

# Evaluation on the Tourism Brand of Qingjiang Based on Text Mining and Quantitative Analysis

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**Keywords:** tourism brand; evaluation; data mining; quantification; Qingjiang.

**Abstract:** In order to keep the sustainable development of China's tourism industry, it is urgent to strengthen the construction of tourism brands. Taking the tourism brand of Qingjiang as an example, this paper tries to evaluate and analyze the tourism brand through ROST text mining software and quantitative analysis method. The results show that Qingjiang enjoys a tourism brand with distinct images and high reputation. But tourists have low awareness on the folk culture of Qingjiang; their brand loyalty needs to be cultivated and improved. In this regard, this paper puts forward the strategy of "strengthening the development of folk culture tourism resources" and relevant suggestions.

## 1. Introduction

The characteristic tourism brand is the core competitiveness of tourism destinations. In the National Tourism Work Reports of 2017 and 2018, Jin Li, the director of China National Tourism Administration, mentioned the word of "brand" 15 and 28 times, and "characteristic" 12 and 19 times. At present, most of China's tourism brands are lack of accurate positioning and connotations, let alone distinct images and strong attractiveness. This article takes the tourism brand of Qingjiang as an example to explain how to build characteristic tourism brands.

## 2. Research Methods

There are many researches on brands at home and abroad. Following the view of Philip Kotler and others, this paper holds that the connotation of Qingjiang tourism brand should be interpreted from five aspects: attribute is the basic utility provided by Qingjiang River for tourists; benefit is the functional and emotional benefits obtained by tourists from Qingjiang tourism; value is the deep-seated factor which attract tourists; culture is the core value highly recognized by tourists; individuality is the distinctive characteristic which distinguishes Qingjiang Gallery from other tourism brands. This paper evaluates the tourism brand of Qingjiang from these five aspects: attribute, benefit, value, culture and individuality. The research methods are divided into two steps.

First, on major domestic tourism websites include Ctrip, Qunar, Tuniu and Baidu tourism, the researcher collects comments and travel notes under the key words of "Qingjiang Gallery". After screening, the "Qingjiang Gallery.txt" is imported into ROST content mining software for analysis.

Secondly, the survey and evaluation method is used to analyze data in order to get tourists' perception on Qingjiang tourism brand. The data are collected by questionnaire survey method. The questionnaire is designed on the basis of KANO model, and aims to investigate the importance, attraction and satisfaction of Qingjiang tourism brand.

## 3. Overview of the Research Area

The Qingjiang River originates in Longdonggou, Lichuan City of western Hubei Province. It flows through Enshi, Changyang and Badong, and flows into the Yangtze River in Yidu City. The river is 423 kilometers long and enjoys the reputation of "picturesque scenery along the 800-li Qingjiang River". It is the mother river of Tujia nationality. In recent years, Hubei Province makes great efforts in exploiting the tourism resources of Qingjiang and develops a series of scenic spots

such as Qingjiang Gallery, Changyang Man Site, Tianlong Bay of Yidu, Songshan Mountain, Wufeng Chaibu River, Enshi Grand Canyon, Shuobuya Stone Forest and Water Curtain Cave .

Qingjiang tourism takes Qingjiang Gallery as the core product and builds the folk tourism brand of "Dreamland Home of Qingjiang Gallery". Qingjiang Gallery Scenic Area is a national forest park, and the largest national 5A-class scenic spot in the Three Gorges area. It is listed in the top ten core scenic spots of western Hubei; it has been honored as the "Top Ten Emerging Brands of Ethnic Culture Tourism in China" for two consecutive years and "Provincial Consumers Satisfaction Model Unit" by Hubei Consumer Association for five consecutive years. Qingjiang Gallery is also a provincial standardized tourism demonstration area.

#### 4. Tourists' Cognition on Qingjiang Tourism Brand Based on Data Mining Software

On major domestic tourism websites include Ctrip, Qunar, Tuniu and Baidu tourism, the researcher collects comments and travel notes from February, 2005 to February, 2018 under the key words of "Qingjiang Gallery". After screening, 4180 valid comments are obtained. The "Qingjiang Gallery.txt" is then imported into the ROST content mining software to filter unrelated words. Finally 71 key words with highest frequencies are selected from 4180 samples (shown in Table 1). At the same time, the social network structure matrix of Qingjiang tourism keywords is also constructed through the social network analysis module (shown in Figure 1).

Table 1. High frequency words and frequencies

| Keywords            | frequency | Keywords                                   | frequency | Keywords         | frequency | Keywords                  | frequency |
|---------------------|-----------|--|-----------|------------------|-----------|---------------------------|-----------|
| scenery             | 546       | The scenery is as beautiful as a painting. | 64        | staff            | 35        | benefit                   | 23        |
| gallery             | 457       | online                                     | 63        | characteristic   | 34        | Fairy Cave                | 23        |
| Zhongli Mountain    | 194       | inverted reflection in water               | 61        | fairness         | 34        | Lijiang River             | 22        |
| by boat             | 193       | price                                      | 58        | Guilin           | 33        | mist                      | 21        |
| mountain climbing   | 155       | comfortable                                | 58        | cost performance | 31        | The wind of the river     | 21        |
| on board            | 145       | graceful                                   | 55        | traffic          | 30        | lunch                     | 20        |
| line up             | 144       | beautiful scenery                          | 54        | bus              | 30        | Tujia nationality         | 20        |
| beautiful           | 108       | enthusiasm                                 | 50        | one-day tour     | 29        | parking                   | 18        |
| weather             | 96        | the elderly                                | 48        | Tujia            | 29        | overcast                  | 18        |
| happy               | 91        | clear                                      | 47        | good-looking     | 28        | pretty                    | 17        |
| satisfied           | 82        | green mountains and rivers                 | 44        | fresh            | 28        | sunny day                 | 17        |
| cheap               | 81        | children                                   | 43        | cozy             | 28        | dark green                | 17        |
| landscape           | 79        | wonderland                                 | 42        | relaxed          | 26        | too many beautiful things | 17        |
| atmosphere          | 74        | river water                                | 41        | mountaintop      | 26        | self-driving travelling   | 17        |
| interesting         | 72        | green water                                | 39        | cheerful         | 25        | rural tourism             | 17        |
| picturesque scenery | 67        | yummy                                      | 38        | Great Buddha     | 24        | Ba Ren                    | 16        |
| rain                | 65        | package ship                               | 37        | taste            | 23        | foggy                     | 13        |
| admission ticket    | 64        | environmental science                      | 35        | kids             | 23        |                           |           |

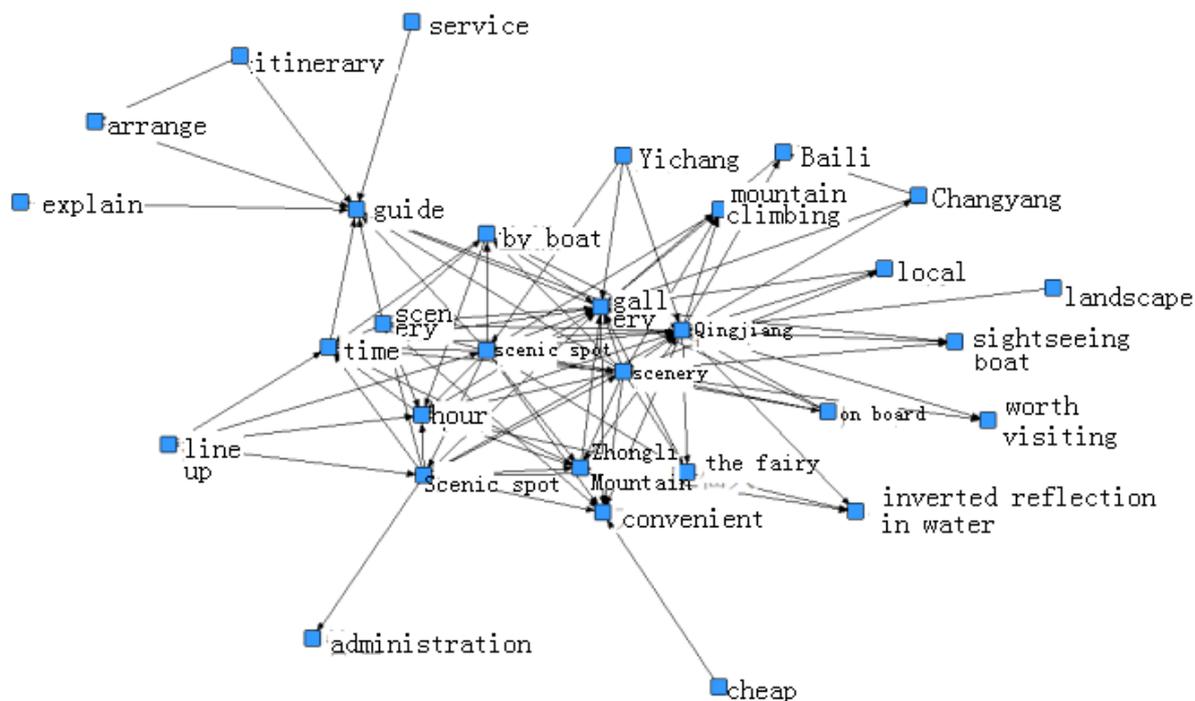


Figure. 1 Matrix diagram of social network structure

It is found that high-frequency words mainly concentrate on five aspects: tourism resources, tourism services, infrastructure, destination image and the experience of tourists.

In terms of tourism resources, the most frequently mentioned word is gallery, followed by Zhongli Mountain and Fairy Cave; the social network structure matrix shows that most tourists focus on Qingjiang Gallery and believe that Qingjiang landscape is worth visiting.

As for services, people focus on "guides", "staff" and "admission tickets". From the matrix it can be found, the tour guides' explanation, itinerary planning, as well as "cheap" and "convenient" tickets are particularly concerned.

With respect to infrastructure, tourists are not satisfied with the traffic condition of Qingjiang. They express that the waiting time is too long while the parking lots are in bad condition. Therefore, words like "line up" and "parking" are frequently mentioned. At the same time, tourists are relatively satisfied with the experience of sightseeing boats of "traveling in a pictorial world".

In terms of destination image, tourists like the green hills, clear waters, picturesque scenery and fresh air of Qingjiang Gallery. Words like "scenery", "landscape", "air", "weather" and "green mountains and waters" are frequently mentioned.

For tourists' experiences, they hold that the scenery of Qingjiang River is beautiful and with high cost performance; most of them are satisfied with the tourism experience. Words like "beautiful", "cheap", "pretty", "comfortable", "satisfied", "cheerful" and "interesting" are frequently mentioned.

## 5. Analysis on Tourists' Emotions on the Tourism Brand of Qingjiang Gallery Based on ROST Content Mining Software

On the basis of above analysis, the emotional analysis function of ROST software is used to analyze tourists' emotions on Qingjiang tourism brand (shown in Table 2).

The analysis shows that 64.71% of tourists have positive emotions towards Qingjiang tourism brand while 17.65% tourists have negative emotions.

The main reasons are as follows. Firstly, Qingjiang River has picturesque scenery; it is quite comfortable to sit in the sightseeing boat and taste the delicious Qingjiang fish. Secondly, the traffic condition of Qingjiang is not convenient; related infrastructures are deficient. Tourists are tired in mountain climbing, and have to wait for a long time for getting on board. Traffic jam on holidays also leads to negative feelings of tourists. On the whole, with the development of Qingjiang Gallery

tourism brand, its reputation and tourists' loyalty can be built.

Table 2. Tourists' emotions on the tourism brand of Qingjiang Gallery

| Overall evaluation results             |                   |                  |                   |
|--|-------------------|------------------|-------------------|
| Type                                   | positive emotions | neutral emotions | negative emotions |
| Overall analysis results               | 64.71%            | 17.65%           | 17.65%            |
| Evaluation results of different phases |                   |                  |                   |
| Degree perception                      | general (0-10)    | Medium (10-20)   | High (above 20)   |
| positive emotions                      | 11.76%            | 23.53%           | 29.41%            |
| negative emotions                      | 17.65%            | 0.00%            | 0.00%             |

## 6. Analysis on the Tourism Brand of Qingjiang Gallery Based on Tourists' Perception

### 6.1 Data collection and processing.

Tour guides distributed questionnaires randomly from May 1 to August 31, 2017. 200 questionnaires were sent out and 183 were recovered, of which 176 were valid. The recovery rate and the effective rate were 91.5% and 88% respectively. SPSS18.0 was used to test the reliability of data; results showed that  $\alpha = 0.803 > 0.7$ . The internal consistency of the questionnaire was good, reflecting that the data was suitable for analysis.

Questions were divided into five levels, namely "very, comparatively, general, no, definitely no" with corresponding scores of "5, 4, 3, 2, 1". After standardization, the map of spatial distribution of survey results is drawn with the three indicators of "importance", "attraction" and "satisfaction" as coordinates. (shown in Table 3 and Figure 2).

Table 3. Visitors' evaluation on Qingjiang Gallery tourism brand

| number | element                | importance | attraction | satisfaction |
|--------|------------------------|------------|------------|--------------|
| 1      | landscape and scenery  | 3.9        | 3.7        | 3.9          |
| 2      | folk culture           | 3.6        | 3.9        | 2.9          |
| 3      | festival events        | 3.1        | 3.0        | 2.9          |
| 4      | special food           | 3.6        | 3.9        | 3.2          |
| 5      | tourism services       | 4.1        | 3.1        | 3.3          |
| 6      | tourism commodities    | 2.9        | 2.6        | 2.8          |
| 7      | ecological environment | 3.7        | 3.5        | 3.4          |

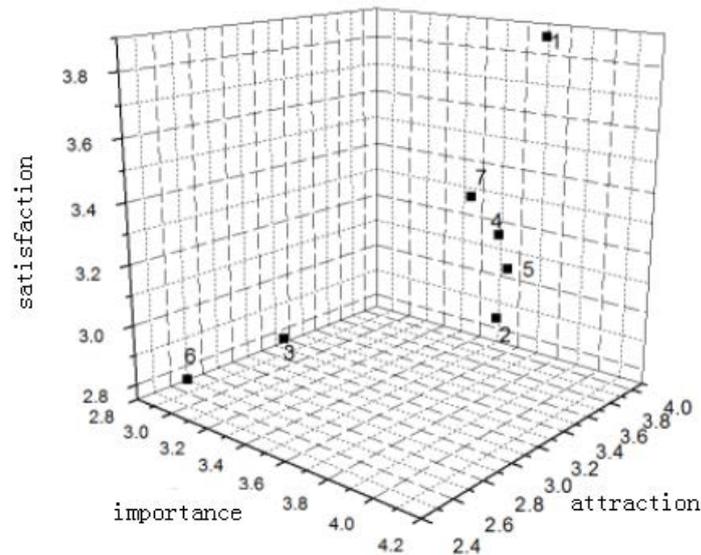


Figure 2. Spatial distribution of tourism brand elements of Qingjiang Gallery

## 6.2 Data analysis.

Through the mean analysis of the survey results of 176 tourists, it is found that:

**Importance analysis.** For tourists, landscape scenery, folk culture, special food, tourism service and ecological environment are of high importance, while festival events and tourism commodities are of low importance. It is related to abundant social entertainment activities and convenient commodity circulation in China.

**Attraction analysis.** Landscape scenery, folk culture, special food and ecological environment are more attractive than festivals, tourism services and tourism commodities to tourists.

**Satisfaction analysis.** Tourists are more satisfied with landscape, ecological environment and tourism services, and less satisfied with special cuisine, folk culture, festivals and tournaments.

## 7. Conclusions on Tourists' Perception of Qingjiang Tourism Brand Based on ROST Content Mining

### 7.1 The attributes of Qingjiang tourism brand conform to local tourism resources.

The survey shows that tourists mainly focus on the landscape, folk culture, special food and ecological environment of Qingjiang tourism, which is consistent with the brand attribute of "scenery + culture + ecology" of Qingjiang tourism.

### 7.2 Tourists have low awareness on the cultural connotation of Qingjiang tourism.

Questionnaires show that tourists are less satisfied with special cuisine, folk culture and festival events, which confirms the low awareness of folk culture in Qingjiang tourism brand. The words of "Tujia" and "Ba Ren", which are most closely related to folk culture, rank relatively low. Possible reasons include the lack of innovation in publicity contents and methods, and the homogeneity of tourism brand between Tujia culture and Ba Ren culture in Enshi.

### 7.3 Qingjiang tourism brand enjoys high reputation.

Brand emotion analysis shows that more than half of the tourists have positive emotions. From the high frequency words on tourists' perception, it can be found that tourists are quite satisfied with the scenery and ecological environment of Qingjiang. These factors reflect that Qingjiang tourism brand enjoys high reputation.

#### **7.4 Tourists' loyalty needs to be further built.**

The survey shows that tourists have high expectations on Qingjiang tourism, but in travelling, they do not have a strong sense of gain except in landscape and ecological environment. ROST analysis shows that some tourists think Qingjiang tourism is similar to the travelling of Guilin, Zhangjiajie and other scenic spots; Qingjiang is only a destination "worth visiting". The tourism brand needs to be upgraded.

### **8. Suggestions on the Upgrading of Qingjiang Tourism Brand Based on Tourists' Perception**

#### **8.1 Strengthening the development of folk culture and enhancing the connotation of Qingjiang tourism.**

First, relevant departments should focus on exploiting unique cultural resources in this area, developing religious tourism in Zhongli Mountain, ancient village tourism in Batu, rural tourism in the green mountains and rivers of Qingjiang, as well as cultural tourism of Three Kingdoms, folk custom tourism of traditional festivals, and food tourism of Tujia Nationality.

Second, the development of folk culture resources should avoid the tendency of "vulgar, low end and homogeneity". The authority should seize the opportunity, deeply exploit existing cultural resources and concise their connotations, trying to realize the high-end and high-quality tourism industry. Innovations should be made in the forms and contents of cultural tourism products; experiences of other countries can be learnt and used.

Third, folk culture resources of Qingjiang should be protected. Plans should be formulated to protect the folk culture resources of Qingjiang River and coordinate the relationship between protection and development. The principle of protection first and keeping the original ecological environment should be adhered.

#### **8.2 Building a competitive industry chain.**

Tourism is a comprehensive industry which has multiplying benefits for many other industries. It can also be influenced by other industries. To building the Qingjiang tourism brand, it is necessary to build a competitive industry chain which integrates cultural creativity, leisure and recreation, health, agriculture, fishery, catering, urban construction, rural development and traditional tourism. Destinations should provide tourists with the combination of scenarios and themes, so as to maintain the freshness and loyalty of tourists, and enhance the attractiveness of Qingjiang tourism.

#### **8.3 Encouraging innovation in the publicity of Qingjiang cultural tourism brand.**

First, the popularity of Qingjiang tourism can be expanded through using the Three Gorges Urban Agglomeration Forum, or organizing events like Three Gorges Tourism Festival, Poetry Festival and Piano Festival. Second, different kinds of tourism activities, such as the introduction and marketing of tourism products and destinations can also be used to enhance the popularity of Qingjiang tourism. Third, various communication means such as new media, masters' works and Internet celebrities can also be applied to expand influence. The world-renowned Lijiang River in Guilin is famous for Zheng-gong Wang's poem "Guilin's scenery is the best in the world".

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