

Research on the Perception and Optimization Paths of the Nighttime Tourism Image in Yuzhong District, Chongqing: A Case Study of Hongyadong Scenic Area

Liping Fu, Baili Li, Yan Cui

Chongqing University of Science and Technology, Chongqing, China

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Abstract: Nighttime tourism has gradually become an important means of driving regional economic development. This study takes Hongyadong, a landmark nighttime tourist attraction in Yuzhong District, Chongqing, as a case study. Based on the theory of tourism destination image, the study constructs a research framework consisting of image perception diagnosis, core issue identification, and optimization path proposal. By crawling 352 tourist reviews from Ctrip and employing web text analysis methods, the study analyzes the tourism image of Hongyadong from three dimensions: cognitive, affective, and overall image. The findings reveal that tourists have formed a composite cognitive image centered on “nightscape + architecture + culture + commerce”, with a predominantly positive affective orientation. However, issues such as superficial experience modes and overcrowding persist. Based on these findings, optimization paths are proposed, including creating culturally immersive experiences, introducing intelligent management, and diversifying business formats, to promote the high-quality development of Hongyadong and similar nighttime tourist destinations.

Keywords: Nighttime tourism; Tourism image; Text analysis; Optimization path; Hongyadong

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1. Introduction

1.1. Research background and significance

With the acceleration of modernization and increasing diversification of consumption, nighttime tourism has gradually emerged as an “excellent avenue” for driving the economy of tourist destinations^[1]. China’s “14th Five-Year Plan for Cultural and Tourism Development” explicitly outlines the development of the nighttime cultural and tourism economy as a national strategy, further promoting practical exploration and academic research in this field^[2]. Chongqing, as one of China’s most influential cities for nighttime economy, relies heavily on nighttime tourism as a core driver of economic development. Yuzhong District, as the central urban area of Chongqing,

boasts multiple popular nighttime tourist attractions. Among them, the Hongyadong Folk Culture Scenic Area, one of the first batch of national-level nighttime cultural and tourism consumption clusters in Chongqing, has become an iconic symbol and core consumption scenario of Chongqing's nighttime tourism due to its stunning night views and high popularity on tourism platforms. Therefore, studying tourists' image perceptions and emotional inclinations towards nighttime tourism at Hongyadong is instrumental in better diagnosing existing issues in its development and providing practical optimization paths. This not only holds practical significance for enhancing the tourism appeal and tourist satisfaction of Hongyadong but also offers reference value for addressing homogenization issues in the development of nighttime tourism in the region.

1.2. Literature review

Current research on nighttime tourism, both domestically and internationally, continues to deepen in terms of methodologies and dimensions. Research dimensions have expanded from focusing on macro-level spatial patterns and economic policies to encompassing micro-level social cultures and tourist experiences, demonstrating characteristics of interdisciplinary integration^[3-4]. At the macro level, scholars such as Zhou Lin and Tang Chengcai have employed geographic detector models to explore the spatial differential driving mechanisms of national-level nighttime cultural and tourism consumption clusters, revealing spatial characteristics of "dense in the east, sparse in the west, and multi-core distribution" in China^[5]. Nighttime economic policies also exert a certain influence on tourism economic growth, exhibiting a "Matthew effect" with uneven growth rates between the eastern and western regions^[6-7]. At the micro level, research on the impact of destination brand management on tourist experiences and revisit intentions has identified brand experience and safety perception as core factors influencing revisit intentions^[8-9]. Furthermore, research methodologies have gradually shifted from traditional literature analysis and questionnaire surveys to leveraging big data support and spatial econometrics, widely employing methods such as spatial analysis, text mining, and big data analysis. For instance, scholars like Li Yijie and Yang Li have utilized spatial autocorrelation analysis and kernel density analysis to study the spatial distribution characteristics of national-level nighttime cultural and tourism consumption clusters and tourism resources in China, respectively^[10-11]. Sun Xirui et al. and Wu Rulian et al. have explored tourists' urban nighttime tourism experiences based on online data^[12-13]. Additionally, obtaining geotagged photos or multi-source data from various social media platforms to explore tourists' nightlife and the spatial distribution of nighttime tourism in urban destinations has become a primary research approach among scholars^[14-16].

These studies provide a rich perspective for systematically analyzing the image and experience of a tourist destination. However, existing research still has limitations, such as insufficient in-depth attention to micro-level subject experiences and inadequate exploration of negative issues. Meanwhile, in the current digital era, tourists are keen on sharing their immediate feelings and experiences online, with online texts providing abundant data for research^[17]. Tourism image is a comprehensive representation of tourists' overall impressions and perceptions of a destination and serves as an important indicator for the destination's development^[18-19]. Furthermore, few scholars have diagnosed issues and provided optimization paths based on image perception. Therefore, this study focuses on tourists' image perceptions at the micro level, utilizes online review texts as data sources, and employs text analysis methods to explore optimization paths for enhancing the overall image of the Hongyadong Scenic Area.

1.3. Theoretical basis and analytical framework

1.3.1. Tourism destination image

Theory Tourism destination image refers to the sum of tourists' beliefs, thoughts, and impressions of a destination, typically categorized into three dimensions: cognitive image, affective image, and overall image^[20]. This theory provides systematic support for this study in deconstructing tourists' image perceptions of nighttime tourism at Hongyadong.

1.3.2. Research framework of this study

Based on the aforementioned literature review and theoretical support, this study constructs a research framework of “image perception diagnosis—core issue identification—optimization path proposal”, as illustrated in **Figure 1**. By analyzing high-frequency words and semantic network structure diagrams obtained through online text analysis, this study perceives the dimensional and structural relationships of the nighttime tourism image at Hongyadong. It then utilizes sentiment analysis to identify tourists' overall emotional attitudes and main issues. Finally, by integrating current research frontiers, targeted optimization strategies are proposed.

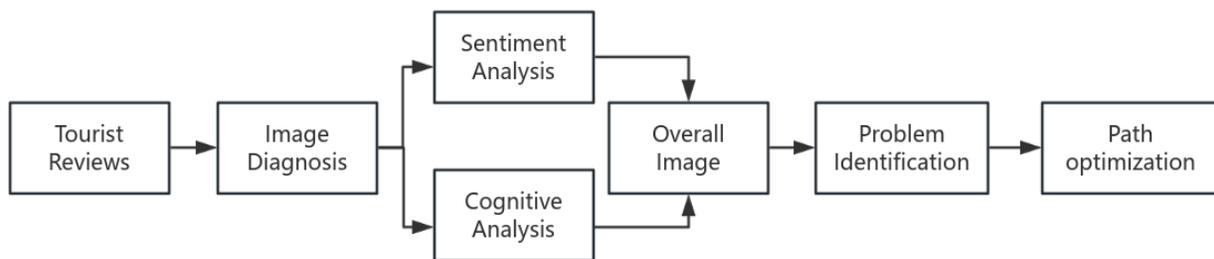


Figure 1. Research framework for text analysis

2. Research design

2.1. Data sources and processing

This paper employs web text analysis, utilizing Octopus software to crawl tourism reviews of Hongyadong Scenic Area on Ctrip, a well-known OTA platform in China, from December 2024 to November 2025. The collected texts were organized into the txt format and then deduplicated using the ROSTCM6 software. Subsequently, reviews lacking substantive content, such as “very beautiful, well worth it” and “very satisfied, a must-visit”, were manually removed, resulting in a final dataset of 352 texts comprising 39,358 characters. After processing with the software, data on high-frequency words, semantic network structures, and sentiment analysis were obtained.

2.2. Analytical methods

2.2.1. High-frequency word analysis

Extract high-frequency feature words from the reviews and tally the occurrences of each word, i.e., word frequency, to discern the focal points of tourist attention. Core image dimensions of tourist interest are summarized through word frequency statistics. The analysis will categorize and interpret high-frequency words into cognitive and emotional images based on tourism destination image theory.

2.2.2. Semantic network analysis

Utilize ROSTCM6 to construct a relational network among high-frequency words, thereby forming a semantic network diagram. The semantic network diagram consists of numerous nodes and arcs connecting these nodes. Nodes represent attributes, states, concepts, etc., of entities, while arcs denote semantic connections between connected nodes. This approach visually illustrates the intrinsic connections and structural characteristics among various image elements.

2.2.3. Sentiment analysis

Quantify tourists' emotional attitudes towards nighttime tourism at Hongyadong by judging the sentiment orientation and intensity of the text data. Analyze and explore the causes of relevant emotional attitudes to assist tourism destination managers in understanding tourist sentiment trends and making improvements.

3. Research findings and analysis

3.1. High-frequency word analysis of the nighttime tourism image of Hongyadong

As shown in **Table 1**, high-frequency words can be categorized based on the cognitive-emotional theoretical framework of tourism destination image. At the cognitive level, they can be further divided into multiple dimensions: In terms of geographical location, "Hongyadong" appears most frequently, indicating tourists' high recognition of it as a city landmark. Regarding tourism nodes, words such as "night view", "lights", and "evening" are densely clustered, suggesting that the nighttime visual experience is the core focus of tourists. In terms of tourism attractions, high-frequency words encompass both natural and cultural aspects. Among cultural elements, "architecture" stands out prominently, with words like "stilted buildings", "mountain city", and "three-dimensional" reflecting the unique architectural forms and mountainous landscape of Hongyadong. For natural landscapes, terms such as "Jialing River", "Yangtze River", and "confluence" highlight the enhancing effect of the rivers' meeting environment. Regarding sightseeing modes, words like "walking", "elevator", and "dock" reflect tourists' attention to transportation and touring methods. The convenience and diversity of viewing the night view of Hongyadong are evident from words such as "subway", "bus", and "cruise ship." In terms of tourism experience, tourism activities primarily revolve around "photography", "sightseeing", and "experience", indicating that tourists' behaviors are mainly focused on visual appreciation and leisure experiences. Content such as "food", "hot pot", and "commercial street" underscores the richness of commercial services in the scenic area, forming part of tourists' consumption activities. At the emotional image level, tourists' cultural identification with Hongyadong is reflected in high-frequency words like "Bayu", "folk customs", and "history", while emotional identification is highly evident in words such as "unique", "stunning", and "worthwhile." It is noteworthy that although negative cognitive words like "crowded" and "queue" do not appear frequently, they still reveal practical issues in crowd management at the scenic area.

Table 1. Statistical table of high-frequency words in Hongyadong

Primary Category	Secondary Category	Core Terms	Related Terms
Tourist Locations	Geographical Location	Hongyadong (515) Liberation Monument (38) Chongqing (296)	Yuzhong District (28) Hongya Gate (27) Chaotianmen (13) Riverside Road (21)
Tourist Nodes	Visiting Time	Night View (114) Lighting (59) Evening (69) Night (38)	Dazzling (20) Lights (14) Fantastical (12) Dreamlike (13)
Tourist Attractions	Architectural Features	Architecture (113) Stilted Buildings (79) Mountain City (64) Bridge (79)	Antique-style (14) Tiered (14) Three-dimensional (11) Well-arranged (11)
	Natural Landscape	Jialing River (62) Yangtze River (32) River View (12) Confluence (12)	Opposite Bank (13) Riverside (22)
Night Tour Forms	Sightseeing Modes	Road (32) Walking (25) Elevator (28) Pier (20)	Subway (11) Bus (10) Taxi (9) Cruise (9)
Tourist Experience	Tourist Activities	Taking Photos (57) Tourism (52) Scenic Spot (53) Experience (33)	Sightseeing (19) Visiting (18) Photo Spot (15) Shooting (13)
	Commercial Activities	Food (64) Hot Pot (33) Leisure (35) Commercial Street (22)	Snacks (25) Catering (16) Shopping (15) Bar (10)
Tourist Perception	Emotional Evaluation	Unique (41) Charm (24) Feeling (40)	Impressive (13) Magnificent (9) Beautiful (16) Worthwhile (15)
	Cultural Connotation	Culture (96) Feature (95) Ba-Yu Culture (46) Folk Customs (66)	Ambience (22) Three Unique Features (13) Ancient (11) Military (10)
Night Tour Issues	Practical Problems		Crowded (7) Queuing (9) Visitor Flow (9) Huge Crowds (8)

3.2. Semantic network analysis of the nighttime tourism image of Hongyadong

After obtaining the semantic network diagram through the ROSTCM6 software, as shown in **Figure 2**, the entire nighttime tourism experience is centered around “Hongyadong” and “Chongqing” as core connecting nodes, forming tight connections with cognitive image words such as “night view”, “architecture”, “stilted buildings”, and “lights.” This indicates that tourists’ perceptions of Hongyadong are highly focused on its nighttime landscapes and architectural features. In the second-tier network, words like “photography”, “food”, “hot pot”, and “river view” form clusters, reflecting tourists’ diverse behavioral patterns during their visits, emphasizing culinary experiences, photography check-ins, and natural sightseeing. Additionally, words such as “Liberation Monument”, “Jialing River”, and “Yuzhong District” exhibit strong connections with other nodes, suggesting that geographical location and transportation conditions play significant roles in tourists’ overall perceptions. The overall semantic network structure is clear, with prominent core cognitive images and no significant clustering of negative words, indicating that Hongyadong’s overall impression among tourists is predominantly positive. The image dimensions mutually support each other, collectively constructing a composite tourism destination image that combines “night view + culture + commerce + nature.”

4. Problem diagnosis and optimization pathways

4.1. Problem diagnosis

Through an analysis of online texts, this survey reveals the following characteristics in tourists' perception of the nighttime tourism image of Hongyadong.

4.1.1. Diverse image with a prominent core, yet lacking in cultural depth

Hongyadong has formed a composite image in tourists' minds, centered around its dazzling night views and unique stilted buildings, integrating humanistic and natural elements, as well as Bayu culture, specialty commerce, and the scenic beauty of the two rivers. It enjoys extremely high recognition as an "internet celebrity" landmark. However, these cultural elements often serve as static backgrounds with limited interactive participation, resulting in cultural experiences that largely remain at a superficial level of cognition.

4.1.2. Experience modes dominated by visual and consumption activities

Tourists' activities are highly concentrated on nighttime light viewing, photography check-ins, and dining and shopping, indicating that current experience offerings still emphasize shallow sensory stimulation and basic consumption.

4.1.3. Overall positive emotional feedback but with management shortcomings

Tourists' emotions are predominantly positive, confirming its market success. Nevertheless, issues such as crowdedness and queuing have become significant negative factors affecting tourist satisfaction. Additionally, the experience structure lacks in-depth immersive and extended consumption content such as "performances" and "accommodations", which may hinder its transformation from a "sightseeing destination" to a "deep experience destination."

4.2. Optimization pathways

Based on the aforementioned issues, to promote the high-quality development of Hongyadong and similar nighttime tourism destinations, the following recommendations are proposed: Firstly, create culturally immersive experiences and optimize the image structure. Beyond mere visual displays, develop regular nighttime performances, cultural workshops, or story-driven light shows that incorporate Bayu history and folk customs, transforming cultural elements from "viewable" backgrounds into "participatory" experiences and enriching the cultural depth of the image. Secondly, introduce intelligent management methods to alleviate passenger flow pressure: Establish a real-time passenger flow monitoring and early warning system, implement a time-slot reservation system, and employ intelligent traffic guidance during peak periods. Simultaneously, optimize internal circulation routes and set up temporary nighttime service points to effectively mitigate queuing and crowdedness issues. Finally, expand business formats and experience durations to promote consumption upgrading: Actively guide and cultivate emerging business formats such as nighttime themed homestays, cultural bars, and immersive script-based tours, extending tourists' stay durations and driving consumption upgrades from simple dining and shopping to comprehensive, immersive experiences encompassing accommodations and entertainment, achieving a transformation from "traffic" to "retention."

5. Conclusion and prospects

Guided by tourism destination image theory and utilizing web text analysis methods, this study reveals that Hongyadong's nighttime tourism leaves tourists with a composite image of "night view + culture + commerce + nature." However, its development remains constrained by factors such as the depth of experience, management efficiency, and the breadth of business formats. The proposed pathways, including immersive cultural experiences, intelligent management, and diversified business formats, aim to systematically enhance tourists' cognitive quality and emotional intensity. These pathways not only point the way for the high-quality development of Hongyadong but also provide valuable reference for the upgrading practices of similar nighttime tourism destinations.

This study is primarily limited by the relatively singular data sources and case selection. In the future, it could integrate multi-source data, such as geotagged photos and social media videos, to conduct dynamic, three-dimensional tracking studies on tourism image perception. Additionally, comparative analyses between different case destinations could be conducted to further enrich the theory and practice of nighttime tourism.

Furthermore, with technological advancements and the evolving needs of tourists, the image shaping of future nighttime tourism destinations will face new opportunities and challenges. For instance, the application of emerging technologies such as the metaverse, virtual reality (VR), and augmented reality (AR) in tourism scenarios is expected to bring revolutionary changes to nighttime tourism experiences. Future research could further explore how to integrate these cutting-edge technologies with the cultural connotations of nighttime tourism destinations to create immersive tourism scenarios that blend virtual and real elements. This will continuously optimize and innovate the image of nighttime tourism, meet tourists' growing demands for personalized and high-quality experiences, and drive the nighttime tourism industry to advance to deeper and broader levels.

Disclosure statement

The authors declare no conflict of interest.

References

- [1] Tang T, Chen W, Fu YG, 2024, Research on the Nighttime Cultural Tourism Space for Generation Z Tourists: A Case Study of Guanxian Ancient Town in Dujiangyan. *Modern Urban Research*, 2024(11): 102–107.
- [2] Lei T, Tian Y, Li WL, et al., 2022, Research on the Development of Nighttime Cultural and Tourism Consumption Clusters: A Case Study of Chongqing Eling Er Factory. *Traveler*, 9(13): 69–71.
- [3] Tang CC, Xiao XY, 2022, Review and Prospect of Nighttime Tourism Research at Home and Abroad. *Human Geography*, 37(3): 21–29 + 98.
- [4] Xu Y, Chu DP, Chen YC, et al., 2021, Research Hotspots and Context of International Nighttime Economy Based on Web of Science. *Resources Development & Market*, 37(3): 320–326.
- [5] Qi J, Lu ZX, 2022, Research on Innovative Paths for High-Quality Development of Urban Nighttime Tourism Scenarios. *Modern Urban Research*, 2022(10): 16–22 + 31.
- [6] Zhou L, Tang CC, Zhou C, et al., 2024, Spatial Structure Characteristics and Driving Mechanisms of National-Level Nighttime Cultural and Tourism Consumption Clusters. *Arid Zone Resources and Environment*, 38(1): 171–179.
- [7] Zhang WJ, Ming QZ, Liu HF, 2023, The Impact of Nighttime Economy Policies on Regional Tourism Economic Growth: An Empirical Analysis Based on a Multi-Time Point Difference-in-Differences Model. *Guangxi Social Sciences*, 2023(6): 110–119.

- [8] Kong YQ, Kwon YJ, Girish VG, et al., 2024, The Impact of Destination Brand Experience on Arousal, Memorable Tourism Experience, and Revisit Intention: Gyeongbok Palace Night Tour. *Asia Pacific Journal of Tourism Research*, 29(9): 1063–1078.
- [9] Wang X, Lai IKW, Wang K, 2023, Do Young Women Travellers Really Consider the Risk of Sexual Harassment during Night Travel? Evening Travel vs Midnight Travel. *Tourism Review*, 78(1): 58–71.
- [10] Li YJ, Liu YN, Yang XX, 2023, Spatial Distribution Characteristics and Configuration Influencing Factors of China's National-Level Nighttime Cultural and Tourism Consumption Clusters. *Journal of Commercial Economics*, 2023(23): 46–50.
- [11] Yang L, Wang JJ, Fu YH, et al., 2023, Research on the Spatial Distribution Characteristics and Influencing Factors of China's Nighttime Tourism Resources. *Resources Development & Market*, 39(12): 1673–1683.
- [12] Sun XR, Wu GH, Wei L, 2022, Research on Urban Nighttime Tourism Visitor Experience Based on Network Data. *Resources Development & Market*, 38(2): 249–256.
- [13] Wu RL, Tian FJ, Li HY, et al., 2022, Perception of Urban Nighttime Tourism Image Elements and Their Dimensional Construction: Based on UGC Data. *Areal Research and Development*, 41(4): 113–118.
- [14] Bui TH, 2025, Exploring Visitors' Nightlife Using Geo-tagged Social Media. *Current Issues in Tourism*, 2025: 1-21.
- [15] Zhang B, Luo M, Du Q, et al., 2023, Spatial Distribution and Suitability Evaluation of Nighttime Tourism in Kunming Utilizing Multi-source Data. *Heliyon*, 2023(9): 6.
- [16] Wang W, Liu L, Yang Y, 2022, Spatial Matching Analysis and Development Strategies of County Night-time Economy: A Case of Anning County, Yunnan Province. *Sustainability*, 14(9): 4891.
- [17] Chen TQ, Zhang JC, 2021, Research on the Perception of Scenic Spot Tourism Image Based on Text Mining: A Case Study of Hangzhou Xixi National Wetland Park. *Resources Development & Market*, 37(6): 741–746.
- [18] Sun XD, Ni RX, 2018, Chinese Cruise Tourists' Product Cognition, Emotional Expression, and Brand Image Perception: A Content Analysis Based on Online Reviews. *Geographical Research*, 37(6): 1159–1180.
- [19] Yu GX, Liu B, 2022, Research on the Structure of Urban Nighttime Tourism Image from the Perspective of Tourist Perception: A Case Study of Guangzhou. *Resources Development & Market*, 38(10): 1248–1255.
- [20] Santana LD, Sevilha Gosling MD, 2018, Dimensions of Image: A Model of Destination Image Formation. *Tourism Analysis*, 23(3): 303–322.

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