

Analysis of Affective Perception of Chinese Tourists in Island Tourist Attractions Based on OTRs Analysis --Taking Bali as an Example

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Abstract: Bali was selected as the case study site, and OTRs released on multiple OTA platforms through Octopus and other means of web crawlers were used as the main research data to study Chinese tourists' emotional perceptions of Bali by using ROSTCM6, ROSTEA1.9.0.4 text analysis software, and the network big data text analysis method. The results of the study show that tourists' emotional perception of Bali is more positive, less negative and mainly reflects high prices, crowdedness and poor experience. Therefore, it is recommended to further strengthen the construction of infrastructure, improve the service management level of the scenic area, and develop special tourism products so that tourists can get a better perceptual experience to improve the overall image of the scenic area.

Keywords: tourism big data; Bali; tourist perception; sentiment analysis

1. Research Methods

1.1 Online Tourism Review

Since entering the twenty-first century, with the continuous rapid development of Internet technology, it has now entered the era of big data. Online travel (Online Travel Agency) is rapidly rising and gradually become an important way to obtain information, express opinions, and communicate with each other, known as the more famous online platforms such as Ctrip, Poor Traveler, Where to go, and so on. More and more tourists will publish numerous Online Travel Reviews (Online Travel Reviews) to express their own perception of the local tourist attractions and personal experience in the process of traveling and other related content. This information becomes an important basis and source of information for other tourists to judge the advantages and disadvantages of the tourist attractions and to choose the destinations. This study takes the five major OTA platforms of Ctrip, Poor Traveler, Touniu, Where to go and Hornet's Nest as the sample selection websites, which have accumulated a large amount of textual data such as travel reviews about the case site - Bali during these years, and can provide sufficient data for the analysis of this study.

1.2 Selection of Case Site

As the largest archipelago in the world, the Indonesian archipelago has a large number of islands, and Bali is one of the islands with the most rapidly developing tourism industry. There are world-class surfing spots, beautiful white sand beaches, idyllic farmhouses, deep valleys and forested grasslands, as well as world-famous spas and coral reefs. Bali has been known as a tourist destination since the 1920s, and in the 21st century has received a significant number of visitors. Since 2006, China has been the largest source of international tourists to Bali. As one of the world's most popular island destinations, Bali receives a large number of tourists and has a large number of travelogues and reviews on OTA platforms. These data are both an important basis for research on improving the perceived image of tourists in Bali, as well as revealing that the overall image perception analysis of island tourism also has an important research value, so this study chooses Bali as a research case site.

1.3 Network Data Collection and Processing

This study uses ROSTCM6 and ROSTEA1.9.0.4 text analysis software to process the acquired data. This software allows for text mining processes such as word splitting, high-frequency word analysis, sentiment analysis, and semantic network analysis of the extracted data. The steps of data processing using ROSTCM6 and ROSTEA1.9.0.4 text analysis software are as follows: Web crawler tool was used to obtain 3546 travel reviews about Chinese tourists in Bali on five OTA platforms, namely Ctrip, Poor Tour, Touniu, Mabee's Nest, and Where to Go. Firstly, we remove the reviews in other languages including English, Korean, etc. and replace some English classic names into Chinese, such as Kintamani, Kuta, Pacung, TanahLot, etc. Then delete some overlapping and incorrect data, such as Treasure Island and Las Vegas, mangrove attractions overlap, and finally the remaining valid data 3278 valid data. After completing the above preprocessing these text data are integrated in a TXT file. Segmentation is performed on the organized data. For the specificity of this study, "Bali", "Ubud", "Temple of Poseidon", "Lover's Cliff", "Deodorant Cliff", "Bali", "Ubud" and "Bali" were added. ", and "Degralang Terraces", and the customized lexicon of ROSTCM6 was updated. Finally, the sentiment analysis is carried out.

2. Sentiment perception analysis of Chinese tourists

OTRs are an important way for tourists to record one or more of their personal experiences and experiences during traveling in tourist destinations and express their inner emotions with the help of them. Nowadays, in the field of natural language processing, sentiment analysis is considered to be one of the most commonly used and effective research methods, which is mainly due to its ability to help achieve

the rapid completion of analyzing, processing, and summarizing the many emotionally charged and subjective words in a large number of OTRs, and finally arrive at the results of the sentiment analysis of the three main types of emotions, namely, positive, neutral, and negative. The results of the sentiment analysis of this study for the OTRs made by Chinese tourists traveling in Bali are shown in Table 1.

Table 1. Results of the sentiment analysis

analyse bear fruit	OTRs statistical result							
	total		height		moderate		sort	
	Quantity / portion	proportion /%	Quantity / portion	proportion /%	Quantity / portion	proportion /%	Quantity / portion	proportion /%
positive	818	58.47	214	15.30	242	17.30	362	25.87
neutral	319	22.80						
negative	262	18.73	10	0.71	60	4.30	192	13.72

Note: The intervals of positive emotions are general (0,10], moderate (10,20], height (20, +); negative emotions are general [-10,0), moderate [-20, -10], height (-, -20); neutral emotions are not divided.

Sentiment analysis by virtue of its superiority in analyzing emotions, in the sentiment analysis of Chinese tourists' perception of Bali's scenic spots can play an important role, that is, it can more comprehensively and accurately show the tourists' perceived image of the scenic spot. As can be obtained from Table 1, in the results of the sentiment analysis, positive emotions accounted for the highest proportion of 58.47%, which is more than half. After segmentation statistics, it is found that the proportion of general positive emotions is the highest, amounting to 25.87%, while the proportion of medium positive emotions is the second highest, amounting to 17.30%, and the smallest proportion is the proportion of high positive emotions, which is only 15.30%. As for the proportion of neutral and negative emotions, they are relatively small, only 22.8% and 18.73% respectively, with the proportion of negative emotions being the smallest, accounting for less than one-fifth of the total. After the segmentation of negative emotions, we get the same result as the segmentation of positive emotions, general negative emotions accounted for the largest proportion of 13.72%, followed by medium negative emotions, which accounted for 4.3%, and high negative emotions are very small, only 0.71%, which is almost negligible. On the one hand, this shows that Bali's tourism development level is high, and tourists have a better experience, on the other hand, it shows that the development of the local tourism industry in terms of service and other aspects of the development of some deficiencies in the tourists to produce a bad tourism perception, so Bali's tourism perception of the image of the possibility of a certain degree of enhancement. By further analyzing the text of the online comments, it can be seen that the positive emotions are mainly reflected in the natural attractions such as the beach, the sea, etc. and recreational activities such as sea surfing, spa and so on. The frequency of phrases such as "favorite beach, cost-effective, and worthwhile to go diving" is very high, which is a recognized positive evaluation of Bali by different tourists. Negative sentiments, on the other hand, were mainly expressed in terms of price, crowdedness, and the characteristics of the services and facilities. Generally, it is expressed in statements such as: "the price of various luxury goods is not as affordable as in Hong Kong, one attraction is particularly boring, and there are too many people", which expresses the many uncomfortable situations that tourists encountered during their travels and the lack of a strong sense of experience. To sum up, most tourists to Bali tourism is to give a positive evaluation of the positive, expressed the recognition of the scenic spot is higher and the tendency to revisit the place; but at the same time the scenic spot still exists in the price is too high, overcrowding and other negative images, so the scenic spot management operators need to pay more attention to the feelings of tourists in the process of tourism and make appropriate changes and enhancements, so as to improve the tourists' perceptions of the experience.

3. Conclusion and Recommendation

3.1 Conclusion

Taking Bali as a case study, this study utilizes ROST-CM6 and ROSTEA1.9.0.4 software for text processing and sentiment analysis of OTRs related to Bali, and concludes that Bali has formed a good IWOM effect due to its superior natural scenery of island tourism and mature tourism development, and the overall perception of the scenic spot is better, which is a great attraction to other potential tourism consumers. The overall perception of the scenic spot is good, and it has great attraction to other potential tourism consumers. However, at the same time, there are still some insufficiencies in the tourist destination that cause tourists to have negative feelings towards Bali, which are mainly reflected in the following aspects:

(1) Bali's service management and supervision level has been slackened, soliciting and ripping off tourists occur from time to time, especially in the B&B, restaurants and other tourist reception facilities, tarnishing the image of Bali.

(2) The basic service facilities are not perfect, mainly in the scenic area in poor sanitation, a large number of people congestion caused by road blockage and so on.

(3) Tourist attractions play projects and other island tourism project homogenization is serious, the lack of local characteristics and creative projects, resulting in tourists do not have a deep impression.

3.2 Research Recommendations

Based on the conclusions drawn, the following recommendations are made for the tourism development and development of Bali:

- (1) Strengthen the level of service management and supervision in the scenic area, and crack down on the behavior of local tourism operators who jeopardize the image of the scenic area in order to seek economic development.
- (2) Improvement of basic service facilities, public toilets, garbage cans, roads and other basic service facilities for inspection and repair, and regular hygiene inspections of the beach, the sea and other natural environments, so as to create a good public environment. And for the reasonable planning of the tour route in the scenic area, when the passenger flow is large, to carry out reasonable diversion.
- (3) Add some special tourist facilities and programs to enhance the attractiveness of Bali and attract more tourists.

References:

- [1] Chen Tianqi,Zhang Jianchun. Research on Tourism Image Perception of Scenic Spots Based on Text Mining--Taking Hangzhou Xixi National Wetland Park as an Example[J]. Resource Development and Market,2021,37(06):741-746.
- [2] Liu Guilan, Tang Meng, Zhang Lanlan. Research on Visitor Perception and Quality Enhancement of Tourist Attractions Based on ROST-CM Method--Taking Xinxiang Wanxian Mountain Scenic Area as an Example[J]. Journal of Xinxiang College,2022,Vol.39(8):24-28
- [3] WU Heng,CHEN Yanling. Research on Tourist Destination Selection Information Based on UGC Text Mining--Taking Ctrip Honeymoon Travelogue as an Example[J]. Intelligence Science,2017,35(01):101-105.
- [4]Xia Jiechang, Gu Fangzhe. Theoretical Connotation and Practical Guidance of Xi Jinping's Important Discourse on Tourism [J]. Study and Exploration, 2020(4):122-129.

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