, tourists have a high awareness of the six ski resorts in Chongli, including skiing, ski resorts and hotels. From the perspective of emotional analysis, tourists are relatively satisfied with the tourism resources and tourism environment in the resort, and the overall positive emotions are dominant; From the perspective of overall image perception, the six ski resorts present a destination image that is mainly ski tourism and has strong accessibility.

KEYWORDS

Skiing; Perception; Tourism

1. INTRODUCTION

The success of the Beijing Winter Olympics has provided vitality for the development of ice and snow tourism in Chongli. This international event not only activates the regional development potential, but also allows Chongli to build a full ecological industrial chain covering ice and snow sports, event operation and leisure tourism with the ski industry as the core by virtue of its unique natural conditions and geographical advantages adjacent to Beijing and Tianjin. The opening of Beijing Zhangjiakou high-speed railway has spawned a new pattern of ice and snow tourism consumption in Beijing Tianjin Hebei. At present, the middle and high-end skiing industry cluster with the largest scale and the most complete facilities in China has been formed here. Its "ice and snow+" integrated development mode is constantly releasing the multiplier effect, showing the demonstration value of leading the upgrading of China's ice and snow industry.

Although under the long tail effect of the Winter Olympics economy, China's ski tourism market has shown a growth trend, the challenge of intensified homogenization competition has become increasingly prominent. In this context, how to shift skiing consumption from functional demand to emotional value consumption has become the key breakthrough to solve the dilemma of market homogeneity. Whether the skiers' perception of the image of the tourist destination is good or not is an important factor affecting their differentiated development, and it is also an important way to understand the needs of skiers. For Chongli, the systematic research on image perception has dual strategic value: at the micro level, a dynamic demand feedback system can be built to improve experience satisfaction through service process reengineering; At the macro level, we can extract the

elements of cultural IP, and through the accurate development of the "ice and snow+" product matrix, we can shape the brand image of ice and snow tourism destination with international recognition, which is of decisive significance for its sustainable development in the industry reshuffle.

2. RESEARCH OVERVIEW

As one of the forms of tourism, ice and snow tourism is an off-site leisure experience that individuals use their spare time to pursue pleasure. Different from traditional tourism, ice and snow tourism is characterized by tourists' physical participation, so it is also called participatory tourism. From the perspective of foreign research, in 2011, Golder and Macy collected millions of data from social media platforms to investigate people's daily and seasonal emotional characteristics, highlighting the research utility of the combination of online data and emotional analysis. Rashedi NR investigated kindergarten children's experience of yoga, interviewed 154 children, and used the method of qualitative analysis to draw the conclusion that children's positive emotions about yoga include positive benefits in the physical field and emotional field [1]. Garcia CA pointed out that the emotional benefits of jigsaw puzzles are inseparable from the specific actions of completing the game, and the process of completing jigsaw puzzles stimulates people's emotions [2].

From the perspective of domestic research, Li Yue (2010) studied the image perception of tourist destinations after the Wenchuan earthquake, and found that tourist destinations should not blindly pursue all-round image improvement, but selectively concentrate resources on effective aspects to shape and market the tourism image, which plays an important role in tourists' tourism decision-making and is the prerequisite for tourists' willingness to travel [3]. Sulujun et al. (2010) took rural tourists as the research object. Through the analysis of a large number of rich data, it was found that service equity, perceived value and service quality were important influencing factors of image perception, while the participation of tourists had no significant impact on the image perception of the tourist destination [4].

3. RESEARCH METHODS

3.1. Sentiment Analysis

Taking the network text as the research object, the text data of Chongli sports tourism destination of Ctrip was collected through the python crawler. In this study, 584 pieces of data information from 2019 to 2023 were collected, and 525 pieces of valid data were removed by manual data cleaning. Using python programming software to calculate the emotional value of tourists.

The Jieba word segmentation database is used to segment the sentences, and each word is input into the snownlp model to get the emotional score. The threshold value was set to 0.5 by the super parameter optimization method. The weight of positive words is 1, the weight of negative words is -1, the weight of negative adverbs is -0.8, and the weight of degree adverbs and exclamation marks before words is 3. The sum of all weights is the total score of the sentence. Set rule C, that is, if the positive score of a comment is greater than or equal to 3 times the absolute value of the negative score, it will be judged as a positive comment; If the positive score is 1 to 3 times the absolute value of the negative score, it is judged as a neutral comment; If the positive score is less than or equal to one time of the absolute value of the negative score, it will be judged as a negative comment.

3.2. Literature Method

Through systematic literature review and comprehensive use of CNKI, Wanfang, ScienceDirect and other Chinese and foreign academic databases, this study takes "ice and snow tourism", "tourist perception" and "tourism destination image" as the core keywords, combined with "network text

analysis" "Ice-snow Tourism", "tourist perception", "Tourism destination image" And construct a multi-level literature analysis framework.

4. RESEARCH AND ANALYSIS

4.1. High Frequency Word Analysis

This study uses the massive user generated content (UGC) of Ctrip as the data source, and uses Python crawlers to capture the comment text of the six ski resorts in Chongli in recent five years. Through the word frequency analysis of micro word cloud software, the top 100 high-frequency words were selected for tabulation and summary (see Table 1). By analyzing the 100 high-frequency words in Table 1, it can be seen that tourists' emotions are mainly affected by tourism projects, tourism environment and atmosphere, tourism accommodation and other factors.

Table 1. High frequency vocabulary of six ski resorts in Chongli (1)

Word	part of speech	times	number of entries	word frequency
Skiing	Nominal verb	268	178	0.032433741
Extraordinary	adverb	133	101	0.016095849
Snow	noun	124	98	0.015006656
Town	noun	100	69	0.012102142
Good	adjective	89	83	0.010770906
Ski resort	noun	88	61	0.010649885
Hotel	noun	85	65	0.010286821
Experience	noun	71	62	0.008592521
Service	Nominal verb	68	61	0.008229457
Chongli	place name	68	57	0.008229457
Scenery	noun	59	55	0.007140264
Convenient	adjective	58	53	0.007019242
Good	adjective	58	48	0.007019242
Special	adverb	55	42	0.006656178
Cable	noun	50	42	0.006051071
Yunding	place name	47	29	0.005688007
It's	adverb	45	40	0.005445964
True	adverb	45	39	0.005445964
Comparative	adverb	43	34	0.005203921
Restaurant	noun	43	37	0.005203921
And	verb	43	38	0.005203921
No	verb	43	34	0.005203921
Fit	verb	42	41	0.0050829
Snow	noun	38	29	0.004598814
Hall	noun	37	29	0.004477793
Local	noun	37	33	0.004477793
Cost	noun	33	32	0.003993707
Staff	noun	33	29	0.003993707
Vacation	Custom words	31	25	0.003751664
A little	noun	31	26	0.003751664
Beijing	place name	31	27	0.003751664
Coach	Nominal verb	31	18	0.003751664
Hilltop	noun	30	26	0.003630643
Recommended	verb	30	26	0.003630643

Table 1. High frequency vocabulary of six ski resorts in Chongli (2)

Word	part of speech	times	number of entries	word frequency
feel	noun	29	27	0.003509621
Child	noun	29	23	0.003509621
Landscape	Custom words	28	25	0.0033886
Worth	verb	26	26	0.003146557
Select	verb	25	24	0.003025536
Overall	noun	23	22	0.002783493
Facility	noun	22	21	0.002662471
Hour	noun	22	19	0.002662471
Everybody	noun	21	19	0.00254145
Best	adjective	21	19	0.00254145
Punch	verb	21	20	0.00254145
Yunshan	place name	20	13	0.002420428
The abbreviation of the Winter Olympics	Abbreviation	20	17	0.002420428
Environmental	noun	20	19	0.002420428
Time	noun	20	19	0.002420428
Hot spring	noun	20	16	0.002420428
perfect	adjective	19	19	0.002299407
when	noun	19	18	0.002299407
Price	noun	19	17	0.002299407
Super	adjective	19	13	0.002299407
High speed	noun	19	17	0.002299407
Food	noun	19	16	0.002299407
Ctrip	noun	19	11	0.002299407
Like	verb	19	16	0.002299407
Novice	noun	17	17	0.002057364
Galaxy	noun	17	12	0.002057364
Activity	Nominal verb	17	15	0.002057364
Place name of Zhangjiakou	place name	17	13	0.002057364
Supporting	Nominal verb	17	17	0.002057364
Other	Custom words	16	16	0.001936343
Definite	adverb	16	16	0.001936343
Zhangjiakou place	place name	16	13	0.001936343
Different	adjective	16	14	0.001936343
Very good	adjective	16	14	0.001936343
Accommodation	noun	16	13	0.001936343
General	noun	16	16	0.001936343
Recommended	noun	15	15	0.001815321
Professional	noun	15	12	0.001815321
Happy	verb	15	14	0.001815321
Free	Nominal verb	15	13	0.001815321
In	verb	15	15	0.001815321
Interesting	noun	15	14	0.001815321
Magic carpet	noun	15	10	0.001815321
Special	adverb	15	14	0.001815321
High speed	adverb	14	12	0.0016943

Table 1. High frequency vocabulary of six ski resorts in Chongli (3)

Word	part of speech	times	number of entries	word frequency
Catering	noun	14	14	0.0016943
General	adjective	14	13	0.0016943
Large	adjective	14	14	0.0016943
Paradise	noun	14	11	0.0016943
Very nice	adjective	14	12	0.0016943
See	verb	13	12	0.001573278
Beginner	noun	13	11	0.001573278
Warm	noun	13	13	0.001573278
High speed railway station	noun	13	13	0.001573278
Distance	noun	13	11	0.001573278
Equipment	noun	13	13	0.001573278
No	verb	13	12	0.001573278
Prince	noun	13	13	0.001573278
Mealtime	verb	13	12	0.001573278
Personal	noun	13	9	0.001573278
Board	noun	13	12	0.001573278
Rest	verb	13	10	0.001573278
Rich	adjective	13	12	0.001573278
Style	Custom words	12	11	0.001452257
Mountain	noun	12	11	0.001452257
Have	verb	12	10	0.001452257

4.2. Analysis of Cognitive Image

The high-frequency words in the study area are imported into gooseeker software for cognitive image analysis, and the tourists' cognitive comments are generated into a word cloud. The tourists' cognition of the destination image of the ski town is presented in a visual way. Figure 1 shows the cloud picture of the six Ski Resorts' cognitive image analysis words. In Figure 1, the larger the font, the more frequently it appears in the online evaluation of tourists. It can be clearly seen that the attention around "skiing" and "ski resort" is the highest, and these two concerns have derived a variety of needs and feelings.

In this study, high-frequency words are imported into the micro word cloud software for cognitive image analysis, and a standardized corpus is formed through data cleaning, word segmentation and stop word filtering. The word cloud picture is generated by tourists' cognitive comments. Figure 1 shows the cloud picture of the six Ski Resorts' cognitive image analysis words. As shown in Figure 1, the larger the font, the more frequently it appears in the online evaluation of tourists. It can be clearly seen that the attention around "skiing" and "ski resort" is the highest, and these two concerns have derived a variety of needs and feelings.



Figure 1. cloud chart of the six ski resorts in Chongli

4.3. Emotional Image Analysis

Based on baloglu and McCleary's three-dimensional construction theory of destination image, this study constructs a multi-dimensional analytical framework of "cognition emotion intention". This paper uses Python to dynamically deconstruct the five-year comment text of the six ski resorts in Chongli (see Table 2). The data showed that positive emotions accounted for 84.75%; Intermediate emotions accounted for 10.59%; Negative emotions accounted for 4.65%. It can be seen that tourists have a good perception of the overall image of the six ski resorts, and tourists are happy in the process of tourism. Using high-frequency words of network text to study tourists' emotions, the positive emotion influencing factors are "convenience", "beautiful scenery", "performance", "style", "air 'Snow track", etc., and the negative emotion influencing factors are "poor service", "inconvenient ticket collection", "inconvenient parking", etc.

Table 2. emotional analysis of six ski resorts in Chongli

Emotion analysis table		
Proportion of summary	name	Proportion%
Overall	positive emotions (>0)	84.75%
	Neutral emotion (=0)	10.59%
	Negative emotions(<0)	4.65%

4.4. Semantic Network Analysis

The construction of semantic network can better reflect the relevance between high-frequency words. As shown in Figure 2, the semantic network diagram is divergent. The more lexical connections, the closer the relationship. It can be seen from Figure 2 that "ski resort" and "Hotel" are located at the core of the graph. These words are the high-frequency words that appear in tourists' online comments, and are also the first perceptive impression of the six ski resorts. Tourists' online comments are also carried out from this. "Town", "experience", "ski resort" and "good" are located at the sub core of the graph. These keywords show the basic needs of tourists' travel cognition.

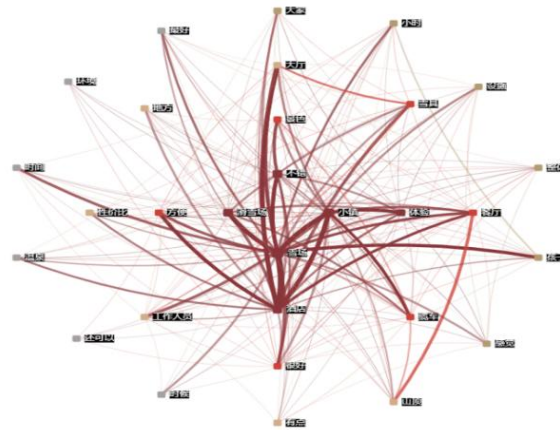


Figure 2. semantic network analysis of the six ski resorts in Chongli

5. CONCLUSION

- (1) The tourists are satisfied with the six venues, and the overall skiing experience is good. At the same time, they show a certain willingness to revisit and recommend.
- (2) Tourists' overall environmental evaluation of the six ski resorts is mostly positive, with positive evaluation accounting for 84.75%, and relatively few neutral and negative evaluations. Positive comments mainly come from ski resort facilities and town landscape.
- (3) The perceived image of tourists is divided into three main categories: tourism projects, tourism environmental atmosphere and tourism accommodation.

6. RECOMMENDATIONS

According to the above results, it can be seen that skiing experience and foreign exotic customs have become the most recognizable core attraction of the resort, and the scenic spot managers should focus on these two elements for differentiated publicity and promotion. Improve infrastructure and implant Olympic elements.

From the perspective of tourism destination image, tourism practitioners, as direct contacts with tourists, their professionalism and service attitude directly affect the quality of tourists' experience and perception. The "warmth" formed by the enthusiasm and professionalism of tourism practitioners is the core competitive factor that distinguishes the industry from other service fields. The management can focus on strengthening the training of emotional and cultural service skills, and establish quantitative service standards for tour guides, merchants, cleaners, security guards and other service posts.

In order to expand the sales channel, the ski resort has increased the Internet Ticketing link. However, in the peak season, due to the poor ticket exchange, tourists have a negative perception. Therefore, the scenic spot can build an order cancellation platform to ensure the real-time synchronization of all channel ticketing information, and trace the services of tourists who book tickets through the Internet after tourists' play, so as to improve tourists' satisfaction.

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