

# Research on the Construction and Application of Service Quality Evaluation Models for Scenic Spots: Taking Chongqing Ciqikou as an Example

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**Abstract:** In the current environment of increasingly fierce competition in the tourism industry, service quality has become crucial for enhancing the competitiveness of scenic spots. This paper uses the SERVQUAL model to design a service quality evaluation questionnaire that captures the gap between tourists' expectations and perceptions, using the Ciqikou Scenic Spot as a case study. Data collected from field surveys are used to comprehensively and meticulously evaluate the service quality of the Ciqikou Scenic Spot. The analysis results show that the scenic spot, with its unique folk culture experience and beautiful ecological environment, has certain advantages in terms of service quality. However, significant deficiencies exist in infrastructure and environmental hygiene. Accordingly, targeted improvement suggestions are proposed to further enhance the service quality of the Ciqikou Scenic Spot and meet the increasingly diverse and personalized needs of tourists. This study provides not only a specific service quality improvement strategy for the Ciqikou Scenic Spot but also a valuable reference for other tourist attractions.

**Keywords:** Service quality; SERVQUAL model; Tourists' perception; Tourists' expectation; Ciqikou

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## 1. Introduction

In recent years, the state has placed great emphasis on the development of tourism, introducing a series of policies and measures to enhance the quality and efficiency of the industry. The *Guiding Opinions on Promoting High-Quality Development of Tourism* clearly advocate for strengthening the supervision of tourism service quality and promoting the transition from rapid growth to high-quality development. The Several Opinions on Promoting the Reform and Development of the Tourism Industry and the Tourism Development Plan for the 14th Five-Year Plan provide clear policy guidance and robust support for improving the service quality of scenic spots. On May 17, 2024, the current General Secretary issued important directives at the National Tourism Development Conference, emphasizing the need to "strive to improve the modern tourism system, accelerate the construction of a strong tourism nation, and promote high-quality tourism development." These directives set higher standards for tourism quality and lay the foundation for constructing and applying service quality evaluation models.

Against the backdrop of increasingly fierce competition in the tourism industry, many scenic spots face serious homogenization and a strong commercial atmosphere. In today's context of consumption upgrading and increasing personalized demand, the core of competition among scenic spots has shifted from traditional resource-based competition to service quality competition. Providing high-quality services to meet the diverse needs of tourists has become an urgent problem to solve.

As one of the most popular tourist attractions in Chongqing, improving the service quality of Ciqikou is crucial not only for tourist satisfaction but also for the scenic spot's long-term development.

## 2. Literature review

Since the 1980s, service quality has become a focal point for Western scholars, primarily divided into the Nordic school, represented by Gronroos and Gummesson, and the American school, represented by Zeithaml<sup>[1]</sup>. Both schools are customer-oriented; however, the Nordic school of service marketing is based on an overall marketing approach, while the American school relies on the 4P marketing theory (Product, Price, Place, Promotion)<sup>[2]</sup>.

Through continuous exploration by numerous domestic and international researchers, service quality evaluation tools such as the Customer Perceived Service Quality Model (Gronroos, 1982), the SERVQUAL Service Quality Gap Model (PZB, 1988), and the SERVPERF Evaluation Model (Cronin & Taylor, 1992) have been developed and implemented. Among these, the SERVQUAL model established by Parasuraman *et al.* is the most widely used<sup>[3]</sup>. Xu and Wang<sup>[4]</sup> constructed a model from the employees' perspective, including "work environment," "employee life," "job reward," "employee emotion," and "service quality" as five latent variables, with a total of 25 measurement items in the structural equation model. This model was applied to empirical research in the Jiuzhaigou and Huanglong scenic areas to explore its applicability in actual tourism service scenarios. Huang and Xin<sup>[5]</sup> constructed a model for evaluating the service quality improvement of tourist attractions from tourists' perceptions by analyzing the theory of service quality and related literature, integrating the Kano model and IPA analysis. This model was applied to practical research to establish strategies for improving scenic spot quality elements. Bu *et al.*<sup>[6]</sup> used the SERVQUAL scale to study the service quality of tourist attractions, allowing each tourist attraction and government management to gain a deeper understanding of the development status of the attractions and the service quality gap. Cao Yuejuan<sup>[7]</sup>, Yao Fan *et al.*<sup>[8]</sup>, Ma Lei and He Meiqing<sup>[9]</sup>, and Wu Liangfeng<sup>[10]</sup> constructed service quality evaluation models for different scenic spots using SERVQUAL and IPA respectively.

In summary, scholars have explored various service quality evaluation models, but the applicability and differences of these models in different geographical and cultural contexts have not been deeply explored. Research on mountainous ancient towns, in particular, is scarce. The evaluation of tourism service quality is deeply influenced by factors such as regional culture, economic level, and consumption habits, which can lead to significant differences in service quality standards and expectations across regions and countries. Therefore, future research should focus more on the regional and cultural adaptability of the evaluation model and explore how to adjust and optimize the model according to different cultural backgrounds.

## 3. Research design

### 3.1. Case site selection

The Ciqikou Scenic Area is located in Shapingba District, Chongqing, covering an area of about 3.4 square kilometers. The area features ancient architecture, unique folk culture, rich tourism resources, and beautiful natural landscapes, making it an ideal tourist destination for both domestic and international visitors.

### 3.2. Data collection and analysis

The questionnaire was designed with reference to established scales, with moderate adjustments made to suit the unique context of the Ciqikou Scenic Area. The final product is a service quality evaluation scale that assesses tourists' expectations and perceptions of the area. Using the SERVQUAL service quality evaluation method, the questionnaire includes five primary indicators: tangibility, reliability, responsiveness, assurance, and empathy. Under these primary indicators, there are 22 secondary indicators, including infrastructure quality and ecological environment.

Since the questionnaire addresses both expectations and perceptions, and a seven-point scale may lead to respondent fatigue or random responses, the questionnaire was adapted to a five-point Likert scale. Respondents rate each question on a scale from 1 to 5, where 1 means very dissatisfied, 2 means dissatisfied, 3 means neutral, 4 means satisfied, and 5 means very satisfied.

The finalized questionnaires were distributed in the Ciqikou Scenic Area from April 28, 2024, to May 20, 2024, using random sampling. Due to limited manpower and other factors, including some tourists' reluctance to participate, a total of 178 questionnaires were collected both online and offline. After excluding questionnaires that were completed too quickly, contained serious errors or omissions, or had uniformly answered questions indicating random responses, 144 valid questionnaires remained, resulting in an effective response rate of 80.9%.

## 4. Results and analyses

### 4.1. Descriptive statistical analysis

The data from the valid questionnaires were analyzed statistically, with specific demographic information shown in **Table 1**.

**Table 1.** Statistical table of social information

Basic information about tourists		Frequency (persons)	Percentage (%)
Sex	Male	56	38.89%
	Female	88	61.11%
Age	15–25 years old	27	18.75%
	26–35 years old	59	40.97%
	36–45 years old	41	28.47%
	> 46 years old	17	11.81%
Academic qualifications	College and below	19	13.19%
	Undergraduate	81	56.25%
	Master's degree and above	44	30.56%
Monthly income	≤ 3,000 RMB	51	35.42%
	3,001–5,000 RMB	37	25.69%
	5,001–10,000 RMB	34	23.61%
	> 10,000 RMB	22	15.28%
Travel mode	Traveling with a group	5	3.47%
	Public transport	124	86.11%
	Self-drive	15	10.42%

According to the SPSS 27.0 analysis, 38.89% of tourists at the Ciqikou Scenic Area are male, while 61.11% are female, indicating a slightly higher number of female tourists. Most tourists are aged 26–45, with the fewest tourists being 46 years and older. This suggests that tourists in the Ciqikou Scenic Area are relatively young, primarily middle-aged and younger, often traveling in groups such as couples, friends, and families. They generally have a good level of education and disposable income. Due to limited parking facilities and the area's proximity to a metro station, most tourists prefer public transport.

#### 4.2. Reliability and validity analysis

The overall Cronbach's alpha value for the questionnaire exceeds 0.9, indicating high reliability. The KMO value is 0.837, which is greater than 0.8, and the significance level is less than 0.05, demonstrating good structural validity.

#### 4.3. Service quality gap analysis

The specific formulas in the SERVQUAL (SQ) model are shown in **Equations (1)** and **(2)**.

$$SQ = \frac{[\sum_{i=1}^m (P_i - E_i)]}{m} \quad (1)$$

$$SO \text{ value} = \text{Actual visitor perception (PS)} - \text{Visitor expectation (ES)} \quad (2)$$

The service quality expectation-perception gap for the Ciqikou Scenic Area is summarized in **Table 2**.

**Table 2.** Service quality gap table

Dimension	No.	Indicator	Perceived mean	Mean expectation	GAP value (SQ)
Tangibles	A1	Well-developed infrastructure	4.10	4.65	-0.55
	A2	Beautiful ecological environment	4.13	4.35	-0.22
	A3	Clean and comfortable environmental hygiene	4.19	4.58	-0.39
	A4	The guide signs are clear and easy to understand	4.19	4.42	-0.23
	A5	Clean and tidy staff clothing	4.65	4.65	0.00
Reliability	B1	Problems encountered in the scenic area can provide appropriate assistance	4.51	4.65	-0.55
	B2	Tour projects as advertised	4.47	4.58	-0.39
	B3	The information provided by the tourist attractions is true and reliable	4.82	4.71	0.11
	B4	Scenic area provides multi-language services	4.18	4.23	-0.05
	B5	In the holiday or peak period still have enough reception capacity	4.26	4.48	-0.23
Responsiveness	C1	Questions can be answered quickly	4.91	4.61	0.30
	C2	Scenic Spots will regularly update their programs to meet visitors' expectations	4.06	4.61	-0.55
	C3	Personalised service is provided to visitors	4.06	4.45	-0.39
Guaranteed	D1	Reasonable prices for consumption in scenic spots	4.72	4.52	0.20
	D2	There is no fraud or compulsory consumption	4.80	4.68	0.12
	D3	Scenic spot staff is professional and responsible	4.23	4.78	-0.55
	D4	The service provided by the scenic spot is above average level	4.33	4.67	-0.34
	D5	Scenic spot for tourists' personal and property safety protection	4.91	4.65	0.26

**Table 2 (Continued)**

Dimension	No.	Indicator	Perceived mean	Mean expectation	GAP value (SQ)
Empathy	E1	Staff's attitude is warm and sincere	4.26	4.65	-0.39
	E2	Staff will pay attention to the feelings of tourists, give attentive service	4.29	4.52	-0.23
	E3	Scenic area focuses on the creation of a cultural atmosphere	3.90	4.61	-0.71
	E4	Scenic spot for tourists to provide services with local characteristics	4.7	4.44	0.26

The SQ values for each level of indicators are listed in **Table 3**, with the five dimensions ranked from highest to lowest as follows: assurance (SQ value = -0.06), reliability (SQ value = -0.08), responsiveness (SQ value = -0.21), empathy (SQ value = -0.27), and tangibility (SQ value = -0.28).

**Table 3.** SQ value statistics

Dimension	SQ Value	Sorting
Tangibles	-0.28	5
Reliability	-0.08	2
Responsiveness	-0.21	3
Guaranteed	-0.06	1
Empathy	-0.27	4

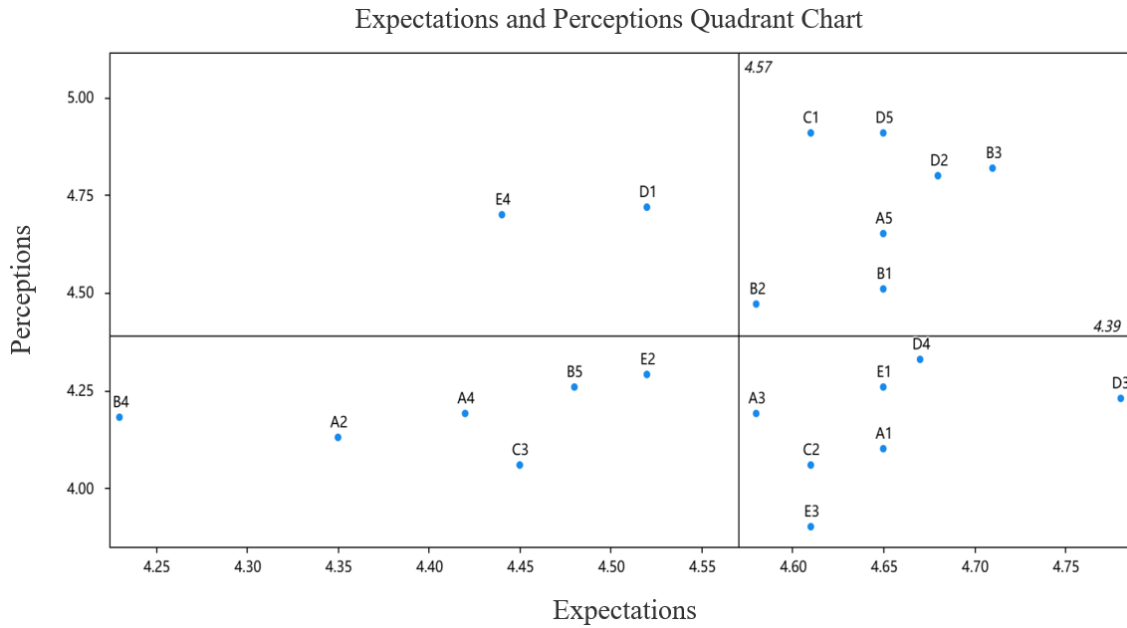
When  $SQ > 0$  ( $PS > ES$ ), tourists' actual perceptions exceed their expectations, indicating that the service level surpasses expectations and tourists are satisfied. When  $SQ = 0$  ( $PS = ES$ ), tourists' perceptions match their expectations, indicating basic satisfaction. When  $SQ < 0$  ( $PS < ES$ ), tourists' perceptions fall short of their expectations, resulting in dissatisfaction.

The calculation shows an SQ value of -0.18, indicating overall tourist dissatisfaction with the service quality at the Ciqikou Scenic Area. Tourists have high expectations, but the actual experience does not meet these expectations, leading to a negative mean value in the final service quality evaluation. Therefore, there is a need for improvement in the service quality of the Ciqikou Scenic Area.

## 5. Analysis of the current situation

### 5.1. IPA analysis model construction

Using the Importance-Performance Analysis (IPA) method, the expectations and perceptions of tourists at the Ciqikou Scenic Spot are divided into four quadrants. Based on the five dimensions of service quality mentioned earlier, the 22 indicators from this survey are plotted into the four quadrants of the IPA analysis matrix, as shown in **Figure 1** below.



**Figure 1.** Expectation-perception IPA quadrant diagram of Ciqikou Scenic Area tourist evaluation

## 5.2. Four-quadrant analysis of service quality evaluation indicators

The first quadrant is the advantage zone, and the second quadrant is the maintenance zone. Indicators in these two quadrants have high overall expectations and perceived value. The scenic area should maintain the status quo and continue optimizing attractions, facilities, and services. The third quadrant is the opportunity zone, also known as the secondary improvement zone. For example, indicators like B5—sufficient reception capacity during holidays or peak periods, and C3—personalized services for visitors. Ciqikou Scenic Area, being a popular tourist destination, often experiences overcrowding during holidays, leading to negative emotions that affect visitor satisfaction. The scenic area can highlight different features in various areas, plan for holidays in advance, and effectively manage visitor flow to enhance the consumer experience. The fourth quadrant is the improvement area, indicating more serious issues that need immediate attention, such as A1—inadequate infrastructure, and A3—poor environmental hygiene in the scenic area. The Ciqikou Scenic Area should analyze the root causes of these problems, identify the issues, and implement necessary improvements. The research found that there is significant room for improvement in infrastructure and services, such as timely waste bin cleaning to prevent overflow and road blockage, and addressing unreasonable washroom settings and cleanliness. These infrastructure and hygiene issues should be prioritized.

Through the IPA analysis method, Ciqikou Scenic Area can better understand tourists’ needs and expectations, make targeted improvements, enhance tourist satisfaction and reputation, and thereby improve the overall quality of the scenic area.

## 6. Conclusion and prospect

This study, by constructing and applying a service quality evaluation model, conducted a comprehensive assessment of the service quality at the Ciqikou Scenic Area, identifying key problems and deficiencies. Based on these findings, we have proposed specific improvement directions aimed at enhancing the service quality of the scenic area to meet the increasingly diverse and personalized needs of tourists.

However, there are still several limitations in this study. During data collection, technical constraints, cost

considerations, or human error may have led to incomplete data collection, which might not cover all necessary aspects. Additionally, the methodology used in data processing may have leaned towards simplicity, potentially affecting the analysis results. Further improvements will be made as opportunities arise in the future.

Looking ahead, with the intensifying competition in the tourism industry and changing tourist needs, Ciqikou Scenic Area must continue to focus on service quality issues, continuously optimize service processes, and improve service levels. Additionally, it is essential to strengthen exchanges and cooperation with other scenic spots, learn from advanced service concepts and management experiences, and collectively promote the sustainable development of the tourism industry.

## Disclosure statement

The authors declare no conflict of interest.

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