

An Empirical Study on Urban Tourist's Satisfaction of Chongqing

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Abstract—As an important symbol of a city's internationalization and modernization, the development of urban tourism gives great impetus to the promotion of economy, culture, environment and sustainable development of a city, thus it has received wide attention by major cities. Due to the widespread attention of everywhere, the urban tourism market competition goes increasing fiercely. In order to ensure sustained and rapid development of urban tourism, how to improve the urban tourism's satisfaction has become a major task for the destination management. The paper, by using factor analysis, tries to find out the most important factor that influences urban tourist's satisfaction of Chongqing through the study of urban tourist's satisfaction. Results show Chongqing urban tourism got a lower score in transportation service, tour guide service, richness of information provided in sightseeing place, traffic convenience in and around city and tourist area capacity, the main measure to improve urban tourism satisfaction is to improve Chongqing urban tourism service. The development of urban tourism not only relies on the landscape and environment, service is more important.

Keywords—Chongqing; Urban tourism; tourist's satisfaction; factor analysis; suggestion

I. INTRODUCTION

As an important symbol of a city's internationalization and modernization, the development of urban tourism gives great impetus to the promotion of economy, culture, environment and sustainable development of a city, thus it has received wide attention by major cities. Chongqing urban tourism was developed after it became municipality. In over ten years development, it enjoys a good momentum now. In 2008, Forbes released The Most Suitable City for Developing Tourism in Mainland China, Chongqing, second to Xi'an and Guilin, got third place in the most suitable city for developing tourism in western China. In 2011, Chongqing received 222 million tourists from home and abroad, with year-on-year growth of 37.3%. Tourism revenue in Chongqing totaled 126.862 billion, which has increased 38.22% from same period of last year.

Due to the widespread attention of everywhere, the urban tourism market competition goes increasing fiercely. In order to ensure sustained and rapid development of urban tourism, how to improve the urban tourism's satisfaction has become a major task for the destination management and marketing. Through the demonstrative study on the domestic tourist's satisfaction and impact factors, this paper finds out the significant factors that influence Chongqing urban tourism satisfaction, thus

provided basis for the sustainable and healthy development of Chongqing urban tourism.

II. RELATED RESEARCH PROGRESS

In view of market management, the customer is the resource of corporate revenue, is the base of enterprises sustainable development, is the fundamental of enterprise survival. A study published in Harvard Business View pointed that the customer retention rate increased by 5%, will make the company profits increased by 25% to 85%. How to acquire new customers and retained existing ones has been the important guarantee of the enterprise's existence and development. This was true of all industries but especially for the urban tourism development, only by constantly improve of urban tourism satisfaction, urban tourism can have vitality and competitiveness.

The current research field about tourist's satisfaction largely involved in scenic regions, hotel and travel destination. The research results mainly embody in the construction of evaluation system and empirical research. Dong and Yang (2005) extracted the main factors affecting tourist's satisfaction on tourism areas and used fuzzy comprehensive evaluation method (FCEM) to build the mathematical model evaluation system. Using the FCEM, Nan (2008) gave the quantitative evaluation to tourist's satisfaction on tourism areas. Guo and Zhang (2010) constructed the tourist's perception and satisfaction theory model and also made an empirical analysis on three tourism areas in Lanzhou, China. From the influencing factors of tourist's satisfaction on red tourism regions, Jiao (2012) established an index system to evaluate tourist's satisfaction on red tourism regions. Structural equation model is used by Huang (2006) to build the hotel customers satisfaction evaluation model and carried on empirical study. Using stratified sampling and systematic sampling methods, Huang and Chen (2010) obtained the influence factors of tourists' satisfaction on hotels of famous tourism areas. Based on the random sampling and a large number of questionnaires, Chen (2006) gained membership degrees of tourist's perception and satisfaction on Kai Feng. Chen also analyzed the tourist's satisfaction on Kaifeng tourism regions based on FCEM. Li (2008) took Xi'an domestic market as an example, put forward the methods to promote tourist's satisfaction on the base of constructing a destination tourist's satisfaction evaluation index system and the method of co-plot and multivariable regression analysis.

Based on the previous literatures, the author found that the study of tourist's satisfaction has been moved from qualitative research to quantitative research, however the

related empirical study is less. This paper tries to find out the most important factor that influences urban tourist's satisfaction of Chongqing through the study of urban tourist's satisfaction and influence factors.

III. METHOD

A. Confirmation of Evaluate Index

Referred to the predecessors' achievements, this paper tries to measure the tourist's satisfaction from urban tourism landscape, catering, transportation, commodity, entertainments, service, environment, price and other aspects. In specific indexes, selected those significant factors that influence customers perception as the specific indexes, Thus, the tourist's core issue of concern can be caught and the accuracy about tourists' answers also can be ensured. On tourism landscape, mainly investigated on tourist's satisfaction on landscape characteristics, landscape value and landscape richness. On catering, it mainly inspects tourist's satisfaction on food features and food quality. On transportation and entertainment, it mainly inspects tourist's satisfaction on traffic convenience degree, entertainment features and entertainment richness. On tourist shopping, it mainly inspects tourist's satisfaction on commodity with local characteristic and the richness of product types. On service, mainly inspected tourist's satisfaction on transportation service, hotel service, catering service, tour guide service and travel consultation. On price, it mainly inspects tourist's satisfaction on ticket and recreational activities' price, accommodation price and commodity price.

Therefore, the author chose 24 evaluation indexes, as shown in table1, and divided every evaluation index into following five levels: very dissatisfied、dissatisfied, general, satisfied and very satisfied and these levels corresponded respectively with 1, 2, 3, 4, 5 points. This paper chose the tourists at Chongqing Ciqikou town, Three Gorges Museum, Hongyadong, Jiefangbei, Bai Mansion and Refuse Pit as samples, The sampling survey is made by using the non-probability sampling, that is, convenience sampling. The survey conducted from September 1st to October 7th 2012. A total of 300 questionnaires are distributed, among which 278 are valid.

TABLE I. EVALUATION INDEX

Index	Evaluation Content	Index	Evaluation Content
X1	Overall evaluation on urban tourism products	X13	Evaluation on goods with local characteristic
X2	Evaluation on landscape features	X14	Evaluation on richness of commodity types
X3	Evaluation on richness of landscape	X15	Evaluation on price of tickets and recreation activities
X4	Evaluation on landscape's value	X16	Evaluation on price of accommodation
X5	Evaluation on ecological environment	X17	Evaluation on price of commodity
X6	Evaluation on	X18	Evaluation on

	entirely appearance of the city		transportation service
X7	Evaluation on cleanness of the city	X19	Evaluation on hotel service
X8	Evaluation on catering features	X20	Evaluation on tourism shopping service
X9	Evaluation on catering quality	X21	Evaluation on tour guide service
X10	Evaluation on traffic convenience in and around city	X22	Evaluation on public security
X11	Evaluation on recreation features	X23	Evaluation on tourist area capacity
X12	Evaluation on richness of entertainment	X24	Evaluation on richness of information provided in sightseeing place

B. Data Analysis Method

After analysis the surveyed data, it is found that the correlation of the data is quite high, so its suitable for factor analysis. The statistical analysis showed that many indicators influence each other and a certain of correlation exist between the variables, so a considerable of information provided in this survey were overlapping. There are 24 evaluation indexes about the urban tourist's satisfaction involved in this paper, however, the average data about tourist's satisfaction reflected in many of the evaluation indexes indicate slightly differences, so it can't reflect the exiting problems of Chongqing urban tourism directly and clearly. The factor analysis can guarantee the least data information lost and at the same time by using the reducing dimension thought to find out the common factors. This method can not only simplified indicator structure but also made the analyzing process easy, intuitive and effective. This paper used SPSS19.0 statistical software to analysis the statistical data.

1) Inspection of KMO and Bartlett

The higher of KMO measure values (approximate 1.0) indicate the more common factors exist between the variables and more suitable for factor analysis. The KMO measure values in this study reach to 0.808, so it's suitable for factor analysis. Another question is whether the correlation matrix in the null hypothesis of Bartlett Test of Sphericity is identity matrix. It's not suitable for the factor analysis if it's turn out to be identity matrix. On the contrary, the lower of significant level (less than 0.05) the more suitable for the factor analysis, The P-value of Bartlett is 0.000, so it's suitable for factor analysis.

2) Confirmation of Common Factors

In the principal of eigenvalues (grater than 1) during the factor extraction to determine the number of common factors. From Table 2, there were four eigenvalues that greater than one, thus indicate that there are four common factors. The first four factors contained 79.908% information of evaluation indexes, which can be seen from cumulative variance proportion. Therefore, the original 24 indexes can be divided into four categories and made further analysis of samples.

TABLE II. TOTAL VARIANCE EXPLAINED

Total Variance Explained									
Component	Initial Eigenvalues			Extract square and loaded			Rotate square and loaded		
	Total	Variance %	Accumulation %	Total	Variance %	Accumulation %	Total	Variance %	Accumulation %
1	6.586	27.443	27.443	6.586	27.443	27.443	5.713	23.803	23.803
2	4.509	18.788	46.231	4.509	18.788	46.231	4.766	19.860	43.663
3	4.226	17.610	63.840	4.226	17.610	63.840	4.520	18.832	62.495
4	3.856	16.067	79.908	3.856	16.067	79.908	4.179	17.413	79.908

Established the factor analysis model is not only find out the common factors but more important is to know the meaning of every common factor and analyze practical problems. However the meaning of the initial factors is ambiguous, and it's hard for solve practical problems so the factor rotation is needed. From Chart Three, it can be seen that the first common factor has a heavy load on the evaluation of public security, richness of entertainment, goods with local characteristic, tourism shopping service, recreation features, hotel service, richness of commodity types and the overall evaluation of urban tourism products, thus it can be called service factor one. The second common factor has a heavy load on evaluation of landscape features, richness of landscape, ecological environment, landscape's value, entirely appearance of the city and cleanness of the city, so it can be defined as landscape and environment factor. The third common factor has a heavy load on evaluation of accommodation price, catering quality, price of tickets and recreation activities, catering features and commodity price, so it can be defined as catering and price factor. The fourth common factor has a heavy load on the evaluation of transportation service, tour guide service, richness of

information provided in sightseeing place, traffic convenience in and around city, tourist area capacity, so it defined as service factor two.

TABLE III. EXPLANATION OF COMMON FACTOR

Common Factor	F1	F2	F3	F4
Factors Names	service factor one	landscape and environment factor	catering and price factor	service factor two
Eigenvalue	6.586	4.509	4.226	3.856
Contribution Rate	27.433 %	18.788 %	17.610 %	16.067 %
Relatively Weight	34.3 %	23.5 %	22.1 %	20.1 %

Based on the investigation of four common factors contribution rate, the relatively weight of service factor one, landscape and environment factor, catering and price factor and service factor two respectively is 34.3%, 23.5%, 22.1%, 20.1%, and they have different level of influence on tourist's satisfaction, among them, the service factor one and landscape and environment factor are the two most important factors that affect tourist's satisfaction. As shown in Table3.

TABLE IV. FACTOR SCORE COEFFICIENT MATRIX

Component Score Coefficient Matrix				
	Component			
	1	2	3	4
Overall evaluation on urban tourism products	.130	.011	.000	-.025
Evaluation on landscape features	-.004	.199	-.024	-.004
Evaluation on richness of landscape	-.018	.190	-.003	.007
Evaluation on landscape's value	.001	.182	.006	-.007
Evaluation on ecological environment	-.038	.194	-.020	.002
Evaluation on entirely appearance of the city	-.011	.183	-.008	-.007
Evaluation on cleanness of the city	-.007	.181	-.004	.018
Evaluation on catering features	-.018	-.022	.214	-.029
Evaluation on catering quality	-.010	-.019	.215	-.005
Evaluation on traffic convenience in and around city	-.017	.012	-.001	.224
Evaluation on recreation features	.154	-.021	-.014	-.016
Evaluation on richness of entertainment	.157	-.018	-.018	-.010
Evaluation on goods with local characteristic	.156	-.017	-.003	-.009
Evaluation on richness of commodity types	.142	.000	-.008	.016
Evaluation on price of tickets and recreation activities	-.004	.010	.208	.007
Evaluation on price of accommodation	-.011	-.014	.219	-.012
Evaluation on price of commodity	-.013	.002	.204	.013
Evaluation on transportation service	-.005	.002	-.006	.233
Evaluation on hotel service	.152	-.033	-.006	-.023
Evaluation on tourism shopping service	.153	-.005	-.022	.005
Evaluation on tour guide service	-.022	.005	-.006	.228
Evaluation on public security	.155	-.009	-.009	.002
Evaluation on tourist area capacity	.001	-.012	-.004	.178
Evaluation on richness of information provided in sightseeing place	-.006	.005	-.011	.225

IV. FACTOR SCORE

Used the regression method to calculate the coefficient of factor score functions, and accordingly write out the expression of factor score: from the factor score matrix in table4, the factor score expression can be obtained as follow:

$$F1=0.13X1 - 0.004X2 - 0.018X3 + 0.001X4 - 0.038X5 - 0.011X6 - 0.007X7 - 0.018X8 - 0.01X9 - 0.017X10 + 0.154X11 + 0.157X12 + 0.156X13 + 0.142X14 - 0.004X15 - 0.011X16 - 0.013X17 - 0.005X18 + 0.152X19 + 0.153X20 - 0.022X21 + 0.155X22 + 0.001X23 - 0.006X24.$$

Similarly, the expressions of F2、F3 and F4 can be got. So the factor score value can be calculated, service factor one got about 77 points, the landscape and environment factor got about 76 points, the catering and price factor got about 74 points and service factor two got about 71 points.

Based on the contribution rate of each factor's weight,

The expression of composite score as follow:

$$F = (27.4 * F1 + 18.8 * F2 + 17.6 * F3 + 16.06 * F4) / 79.9 = 74.8$$

V. CONCLUSION

The factor analysis results indicate that the extracted four main factors that influence tourist's satisfaction from high to low are: service factor one, landscape and environment factor, catering and price factor and service factor two. The contribution rate of service factor one and service factor two's the sum of variance can reached to 43.5%, which is far much higher than the landscape and environment factor's variance contribution rate, so the service factor became the most important factor that influence on Chongqing urban tourism satisfaction.

The score of Chongqing urban tourism satisfaction is 74.8, If treated more than 80 points as superior(evaluated as excellent, good and poor),Chongqing urban tourism satisfaction remained in the good range level, the degree of satisfaction needed to be further improved. From the main factor scores, the service factor one got the highest score, the landscape and environment factor, catering and price factor were in the middle, the service factor two got the lowest score, which suggested that tourist's satisfaction one service factor two is not high.

The main measure to improve urban tourism satisfaction is to improve Chongqing urban tourism service. The development of urban tourism not only relies on the landscape and environment, service is more important. Chongqing urban tourism got a lower score in transportation service, tour guide service, richness of information provided in sightseeing place, traffic

convenience in and around city and tourist area capacity, thus the above aspects remain to be further improved.

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