

Research on Customer Experience Perception of Mid-Range Brand Hotels Based on Network Text Analysis—A Case Study of Guiyang Orange Hotel Grand Cross Branch

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Abstract: In the era of experience economy, customer experience perception serves as the primary basis for experiential marketing. The widespread use of online review texts has become an important tool in understanding customer experience in hotel management processes. This paper explores the customer experience perception of Orange Hotel Grand Cross Branch, a mid-range brand hotel under Huazhu Hotel Group, based on network text analysis. Through web crawling technology, online review texts were collected, and analyses were conducted on aspects such as high-frequency words and sentiments. High-frequency words and related texts were collected and comprehensively processed to assess the overall service quality, facility conditions, and customer satisfaction of the hotel. It was found that customers' attention mainly focused on service quality, facility conditions, room cleanliness, hotel breakfast, geographical location, and value for money. Customers hold a generally positive attitude towards the hotel, with positive emotions being predominant. Specific improvement suggestions are also provided for some negative reviews.

Keywords: Web Text, Customer Perception, Hospitality, Serve

1. Introduction

In the current era of rapid digitalization, online reviews have become a crucial channel for consumers to express opinions and share experiences, and customer perceptions of hotel images directly impact the hotel's market competitiveness and brand reputation. According to the "2023 China Hotel Industry Development Report" released by the China Hotel Association, the hotel chainization rate is only 39%, much lower than that of developed countries, and the majority of hotels are concentrated in non-first-tier cities and provincial capitals, indicating uneven development in China's hotel industry. On the other hand, the "2023 Accommodation Market Online Reputation Report" shows that consumers' focus on hotels is changing, shifting from facilities, location, and price to a greater emphasis on service and hygiene. The hotel industry is increasingly focusing on analyzing online texts to understand consumer demands and enhance service quality. Network text analysis brings a fresh perspective to hotel research, enabling hotels to delve deeper into consumers' true feelings and needs. Guiyang, as the capital city of Guizhou Province, boasts unique regional culture and abundant tourism resources, leading to the rapid growth of the hotel industry. This study takes Guiyang Orange Hotel Grand Cross Branch as an example, utilizing network text analysis methods to thoroughly analyze a large number of online reviews, extracting customers' evaluations, opinions, and emotional tendencies regarding hotel services, facilities, and prices. Through comprehensive analysis of this data, a comprehensive evaluation of the overall service quality, facility conditions, and customer satisfaction of Orange Hotel Grand Cross Branch is conducted. Subsequently, the study delves into the perception of customer experiences in mid-range brand hotels. Through semantic analysis of consumer reviews, the aim is to reveal customers' evaluations, needs, and emotional attitudes towards hotels, providing suggestions for improvement and optimization to propel the continuous development of the hotel industry.

2. Literature Review

2.1. Customer Experience Perception

Customer experience perception first appeared in the consumer research conducted by Fornell at the Swedish Academy of Business Administration in 1982. Fornell believed that customer experience perception is the overall feeling of consumers towards products or services, including evaluations of quality, value, credibility, and other aspects [1]. In recent years, research on customer experience perception has gradually emerged in China, mainly focusing on the overall feelings and evaluations of customers towards products or services. This research field emphasizes starting from the perspective of customers to deeply understand their needs, expectations, and perceptions in order to enhance the service quality and customer satisfaction of enterprises. Customer perceived value is an important source of competitive advantage for service enterprises. It can help enterprises better understand customer needs and expectations, thereby providing better service experiences and increasing customer loyalty [2]. Through empirical research on five-star hotels in Macau, Hu Tianxuan found that hotel service quality has a significant positive impact on customer perceived value, and customer perceived value has a significant positive impact on customer loyalty [3].

2.2. Online Network Reviews

Network text analysis is a method that uses natural language processing and machine learning technologies to process and analyze online text. In the field of customer perception, network text analysis can help companies understand customer evaluations, emotions, and needs towards products or services, thereby optimizing products and services and improving customer satisfaction. With the popularity of the Internet and the rise of social media, consumers are increasingly inclined to share their evaluations of services such as hotels online. Positive online reviews can significantly enhance the reputation and attractiveness of hotels, while negative reviews may have adverse effects on hotel business [4]. Xiong Caiyu used network text analysis methods and found that customer evaluations of hotels mainly focus on service attitude, facility conditions, dining, and other aspects [5]. Nie Qi and Ma Jiayun, using network text analysis methods, believe that reasonable use of social media platforms for brand promotion and word-of-mouth dissemination is the key to enhancing hotel visibility and attracting more customers [6].

2.3. Mid-range Hotel Research

Mid-range hotels refer to a type of hotel that provides certain quality hardware facilities and good services, with room rates positioned at a moderate level, to meet the accommodation needs of both business travelers and tourists seeking high value for money. They typically differentiate themselves from luxury hotels in terms of luxury but still provide comfortable and practical accommodation experiences. Smith believes that the rise of mid-range market hotels represents a new era in the hotel industry, as these hotels offer quality and comfort while maintaining affordable prices [7]. In China, there has not been a unified and accurate definition of mid-range hotels within the industry, which has to some extent affected the standardization and development of the mid-range hotel market. Zhu Yuanzheng points out in the text that internationally, based on customer consumption levels and market demand, hotels are classified from low to high into ECONOMY, MIDCLASS, FIRST CLASS, and LUXURY categories. Generally, one-star and two-star classifications have been largely replaced by economy hotels, while hotels around three stars or quasi-three-star and quasi-four-star hotels, as well as high-end economy hotels, are included in the mid-range hotel category [8]. The mid-range hotel market is showing a rapid growth trend, but competition is also becoming increasingly fierce. Mid-range hotels need to constantly improve their quality and service levels to attract more consumers. In terms of operations, attention is paid to details and personalized services, attracting consumers by providing distinctive facilities and services. Hotels also focus on staff training and motivation to improve staff attitudes and service quality [9].

3. Research Methods and Data Sources

3.1. Research Object

The Orange Hotel Grand Cross Branch in Guiyang, opened in February 2019, is a mid-range brand

hotel directly operated by Huazhu Hotel Group. Located at No. 1 Zhonghua South Road, Nanming District, Guiyang City, the Orange Hotel Grand Cross Branch is situated in the bustling commercial area of Grand Cross and Fountain Square, adjacent to the famous Jiaxiu Tower. Since its opening, the Orange Hotel Grand Cross Branch has attracted a large number of consumers with its superior location and abundant tourist resources. As a mid-range brand hotel under the Huazhu Hotel Group, the Orange Hotel Grand Cross Branch in Guiyang has garnered significant attention. As of November 30, 2023, the hotel has a rating of 4.7 on Ctrip, ranking 13th in the Fountain Square Grand Cross business district. However, compared to last year, its online rating and ranking have slightly declined. Consumers have mainly raised issues regarding room cleanliness, facility standards, and service quality in their reviews.

3.2. Research Methods

This study primarily utilizes the ROST CM6 Chinese word segmentation and sentiment analysis software, which automatically segments words, generates word frequency tables, and provides segmentation effectiveness analysis. Firstly, text information from online reviews is collected using web crawler software. Secondly, the collected text is subjected to word frequency and sentiment analysis to obtain the customer service quality perception index system. Finally, the overall experience perception of customers at the Orange Hotel Grand Cross Branch in Guiyang is analyzed.

3.3. Data Source

In this study, text data from online reviews of the Orange Hotel Grand Cross Branch in Guiyang from November 30, 2022, to November 30, 2023, were collected using web crawler software. The data were gathered from four platforms: Ctrip (<http://www.ctrip.com/>), LY.com (<https://www.ly.com/>), Qunar (<https://www.qunar.com/>), and Huazhu Rewards (<https://hrewards.huazhu.com/>). The specific data are shown in Table 1. A total of 9,545 pieces of text were collected, and after filtering, 7,238 valid texts were obtained.

Table 1: Shows the quantity of text data collected from the web

Platform	Total Reviews	Valid Reviews
Huazhu Rewards	4479	2834
Ctrip	3962	3554
Qunar	819	568
LY.com	285	282
Total	9545	7238

Data Source: Data collected and organized by Octopus Collector software.

4. Data Analysis

4.1. Word Frequency Analysis

The collected texts were analyzed for high-frequency words using ROST CM 6 software, and the top 66 high-frequency words occurring more than 89 times were selected, as shown in Table 2. This word list reflects the intuitive experience of customers staying at the hotel. After sorting through them, it was discovered that there are some underlying connections between different high-frequency words. By synthesizing the high-frequency words in comprehensive evaluations, customers' hot-button issues regarding their stay at Orange Hotel can be intuitively identified. The most frequently mentioned words, ranked first and second in frequency, are "service" and "hotel," appearing 3573 and 2280 times, respectively, indicating that customers prioritize service quality in their hotel experience. As one of the core competitive advantages in the hotel industry, the quality and level of service directly influence customer satisfaction and loyalty. Words ranked third, sixth, seventh, eleventh, eighteenth, and nineteenth in frequency are "room," "cleanliness," "clean," "environment," "facilities," and "tidy," mentioned 2275, 1303, 1234, 910, 468, and 448 times, respectively. Among them, "room" ranks third with a frequency of 2275, indicating customers have high demands for the comfort of the accommodation environment. "Cleanliness," "clean," and "tidy" further emphasize the importance of cleanliness in the hotel stay experience. "Environment" and "facilities" indicate customers' high expectations for the overall environment and facilities provided by the hotel. An elegant and well-equipped environment not only enhances the customer's accommodation experience but also directly reflects the quality and service level of the hotel. "Front desk," "attitude," "enthusiasm," and

"staff" rank fourth, tenth, thirteenth, and fourteenth in frequency, with 1696, 938, 776, and 693 mentions, respectively. This indicates that customers pay close attention to the quality of front desk service and the attitude of staff when choosing a hotel. A proactive, enthusiastic, and thoughtful service attitude can make guests feel cared for and respected, thereby enhancing customer loyalty and repeat business.

Table 2: High-Frequency Feature Word List

Number	Term	Frequency	Number	Term	Frequency	Number	Term	Frequency
1	Service	3573	23	Guiyang	365	45	Sound insulation	149
2	Hotel	2280	24	Comfortable	364	46	Nighttime	149
3	Room	2275	25	Cozy	353	47	Decoration	146
4	Clean	1234	26	Geography	330	48	Robot	136
5	Front desk	1696	27	Convenience	306	49	Waiter	128
6	Convenient	1398	28	Abundant	283	50	Business trip	126
7	Hygiene	1303	29	Thoughtful	275	51	Parking lot	123
8	Breakfast	1136	30	Travel	257	52	Elevator	113
9	Location	1116	31	Considerate	254	53	Variety	112
10	Attitude	938	32	Cost-effectiveness	236	54	Grand Cross	111
11	Environment	910	33	Surroundings	222	55	Snacks	109
12	Check-in	793	34	Choice	204	56	Cleaning	109
13	Enthusiasm	776	35	Parking	201	57	Every time	107
14	Staff	693	36	Nearby	199	58	Guest room	106
15	Transportation	586	37	Quiet	191	59	In place	105
16	Orange	562	38	Free	178	60	Category	103
17	Satisfaction	479	39	Worthy	178	61	Room type	103
18	Facilities	468	40	Downstairs	171	62	Around	102
19	Neat	448	41	Complete	161	63	Taste	97
20	Delicious	441	42	Positive review	159	64	Walking	94
21	Experience	436	43	Upgrade	157	65	Lobby	94
22	City center	378	44	Subway station	154	66	Prime location	89

Data source: Analyzed and organized by ROST CM6 software.

4.2. Sentiment Analysis of Online Texts

Sentiment analysis refers to the process of analyzing emotional nuances in text that carry subjective sentiments, identifying implicit emotional information, and finally summarizing and categorizing them. Using ROST CM 6 software, the processed comments underwent sentiment analysis, where sentiment features were divided into three major categories. Based on the strength of the sentiment, positive and negative sentiments were further classified into three levels: general, moderate, and high. The specific results are shown in Table 3.

In the expression of customer experiences at the Orange Hotel Grand Cross Branch in Guiyang, positive sentiments occurred 3,327 times, accounting for 86.20% of the total. Among them, words expressing highly positive emotions appeared 6,706 times ("excellent service," "clean rooms," "delicious breakfast," etc.), accounting for 34.11% of the positive sentiments. Words expressing extreme sentiments appeared 983 times ("outdated facilities," "poor service," "unclean," etc.), accounting for 13.71% of the total.

Table 3: Tourist Sentiment Analysis

Sentiment Category	Total Number of Comments and Percentage		Intensity	Subdivision Comments and Percentage	
	Comments	Percentage		Comments	Percentage
Positive Emotions (5,+∞):	6706 comments	86.20%	General:(5,15]:	2029comments	26.08%
			Moderate:(15,25]:	2023comments	26.00%
			High:(25,+∞):	2654comments	34.11%
Neutral Emotions [5,5]:	7comments	0.09%	—		
Negative Emotions (-∞,5):	1067 comments	13.71%	General:[-15,5):	160comments	2.06%
			Moderate:[-25,-15):	53comments	0.68%
			High:(-∞,-25):	43comments	0.55%

Overall, the frequency of positive sentiment words in the customer sentiment at the Orange Hotel Grand Cross Branch in Guiyang is much higher than that of negative sentiment words, although there

are still a considerable number of negative sentiment words. In summary, the Orange Hotel Grand Cross Branch in Guiyang has performed well in customer experience, with the majority of customers holding positive and favorable opinions. However, the hotel should also pay attention to feedback expressing negative emotions from customers and make timely improvements to services and facilities to further enhance customer satisfaction.

4.3. Customer Experience Perception Analysis

The intention attributes most mentioned by customers are the characteristic things that leave a deep impression on them about the hotel, reflecting the outstanding parts of the customer's hotel experience. Therefore, based on content analysis, the top 100 high-frequency words are categorized into nouns, verbs, and adjectives to conduct a deep-level analysis of the customer experience perception at the Orange Hotel Grand Cross Branch in Guiyang. In the analysis of high-frequency nouns, it is found that the most deeply perceived high-frequency nouns by customers include "hotel," "room," "cleanliness," indicating that cleanliness of the hotel environment directly impacts customers' perception of the hotel experience. A clean and tidy environment can leave a lasting impression on customers. Additionally, terms related to hotel service personnel such as "front desk," "staff," and "service staff" highlight the crucial role of hotel service staff in the customer experience. The frequent mention of these terms indicates that customers have formed a profound impression during interactions with service personnel, which directly affects their overall evaluation of the hotel's service. Analysis of high-frequency verbs reveals that descriptions of actions frequently mentioned in customer comments at the Orange Hotel Grand Cross Branch in Guiyang mainly focus on "service," "check-in," and "check-in procedures." The use of these verbs not only reveals key aspects of customer experience perception but also underscores the importance of a smooth check-in experience for customer satisfaction. Analysis of high-frequency adjectives indicates that "clean" and "comfortable" occupy prominent positions in customer evaluations of the hotel, ranking at the top. These two adjectives are directly related to customers' perception of the hotel environment and service quality, constituting important factors in customer experience perception.

4.4. Recommendations

Based on the research findings, it is evident that service is the core competitive advantage in the hotel industry, and the accommodation environment and hygiene level are crucial for customer experience. Front desk service and staff attitude directly impact customers' overall perceptions, although most customers hold positive attitudes, there are also some negative feedback. The high-frequency occurrence of nouns reflects customers' perception of experience. In negative evaluations, issues such as poor service attitude of some staff, aging hardware facilities, limited breakfast options, and inconvenient parking stand out. Combining the above analysis, the following improvement suggestions are proposed for the Guiyang Orange Hotel Grand Cross Branch: Enhance service quality by providing systematic training to ensure service staff possess professional skills and good attitudes; Optimize hardware facilities by regularly maintaining and upgrading equipment in key areas; Improve dining quality by introducing local specialty dishes to cater to different taste preferences; Integrate geographical location and surrounding environment by collaborating with nearby tourist resources to offer attractive package deals; Enhance brand image and visibility by strengthening brand promotion and marketing.

5. Conclusion

This study focused on the Guiyang Orange Hotel Grand Cross Branch as a case study, conducting in-depth analysis of guest reviews on major online platforms including Ctrip, LY.com, Qunar, and Huazhu Club to explore the underlying concerns and emotions of customers behind online comments. Grounded in extensive and authentic textual data, the research employed segmentation, high-frequency word extraction, and the construction of a comprehensive framework to uncover the key factors and discussion points that customers pay attention to regarding their experience at the Guiyang Orange Hotel Grand Cross Branch. The data indicates that customers primarily focus on six aspects: service quality, facilities conditions, room cleanliness, hotel breakfast, geographical location, and value for money, with evaluations and opinions revolving around these areas. Furthermore, a deep emotional analysis of customer feedback reveals overall satisfaction among customers, with a predominant proportion expressing positive sentiments. Positive evaluations highlight the hotel's strengths in areas

such as excellent front desk service, clean and tidy rooms, delicious breakfast, and convenient location in the city center for transportation. While the Guiyang Orange Hotel currently performs well in various aspects, continued efforts are necessary to stand out in the competitive landscape. Therefore, targeted recommendations and development strategies are proposed to address specific issues raised in negative feedback, such as poor service attitude among some staff, aging hardware facilities, limited breakfast options, and inconvenient parking, focusing on enhancing service quality, optimizing hardware facilities, improving dining quality, and integrating geographical location and surrounding environment. This study not only provides valuable insights for the continuous development of the Guiyang Orange Hotel Grand Cross Branch but also serves as a reference for the healthy development of the entire hotel industry. Additionally, we hope this research will inspire industry professionals to pay more attention to and reflect on hotel service quality, collectively driving the prosperity and development of the national tourism industry and creating a higher-quality and more comfortable travel experience for travelers. Grounded in authentic and effective online textual data, this study offers comprehensive and insightful analysis, demonstrating both theoretical and practical value.

While this study delved deeply into the perception of customer experience at the Guiyang Orange Hotel Grand Cross Branch, there are still some limitations. Firstly, the data primarily relies on online reviews, which may not cover all customers' opinions and suggestions. Secondly, due to limitations in research methods and technology, it may not fully capture customers' true feelings accurately. Future research could further expand data sources and research methods, incorporating on-site investigations, in-depth interviews, and other methods to gain a more comprehensive understanding of customer experience perception. Additionally, attention could be directed towards the latest developments and emerging technological trends in the hotel industry to provide more forward-looking recommendations for hotel development. Furthermore, deeper exploration could be conducted on how to continuously improve service quality and customer experience while maintaining brand characteristics to cope with increasingly fierce market competition.

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