

Study on Tourist Perception of Zhenyuan Ancient Town in Guizhou Based on Online Reviews

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Abstract: With the improvement of living standards, people increasingly value tourism experiences, intensifying competition among tourist destinations. Zhenyuan Ancient Town, renowned for its scenic beauty and cultural relics, faces crucial challenges in enhancing its image and visitor experience. This study selects Zhenyuan Ancient Town as its research subject, utilizing Baidu Index to analyze online attention from tourists and explore their behavioral characteristics. By employing the "Octopus" data collector and ROST CM6 software, this research analyzes online reviews from Ctrip, Meituan, and Dianping to investigate tourists' primary concerns and perception of the town's image. The results indicate that the southwest region serves as the main source of tourists, with young and middle-aged adults showing the highest interest. Tourist visits mainly concentrate during summer holidays, focusing primarily on scenic sightseeing while highlighting a limited variety of tourist attractions. Furthermore, the study identifies the urgent need to improve infrastructure and service facilities within the town. To enhance tourists' perception of Zhenyuan Ancient Town, recommendations include diversifying tourist attractions, enhancing infrastructure, and adjusting development strategies.

1. Introduction

With the development of the internet era, people can search for tourist destination information or share travel experiences through various platforms or apps. According to a statistical report released by the China Internet Network Information Center, as of June 2023, China's internet users reached 1.079 billion, with an internet penetration rate of 76.4%. The internet has become an integral part of daily life, profoundly influencing various sectors^[1]. With the development of the tourism industry, competition among tourist destinations has intensified, making tourist experience and image competition predominant. Shaping the image of tourist destinations is a key step in enhancing competitiveness. In January 2020, Zhenyuan Ancient Town in Qiandongnan Prefecture, Guizhou Province, was designated as a National 5A Tourist Attraction, gaining high visibility and appeal^[2]. However, inadequate promotion, infrastructure, and service facilities, coupled with limited tourism offerings, have affected visitor impressions and experiences, leading to negative online reviews that influence potential tourists' perceptions and decisions. Therefore, analyzing online reviews from tourists to understand shortcomings in Zhenyuan Ancient Town's image, improving its tourism

image, enhancing its perception among visitors, and promoting its cultural heritage are crucial for advancing tourism service quality and industry development in Guizhou.

Current research on Zhenyuan Ancient Town's scenic area predominantly focuses on historical landscapes, rural revitalization, and tourism development models. This study analyzes tourists' perceptions of Zhenyuan Ancient Town by examining their reviews on platforms such as Ctrip, Meituan, and Dianping. The research reveals deficiencies in the town's promotion, infrastructure, and services that affect tourists' experiences. Utilizing Baidu Index and the "Octopus" data collector, and employing ROST CM6 software for comment data analysis, the study proposes recommendations to enhance Zhenyuan Ancient Town's image. These efforts aim to improve the town's perception among tourists, increase revisitation and recommendation intentions, and foster sustainable development of the area and local economy.

2. Literature Review

2.1 Tourism Destination Image Research

The concept of Tourism Destination Image (TDI) was initially defined by Hunt in 1971 as the overall perception of non-residential areas by individuals, considered to be within the realm of consciousness and having a significant influence on destination development^[3]. Crompton further elaborated in 1979 that TDI encompasses the comprehensive cognitive beliefs, concepts, impressions, and feelings formed by individuals regarding specific aspects and behaviors^[4]. Gunn in 1988 distinguished between the primitive image and the image shaped under marketing promotion^[5]. Embather and Buttle in 1997 viewed TDI as a synthesis of evaluations formed by individuals or groups after completing a tourism experience^[6]. Baloglu and McCleary (1999) proposed that TDI is a comprehensive product of cognitive processing and understanding of various elements of the destination^[7]. Tasci emphasized in 2007 that TDI encompasses perspectives, concepts, emotions, and thoughts^[8]. In Chinese research, scholars have differentiated between narrow and broad definitions of tourism destination image, focusing on the broad image that includes specific landscapes and abstract environments^[9]. Other scholars have included perceptions, impressions, beliefs, and opinions within the connotation of tourism destination image, suggesting that it is formed by tourists' overall cognition of the destination's resources and elements^[10]. In this paper, Tourism Destination Image is defined as tourists' comprehensive cognitive perceptions and evaluations of the tourism destination.

2.2 Study of Online Reviews

Online reviews represent a consumer-oriented evaluation mode where services are described and assessed based on genuine experiences, constituting a form of word-of-mouth communication. As early as 1955, scholars observed that many Americans consulted friends and family for opinions when choosing durable goods, highlighting the dual role of online reviews in providing information and positive recommendations^[11]. Research indicates that negative word-of-mouth is often perceived as more reliable information. Online reviews not only provide consumers with information but also influence their purchasing decisions^[12]. In recent years, online reviews have become a crucial channel for consumers to gather product information comprehensively, offering valuable insights for tourism platforms to formulate precise strategies^[13]. Negative reviews are particularly significant for constructing the image of tourism destinations. Online review research in China emerged around 2008, revealing that consumer reviews reflect satisfaction levels with products or services and impact purchasing decisions^[14]. Positive reviews enhance sales and profits, while negative reviews generate adverse effects, with combined text and visual reviews proving

more effective. Furthermore, tourists wield considerable influence in the tourist gaze, influencing shifts in "symbolic situations" ^[15]. Images lacking appeal in reviews may increase uncertainty in purchasing behaviors ^[16]. Such studies provide insights into the characteristics and influencing factors of tourism user reviews, aiding in enhancing tourism business management and user experience.

3. Research Design

3.1 Overview of the Study Destination

Zhenyuan Ancient Town, a renowned tourist destination in Qiandongnan, Guizhou Province, is famous for its rich ethnic culture and distinctive resources. In January 2020, Zhenyuan was awarded the title of National 5A Tourist Attraction. Its advantageous geographical location and convenient transportation links place it within 270 kilometers of Tongren, Huaihua Zhijiang, and Guizhou airports. With a history spanning 2,281 years since its establishment as a county in the 30th year of the reign of King Zhao of Qin, Zhenyuan has experienced centuries of prosperity during the Yuan and Qing dynasties, boasting a profound cultural heritage and historical legacy ^[17]. In 2023, Zhenyuan hosted 7.6481 million tourists, generating a total tourism income of 8.561 billion yuan, demonstrating significant growth. Over the past 10 months, the turnover of the accommodation and catering industries above designated size increased by 75.8% and 10.1%, respectively. These data indicate Zhenyuan's immense potential and attractiveness in tourism development, laying a solid foundation for further enhancing its destination image.

3.2 Research Sample Collection and Data Preprocessing

This study focuses on Zhenyuan Ancient Town, a prominent tourist destination in Qiandongnan, Guizhou Province. Data were collected from online reviews on three major tourism platforms: Ctrip, Meituan, and Dianping, resulting in a total of 4,223 valid textual reviews. During the data collection process, the Baidu Index platform was first utilized to obtain information on public interest and demographic profiles of Zhenyuan Ancient Town from 2011 to 2024. Then, Octoparse software was employed to scrape and filter relevant online textual data[12]. During the filtering process, non-scenic descriptions, content unrelated to the scenic experience, and texts with only ratings and no comments were excluded. Subsequently, the ROST CM6 software was used for preprocessing the online text content, which included correcting formats, removing irrelevant symbols, and establishing a custom dictionary for word segmentation. These steps ensure the accuracy and validity of subsequent analyses, providing essential research material and methodological support for an in-depth analysis of tourists' perceptions of Zhenyuan Ancient Town's image.

4. Analysis of Tourist Characteristics and Online Review Text Data

4.1 Tourist Characteristics

As a famous tourist destination in Qiandongnan, Guizhou Province, Zhenyuan Ancient Town has shown significant annual fluctuations in online attention from 2011 to 2024. Initially, from 2011 to 2014, the development of the scenic area was relatively slow, with an average daily online attention of approximately 750. However, during 2015 to 2016, the scenic area experienced rapid growth, with the average daily online attention reaching 1691, reflecting a sudden increase in the attraction of the scenic area. From 2017 to 2019, despite some fluctuations, the overall trend was relatively stable, with an average daily value of about 1261[13]. In contrast, from 2020 to 2022, the global

pandemic severely restricted travel, causing the scenic area's online attention to drop to an average daily value of 901, highlighting the significant impact of external environments on the tourism industry. With the gradual easing of the pandemic, from 2023 to 2024, the online attention of the scenic area gradually recovered to an average daily value of 1037, demonstrating a sustained interest in Zhenyuan Ancient Town.

From 2020 to 2023, the online attention of Zhenyuan Ancient Town exhibited notable seasonal variations. Peaks in online attention typically occurred during the Qingming, May Day, and National Day holidays, with the longest sustained period during the summer vacation from mid-July to late August. The National Day holiday marked the highest point in the annual search index, despite its short duration. From late October to late January of the following year, as the climate gradually cooled, the search index consistently declined, reaching an annual low, particularly in mid to late December. There were brief upsurges during New Year's Day and Spring Festival, but overall activity remained relatively subdued.

Analysis of Baidu Index data indicates that the primary source markets for Zhenyuan Ancient Town are concentrated in the southwestern regions and economically developed cities such as Guiyang, Chengdu, and Chongqing. These areas have consistently been the provinces and cities with the highest attention to the scenic area. In recent years, although the source markets have expanded, they still exhibit relatively fixed trends, indicating sustained growth in Zhenyuan Ancient Town's popularity and attractiveness in specific regions and among specific demographics. Furthermore, Zhenyuan Ancient Town has varying levels of appeal to different age groups and genders. Potential tourists under 19 years old show less interest, with the main tourist demographic being between 20 and 30 years old, and males showing more interest than females. This finding may be related to the natural sightseeing characteristics of the scenic area and the higher activity level of young and middle-aged groups in online interactions, providing valuable data support for further enhancing Zhenyuan Ancient Town's marketing strategies and customer targeting.

4.2 High-Frequency Vocabulary Analysis of Tourism Image Perception

Using the ROST CM6 software, this study conducted word frequency statistics on reviews from websites such as Ctrip, Meituan, and Dianping, uncovering the most prominent features of tourists' perceptions of Zhenyuan Ancient Town. As shown in Table 1, "Zhenyuan Ancient Town" and "evening" are the most frequently mentioned terms, reflecting tourists' strong preference for the night scenery. Additionally, terms such as "Wuyang River," "ancient architectural complex," "Qinglong Cave," and "Shiping Mountain" are frequently mentioned, highlighting the main attractions and features tourists choose to visit and observe. The night scenery of Zhenyuan Ancient Town is likely the most favored by tourists, with its unique charm and allure making nighttime visits and observations a common choice for nearly all tourists to the town. A comprehensive analysis of tourists' descriptions of Zhenyuan Ancient Town's tourism image reveals that the scenic spots and the entire tourism process are the primary focus of tourists' attention. This information is crucial for optimizing the tourism image of Zhenyuan Ancient Town and enhancing the tourist experience.

Table 1: High-Frequency Characteristic Words

Rank	Term	Frequency	Rank	Term	Frequency	Rank	Term	Frequency
1	Scenery	5745	21	Hours	297	41	Delicious	250
2	Place	1655	22	Shipping Mountain	293	42	Photograph	236
3	Commercialization	1284	23	Located	292	43	Guiyang	229
4	Daytime	1260	24	Lighting	282	44	Surroundings	227
5	Features	1087	25	Tickets	280	45	TaijiDiagram	225
6	Worth	1045	26	Whole	352	46	Both Sides	215
7	Qinglong Cave	942	27	Transportation	348	47	Street	207
8	Tourism	879	28	Miao Ethnic Group	325	48	China	195
9	Train	756	29	Experience	306	49	Weicheng	184
10	Scenery	672	30	Convenient	304	50	Kilometers	184
11	Place	635	31	Hotel	297	51	Comfortable	175
12	Commercialization	628	32	Zhusheng Bridge	293	52	Traditional	168
13	Daytime	607	33	Bustling	292	53	Museum	166
14	Features	489	34	Dong Ethnic Group	282	54	Ethnic	166
15	Worth	472	35	Wharf	280	55	Free	153
16	Qiandongnan	456	36	Autonomous Prefecture	278	56	Owner	149
17	Culture	450	37	Long-Standing	277	57	Nature	147
18	Parking	424	38	Quiet	273	58	Millennia	145
19	Local	420	39	Cruise	267	59	Self-Driving Tour	142
20	Beautiful	408	40	Suggestion	261	60	Clean	141

4.3 Sentiment Analysis of Online Texts

Table 2: Visitor Sentiment Analysis

entiment Category	Number of Comments	Percentage	Intensity	Number of Comments	Percentage
Positive Sentimen	3327	76.75%	General (5~<15)	717	16.54%
			Moderate (15~<25)	698	16.10%
			High(25+)	1912	44.11%
Neutral Sentiment	25	0.58%	——		
Negative Sentiment	983	22.68%	General (-15~<5)	238	5.49%
			Moderate (-25~<-15)	85	1.96%
			High(-25-)	72	1.66%

According to the results of the Emotion Calculator analysis by ROST CM6 software (see Table 2), a total of 4,335 attitude comments were identified in the reviews of Zhenyuan Ancient Town. Of these comments, 76.75% expressed positive sentiment, with highly positive comments comprising 44.11% (1,912 comments). In contrast, neutral sentiment comments accounted for only 0.58%, while negative sentiment comments made up 22.68%, with highly negative sentiment comments at 1.66%. Despite the majority of comments being positive, a significant proportion of visitors expressed dissatisfaction with their experience at the scenic area. This indicates that the scenic area

management needs to enhance their management practices and improve the overall image to elevate the tourist experience.

4.4 Summary of Zhenyuan Ancient Town Scenic Area's Tourism Image Perception

Visitors to Zhenyuan Ancient Town primarily focus on enjoying the natural scenery. Frequently mentioned words in the comments, such as "beautiful," "scenery," "traditional," "green hills," and "historical sites," appeared a total of 3,189 times, reflecting their main motivation for choosing this destination. However, the lack of diverse activities, indicated by terms like "boating," "photography," and "museum," suggests room for improvement in this area. Visitor perception of Zhenyuan Ancient Town's image is significantly influenced by travel conditions, especially the attraction of night views and the peak summer season, as well as factors like parking, self-driving tours, and commercialization impacting their experience. Overall, the scenic area's environmental resources, facility conditions, and management service levels collectively shape visitors' deep impressions of the site.

4.5 Recommendations for Improvement of Zhenyuan Ancient Town Scenic Area

In recent years, Zhenyuan Ancient Town Scenic Area has invested heavily and undertaken various projects to preserve its traditions and enhance the visitor experience. However, visitor feedback indicates deficiencies in the diversity of tourist activities and the completeness of infrastructure, particularly in terms of transportation convenience and accommodation and dining services. It is recommended that the scenic area, while maintaining its natural beauty and cultural heritage, should add new projects such as water entertainment facilities and intangible cultural heritage performances. Additionally, optimizing parking and transportation services would enhance the overall visitor experience. In terms of cultural tourism development, Zhenyuan Ancient Town should fully leverage its ethnic charm resources to create a unique tourism brand, thereby promoting the sustainable development and image enhancement of the scenic area.

5. Research Conclusions and Prospects

This study, taking Zhenyuan Ancient Town as an example, analyzed online reviews from platforms such as Ctrip, Meituan, and Dianping to explore visitors' focal points and emotional feedback. The findings reveal that visitors mainly focus on natural and cultural landscapes, service facilities, and cost-effectiveness. Overall satisfaction with the scenic area is high, but issues such as limited attractions and inadequate infrastructure were also noted. Recommendations include enriching tourist attractions, optimizing infrastructure and service levels, and expanding data sources and analysis methods to enhance the depth and breadth of the research. This approach would more comprehensively reveal the multidimensional characteristics of the tourism image perception of Zhenyuan Ancient Town, facilitating continuous improvement and development of the scenic area's image. Future research should expand data sources and analysis methods to improve the depth and breadth of the study, fully uncovering the multidimensional characteristics of the scenic area's image.

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