

The construction of Hainan rural B&B service quality evaluation system based on SERVQUAL model

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Abstract: Hainan is rich in rural tourism resources, profound local culture and distinctive national characteristics. There is great potential for the development of rural B&B, and favorable policies follow one after another, but there is little evaluation and standardization of rural folk custom service quality. Through online and offline questionnaires, this paper constructs the service quality evaluation index system of Hainan Rural B & B from the six dimensions of tangibility, reliability, responsiveness, assurance, empathy and characteristics with the help of SERVQUAL model, attempts to make a scientific and systematic evaluation of Hainan Rural B & B, analyzes its shortcomings, and puts forward suggestions to improve service facilities Standardize the service process, enhance local characteristics and strengthen humanistic care, strive to improve the service quality of rural B&B in Hainan, improve farmers' income and help rural revitalization.

With the accelerating pace of urban life and the growing pressure of urban population, relaxed and comfortable rural tourism is increasingly favored by tourists. Rural homestay can carry the homesickness of tourists, inherit rural culture, and provide personalized living experience, so it becomes the first choice for tourists. According to statistics, the average annual growth rate of rural B&B consumption is as high as 16%, which is far higher than the growth rate of tourism consumption in China.

1. Definition of rural B&B

The earliest B&Bs appeared in Britain, which is often called "bed and breakfast", that is, they provide accommodation and breakfast for passengers at a lower price than ordinary hotels. In the United States, B&Bs are mostly home style B&Bs or youth hostels. After years of development, the development types of B&Bs in different countries and regions have different priorities and development characteristics. In 2019, the Basic Requirements and Evaluation of Tourism B&B defined tourism B&B as: using the idle resources of the residential buildings at that time, the operating rooms should not exceed 4 floors, the building area should not exceed 800 square meters, the host should participate in reception, and provide tourists with small accommodation facilities to experience the local nature, culture, production and lifestyle. So far, the scale and reception form of B&B have been clearly defined, In the Measures for the Administration of Rural B&B in Hainan Province (revised in 2021), it is no longer limited to idle residential buildings in rural areas, but expanded to rural self owned houses, village collective houses or other facilities. The form of B&B transformation is further relaxed.

2. Development status of rural B&B in Hainan Province

2.1 Policy escort to support the healthy and sustainable development of rural B&B in Hainan

In November 2015, the Guiding Opinions of the General Office of the State Council on Accelerating the Development of the Lifestyle Service Industry and Promoting the Upgrading of the Consumption Structure pointed out for the first time in the national policy document that the development of B&B and other subdivided businesses should be carried out; In March 2016, the National Development and Reform Commission, the Propaganda Department of the Central Committee and other ten departments

issued the Guiding Opinions on Promoting Green Consumption to encourage the effective use of idle personal resources and orderly development of B&B; In December 2016, Several Opinions on Deepening the Agricultural Supply side Structural Reform and Cultivating a New Driving Force for Agricultural and Rural Development proposed to develop homestays with rural characteristics; In 2017, the National Tourism Administration issued the Basic Requirements and Evaluation of Tourist Home Accommodation, which clarified the industry standards of B&B; In 2018, the Opinions of the CPC Central Committee and the State Council on the Implementation of the Rural Revitalization Strategy proposed to encourage the use of idle rural housing to develop rural homestays.

In March 2021, the Housing and Construction Department of Hainan Province, together with the Department of Tourism and Culture, the Department of Natural Resources and Planning, the Department of Agriculture and Rural Affairs and other departments, issued the Measures for the Administration of Rural B&B in Hainan Province (revised in 2021), which relaxed the market access of rural B&B, simplified the application process, clarified the application requirements, confirmed the authority and blame of functional departments at all levels, and emphasized the strengthening of guidance in the matter and supervision after the event.

2.2 Huge potential, helping the rapid and diversified development of rural B&B in Hainan

The results of the seventh census (2021) show that the permanent population of Hainan Province has exceeded 10 million, reaching 10081232, and the urban population is 6075981, accounting for 60.27%; The population living in the countryside is 4005251, accounting for 39.73%. Compared with the sixth national population census in 2010, the urban population increased by 1,767,465 and the rural population decreased by 357,718. According to the estimation of Hainan Provincial Department of Housing and Urban Rural Development and other departments, at present, the rural residential area in Hainan Province is about 156 million square meters. If the per capita residential area is 30 square meters, there will be about 36 million square meters of rural residential (housing) in Hainan Province idle. Hainan is surrounded by rich marine resources in the surrounding areas and the vast forests and mountains in the central region. The local culture in Li and Miao areas is profound, the production and lifestyle are very distinctive, and rural tourism is extremely attractive. With the increasing number of rural tourism reception, the demand for rural B&B will increase. At the same time, the increasing number of migratory birds limited by the purchase restriction policy will also stimulate the growth of the long rent and healthy B&B market.

2.3 Good start, leading the comprehensive and professional development of Hainan rural B&B

By April 2021, a total of 322 characteristic rural B&Bs have been built in Hainan, and a rural B&B pattern of "two circles, one belt and three clusters" has been established, which is based on the Haicheng Cultural Integrated Economic Circle and the Greater Sanya Tourism Economic Circle, integrates coastal rural tourism resources, relies on the eastern health tourism cluster, the western mountain and sea tourism cluster, and the central rainforest tourism cluster. The current situation of multiple business models, such as villagers' independent operation represented by Shijin Village in Baoting, villagers' cooperative operation represented by Meishe Village in Haikou, company+village collective+farmer operation represented by Xidao Fishing Village in Sanya, and enterprise leasing represented by Qiong Middle School and Shanfang, has been preliminarily formed. The transformation of B&B has also developed from the original single traditional residence to the diversified transformation mode of old factory buildings, abandoned schools, abandoned hospitals, etc.

Hainan is rich in rural tourism resources and tourists. There is a huge potential for the development of rural homestay, and favorable policies follow one after another. However, few of them involve the evaluation and standardization of rural homestay service quality. The quality of B&B service is the core factor for its survival and sustainable and healthy development.

3. Construction of Hainan Rural B&B Service Experience Evaluation System Based on SERVQUAL Model

American marketing experts A. Parasuraman, Zeithaml and Berry proposed SERVQUAL model, also known as "expectation perception" model, based on the theory of total quality management, and believed that service quality depends on the difference between the service level perceived by passengers and the service level expected by passengers. The basis for providing quality service is to understand the expectations of passengers and exceed their expectations. The model is: $SERVQUAL\ score = actual\ perceived\ value - expected\ value$. When the passenger's expectation of service is higher than the actual perceived value, the service quality is poor; When the passenger's expectation for service is equal to the actual perceived value, the service quality is acceptable; When the passenger's expectation of service is less than the actual perceived value, the service quality is good.

3.1 Establishment of rural B&B evaluation index system

In order to comprehensively and systematically evaluate passengers' expectations and perceptions of service quality, SERVQUAL model divides service quality into five dimensions (tangibility, reliability, responsiveness, assurance and empathy) and 22 factors. Through questionnaires, we can understand and evaluate service quality (see Table 1).

Table 1 SERVQUAL Model Service Quality Evaluation Indicators

dimension	content
tangibles	Including actual facilities, equipment and service personnel
reliability	The ability to reliably and accurately fulfill service commitments
Responsiveness	Willingness to help customers and quickly improve service levels
Guarantee	Employees' knowledge, etiquette and ability to express confidence and credibility
empathy	Care for and provide personalized service to customers

In this paper, based on the full consideration of the humanistic interaction, characteristics and other characteristics of rural B&B, combined with expert opinions, and the SERVQUAL model as the theoretical basis, a six dimension and 24 factor Hainan rural B&B service quality evaluation system has been constructed (see Table 2).

Table 2 Hainan Rural B&B Service Quality Evaluation System

dimension	factor
1 Tangibility	1.1 The facilities and equipment of B&B are complete and convenient
	1.2 Attractive appearance of B&B buildings
	1.3 The B&B service personnel shall be neatly dressed
	1.4 The B&B environment is clean and comfortable
2 Reliability	2.1 The B&B can provide the promised service content in time
	2.2 When I encounter difficulties, I can provide care
	2.3 Operation specification of B&B
	2.4 B&B can accurately provide the promised service content
3 Responsiveness	3.1 The service staff can tell me the exact time of service
	3.2 Service personnel can provide services in a timely manner
	3.3 Service personnel are willing to help tourists
	3.4 The service staff will not refuse to provide services for me because they are busy
	3.5 The service staff and I have a good interaction
4 Guarantee	4.1 I can rely on the service personnel of B&B
	4.2 I feel relieved during the homestay stay
	4.3 B&B staff are polite
	4.4 B&B employees are proficient in business
5 Empathy	5.1 B&B can provide personalized services
	5.2 The service personnel take the initiative to understand my needs
	5.3 B&B club gives priority to my interests
	5.4 The service time of B&B can meet my requirements
6 Characteristics	6.1 The layout of B&B rooms can reflect local characteristics
	6.2 B&B catering can reflect local characteristics
	6.3 I can participate in festivals with local characteristics during my stay

3.2 Design of questionnaire for rural B&B

The questionnaire is divided into three parts: the first part is the collection of demographic data of personal information, including the gender, age, marital status, education level and monthly family income of passengers, trying to explore the internal relationship between demographic characteristics and rural homestay expectations; The second part, from six dimensions in turn, understands the expectations of tourists on the services they provide before they stay in Hainan rural B&B; The third part investigates the tourists' actual feelings of Hainan rural B&B service from the same dimension. Factor expectation and perception value are measured by Likert five scale, and different scores of 1-5 are used to indicate the degree of recognition of passengers to the tested factors (see Table 3).

Table 3 Likert Level 5 Scale for Hainan Rural B&B Service Quality Evaluation

Degree of recognition	Strongly disagree	disagree	commonly	agree	Strongly agree
Score	1	2	3	4	5

3.3 Data analysis

The survey is divided into online and offline parts. From August 14 to 22, 2021, the author selected two weekends to go to Qiong Middle School and used offline surveys in Shanfang, Haikou Lianlizhi, Meishe Village and other B&Bs. From September 12 to 15, 2021, the author used questionnaire stars to distribute questionnaires online, and a total of 172 valid questionnaires were collected.

3.3.1 Reliability and validity test of the questionnaire

Reliability and validity analysis of the questionnaire Standardized Cronbach to measure the reliability of the questionnaire with the help of SPSSAU software statistics α The coefficient is 0.978, if α When the coefficient is lower than 0.6, it indicates that the reliability of the questionnaire is very low. If α The coefficient is between 0.7 and 0.8, indicating that the reliability of the questionnaire is good. The reliability of this survey is as high as 0.978 (see Table 4), indicating that the reliability quality of the survey data is very high. In addition, the CITC values corresponding to gender, age, marital status, education level and family monthly income involved in demographic information are all less than 0.2, indicating that the correlation between these five items and other expectation and perception indicators is weak.

Table 4 Reliability test of questionnaire on service quality of rural B&B in Hainan

Number of items	sample size	Cronbach α coefficient
53	172	0.978

The KMO value of the questionnaire is 0.732. The KMO statistic value is between 0 and 1. Kaiser's KMO metric: if this value is higher than 0.8, it means that the validity is high; If the value is between 0.7 and 0.8, the validity is good; If the value is between 0.6 and 0.7, the validity is acceptable; if the value is less than 0.6, the validity is poor. The KMO value of this survey is 0.732, with good data validity.

3.3.2 Demographic data analysis

As shown in Table 5, from the perspective of gender, women account for 56.69%, while men account for 43.31%. The gender distribution is reasonable. In terms of age, passengers aged 19 to 40 account for more than 80%, indicating that rural B&B passengers are mainly young and middle-aged. College degree and above accounted for 76.67%, indicating that the education level of rural B&B passengers is generally high. The income level is equivalent to the average income level of Hainan Province. The sampling is representative.

Table 5 Analysis of Demographic Data

Category	option	%
Gender	male	43.31
	female	56.69
Age	Under 18	5.51
	19-25 years old	37.80
	26-40	30.71
	41-60 years old	16.54
	Over 61	9.45
Marital status	unmarried	53.33
	married	46.67
Highest level of education	High school and below	19.27
	University (undergraduate, junior college)	57.40
	Postgraduate (Master, Doctor)	23.33
Monthly household income	Below 3000	3.33
	3001-6000	46.67
	6001-10000	19.69
	Above 10000	30.04

3.3.3 Weight analysis of service quality indicators

According to the expectations of tourists on rural B&B, the average value of each indicator is divided by the average value using AHP analytic hierarchy process to obtain the judgment matrix. The larger the average value is, the higher the weight is. The CI value in the matrix is 0.000, and the corresponding CR value is $0.000 < 0.1$. The judgment matrix in this study meets the consistency test. In Table 6, indicators with a weight value of more than 4.2% are marked in red, indicating that tourists have high expectations for the physical environmental facilities, reliability and characteristics of rural B&B.

Table 6 AHP Hierarchy Analysis Results

dimension	index	feature vector	Weight value (%)	CI value
1 Tangibility	1.1 The facilities and equipment of B&B are complete and convenient	1.019	4.247	0.000
	1.2 Attractive appearance of B&B buildings	1.003	4.179	
	1.3 The B&B service personnel shall be neatly dressed	0.954	3.976	
	1.4 The B&B environment is clean and comfortable	1.019	4.247	
2 Reliability	2.1 The B&B can provide the promised service content in time	1.044	4.349	
	2.2 When I encounter difficulties, I can provide care	0.962	4.010	
	2.3 Operation specification of B&B	1.019	4.247	
	2.4 B&B can accurately provide the promised service content	1.028	4.281	
3 Responsiveness	3.1 The service staff can tell me the exact time of service	1.003	4.179	
	3.2 Service personnel can provide services in a timely manner	1.019	4.247	
	3.3 Service personnel are willing to help tourists	1.003	4.179	

	3.4 The service staff will not refuse to provide services for me because they are busy	1.003	4.179
	3.5 The service staff and I have a good interaction	0.954	3.976
4 Guarantee	4.1 I can rely on the service personnel of B&B	0.979	4.077
	4.2 I feel relieved during the homestay stay	1.019	4.247
	4.3 B&B staff are polite	1.003	4.179
	4.4 B&B employees are proficient in business	0.995	4.145
5 Empathy	5.1 B&B can provide personalized services	0.995	4.145
	5.2 The service personnel take the initiative to understand my needs	0.954	3.976
	5.3 B&B club gives priority to my interests	0.995	4.145
	5.4 The service time of B&B can meet my requirements	1.011	4.213
6 Characteristics	6.1 The layout of B&B rooms can reflect local characteristics	1.019	4.247
	6.2 B&B catering can reflect local characteristics	1.019	4.247
	6.3 I can participate in festivals with local characteristics during my stay	0.979	4.077

3.3.4 Analysis of expectation and perception differences of main indicators of rural B&B service quality

The average score of the expected value in this survey is 4.24, the average score of the actual perceived value is 3.95, and the average difference is -0.29. The results are significantly different. The actual feeling value of tourists on Hainan rural B&B is between 3 and 4, and the evaluation result of service quality is good (see Table 7). Based on the average difference of - 0.29 index classification standard, combined with the weight analysis of service quality indicators, the service quality evaluation results of passengers show that the facilities of Hainan rural B&Bs are not complete and convenient, the B&Bs environment is not clean and comfortable, the standardization of B&Bs operation is not high, the B&Bs can not provide timely and accurate service content, and the B&Bs can not fully meet the needs of passengers in terms of service time, The guest room layout and catering of B&B are lack of local characteristics of Hainan.

Table 7 Scores of Hainan Rural B&B SERVQUAL

index	expected value	Actual perceived value	Difference
1.1 The facilities and equipment of B&B are complete and convenient	4.33	4	-0.33
1.2 Attractive appearance of B&B buildings	4.27	3.93	-0.34
1.3 The B&B service personnel shall be neatly dressed	4.07	3.9	-0.17
1.4 The B&B environment is clean and comfortable	4.33	3.87	-0.46
2.1 The B&B can provide the promised service content in time	4.43	3.9	-0.53
2.2 When I encounter difficulties, I can provide care	4.1	3.93	-0.17
2.3 Operation specification of B&B	4.33	3.93	-0.4
2.4 B&B can accurately provide the promised service content	4.37	4	-0.37
3.1 The service staff can tell me the exact time of service	4.27	3.9	-0.37

3.2 Service personnel can provide services in a timely manner	4.33	4	-0.33
3.3 Service personnel are willing to help tourists	4.27	4	-0.27
3.4 The service staff will not refuse to provide services for me because they are busy	4.27	4.03	-0.24
3.5 The service staff and I have a good interaction	4.03	3.9	-0.13
4.1 I can rely on the service personnel of B&B	4.13	3.97	-0.16
4.2 I feel relieved during the homestay stay	4.3	4	-0.3
4.3 B&B staff are polite	4.23	4	-0.23
4.4 B&B employees are proficient in business	4.2	4.1	-0.1
5.1 B&B can provide personalized services	4.2	3.93	-0.27
5.2 The service personnel take the initiative to understand my needs	4.03	3.83	-0.2
5.3 B&B club gives priority to my interests	4.2	3.87	-0.33
5.4 The service time of B&B can meet my requirements	4.27	3.93	-0.34
6.1 The layout of B&B rooms can reflect local characteristics	4.3	3.97	-0.33
6.2 B&B catering can reflect local characteristics	4.3	3.97	-0.33
6.3 I can participate in festivals with local characteristics during my stay	4.13	3.95	-0.18

4. Countermeasures for Improving the Service Quality of Hainan Rural B&B

4.1 Improve service facilities

First of all, we should improve the traffic network to ensure the accessibility of rural homestays. Most homestays are located in villages or even mountains with good privacy. Therefore, we must consider the issue of traffic convenience. At the same time, the location of parking lots, luggage pickup and other service facilities should be fully equipped, with reasonable and eye-catching signs; Secondly, it is necessary to ensure that the layout of guest rooms, kitchens and bathrooms is reasonable, the lighting is good, the ventilation and sound insulation effects meet the requirements, the supplies and appliances in guest rooms are complete, the sockets are set reasonably, and the network equipment, leisure equipment and electrical equipment are complete, so as to meet the needs of passengers for the completeness and convenience of B&B equipment; Finally, the main activity areas shall be clean and ventilated, the bedding in the guest rooms shall be clean and free of peculiar smell, and the drainage facilities in the kitchen and toilet shall be smooth to meet the requirements of the overall environmental comfort of passengers.

4.2 Standardize the service process

Industry norms and legal supervision are as important as hardware investment. First of all, from the release stage of the housing information, it is necessary to ensure the right to know and the right to choose of passengers, and not to deceive or mislead consumers. In the process of consumption, B&B mainly provides services according to the scheduled service content based on the principle of honesty and trustworthiness. In case of breach of contract, the relevant regulatory department will intervene in a timely manner to ensure that the legitimate rights and interests of passengers are protected. After sales, it is necessary to ensure that passengers can independently and truly evaluate B&B services, Eliminate the non-standard operation of some third-party platforms; Secondly, the service quality of B&B should be measured and evaluated continuously, so as to accurately understand the current situation and defects of B&B service quality, and regularly improve the aspects with defects in service quality, so as to form a continuous service quality monitoring mechanism.

4.3 Highlight local characteristics

The core attraction of rural B&B lies in the vibrant rural scenery and unique local customs, so the core of strengthening local characteristics lies in this. First, we should further optimize the natural environment of rural B&B. In the process of building B&B, we should focus on the original flavor and highlight the authenticity. At the same time, we should pay attention to ecological protection to ensure the sustainable development of the beautiful countryside; Secondly, we should strengthen the implantation of characteristic culture. Hainan has very unique cultural resources, such as Li and Miao culture, island culture, Nanyang culture, red culture, rainforest culture and volcanic culture. Taking Li and Miao culture as an example, Li and Miao people have a long history and bright culture, but also have a production and life style that is significantly different from the Han people. B&B plays an important role in spreading and inheriting national culture, whether it is the appearance design The layout of guest rooms or the interaction between host and guest should give full play to the role of B&B culture communication; Finally, we should fully tap into the local special diet. Food is the most important thing for the people. Catering is an important link in tourism activities. Hainan has high-quality food materials and a wide range of dishes. Except for four famous dishes, each region has its own special dishes that are popular with tourists. We should make full use of local food materials to improve the attractiveness of B&B and meet the needs of tourists for B&B characteristics.

4.4 Strengthen humanistic care

The standardized services implemented by most rural B&Bs can only meet the common needs of tourists, but the needs of rural B&Bs vary greatly. The B&B service should follow the concept of humanistic care, arrange services according to the needs of tourists, actively ask about the service needs of tourists when they register for accommodation, and provide special care for parent-child customers, disabled passengers, passengers with religious beliefs, elderly passengers and passengers with other special needs; A 24-hour reception desk shall be set up to provide consultation, reception, check-in, check-out and other services. The online service page shall cover such functions as publicity, inquiry, reservation and complaint, which shall ensure the timeliness of response to meet the needs of passengers for B&B service time.

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