

Factors Affecting The Quality Of Tourism Services In The Lower Mekong River Basin

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ABSTRACT:- This study examines some factors affecting the quality of tourism services in the Lower Mekong Basin using the Servqual Service Quality Instrumentation by Parasuraman et al. to identify and measure factors using Cronbach alpha analysis, factor analysis, and multivariate regression analysis. The ultimate aim is to identify four factors affecting the quality of tourism: (1) Reliability and Responsiveness, (2) Facilities, (3) Empathy and (4) tangibles. The study also provides some suggestions for the improvement of the tourism service quality in the Lower Mekong River Basin.

Keywords:- Service quality, tourism services, lower Mekong River Basin

I. INTRODUCTION

The Lower Mekong River Basin is located in the south of Vietnam with urban centers providing convenient arterial traffic connections within the local region and connecting with Ho Chi Minh City- an economic and cultural center of Vietnam. The Lower Mekong River Basin has many scenic spots typical of a granary of the South of Vietnam with its riverside ecological forests such as Can Tho, Bac Lieu, Soc Trang, An Giang, Kien Giang and Dong Thap. In addition, this place has artistic values such as *don ca tai tu* (literally translated as *music of amateurs*), cultural and historical inheritance systems, well-known religious institutions, as well as unique cultural features of the 3 Kinh, Khmer, and Hoa ethnic groups, all of which making up great resources for tourism services developments.

Promoting tourism development in the lower Mekong River Basin contributes to economic restructuring, job creation, living standards enhancement, and promoting cooperation amongst domestic and international areas. However, there remain numerous limitations regarding poor infrastructure as well as limited tourism typologies and support services. Therefore, studying factors affecting the quality of tourism services in the lower Mekong River Basin is supposedly of practical significance.

II. LITERATURE REVIEW

Quality of service is the extent to which a service meets or exceeds customer needs and expectations (Lewis & Mitchell, 1990; Dotchin & Oakland, 1994; Asuboteng & Ctg, 1996; Wisniewski & Donnelly, 1996, Arash Shahin). According to Parasuraman et al. (1985, 1988), service quality is the gap between customer expectations and their perceptions of the used service. Parasuraman et al. (1998) refined and introduced the Servqual model with five dimensions that affect service quality, including Reliability, Responsiveness, Competence, Empathy and Tangibles. Based on this model, many studies have been carried out in many service sectors as well as in various markets. The results show inconsistent service quality across service sectors. Therefore, there is an urgent need to adapt and conduct a wider range of research to examine different sectors.

There have been a number of studies into the field of tourism, one of which is the study conducted by Song, H. & Wu, D. C (2006). This study evaluated the service quality in the three tourism service sectors (namely restaurants, hotels, and travel agencies) in Hong Kong in 2006 by Importance Performance Analysis (IPA). The study employed Parasurama's five- dimensional measurement instrument and identified specific attributes to measure the service quality for each sector of the Hong Kong tourism industry, identifying the strengths and weaknesses of restaurants, hotels, and travel agencies in terms of their service quality. However, some researchers have questioned the validity and reliability of the IPA model.

Akbaba (2006) assessed the service quality of the Turkish hotel businesses in 2006. This study was carried out to investigate a sample of 250 tourists staying at a hotel on the western coast of Turkey. By way of

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analyzing tourists' expectation and perception concerning their stay in Turkey, the research concluded that Tangible was the most important factor affecting tourists' perception of the service quality they had experienced at their hotel. However, the study was primarily an assessment of the hotel service quality conducted at a particular hotel. Hence, the findings reported are admittedly of weak generalization.

Caro and Garcia (2007) evaluated the quality of transport services in the Murcia region of Spain. They surveyed 400 samples on 36 observed variables and collected 375 valid samples. The data were then analyzed via the computation of Cronbach's Alpha coefficients, item-to-total correlation, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

The quality of urgent transport services included four groups of factors as follow: (1) Personal Interaction (with 4 sub-dimensions including Attitude, Behavior, Expertise, and Problem Solving) via 14 observed variables; (2) Design (consisting of Service Specificity and Operation Time) via 7 observed variables; (3) Physical Environment (consisting of Equipment and Ambience) with 7 observed variables; and (4) Outcome (including Punctuality and Valence) via 8 observed variables.

These studies have contributed to the validation of a service quality measurement model. However, the afore-mentioned studies only examined a specific service and were conducted in various countries. In Vietnam, especially in the Lower Mekong River Basin, there are many discrepancies regarding culture and economic development as well as geographical conditions. As a consequence, there exist differences across factors and the degree to which they affect tourism quality.

III. MODELS AND RESEARCH METHODOLOGY

3.1. Proposed research model

This study employs the Servqual service quality model with five determinants including Reliability, Responsiveness, Competence, Empathy and Tangibles. This model has 19 independent variables representing factors affecting the quality of tourism services and 3 variables measuring service quality, which are as follows:

Table 1. Observed variables in the model and the codified measurement scale

Dimensions	Code
Reliability	
1. Security and political conditions	REL1
2. Food safety and hygiene	REL2
3. Sanitation	REL3
Responsiveness	
4. Souvenirs/ local produces	RES1
5. Links across destinations	RES2
6. Variety of foods	RES3
7. Trip costs	RES4
Competence	
8. Professionalism of employees	C1
9. Promptness of employees	C2
Empathy	
10. Communication skills of employees	E1
11. Care and individualized attention of employees	E2
12. Friendliness of local residents	E3
Tangibles	
13. Natural landscapes	T1
14. Entertainment activities	T2
15. Traffic system	T3
16. Communication system	T4
17. Restaurant and hotel system	T5
18. Appearance of employees	T6
19. Dress code of employees	T7
Service quality	
20. You are satisfied with the service quality in the Lower Mekong River Basin	SQ1
21. You will recommend the Lower Mekong River Basin to your relatives	SQ2
22. You will travel to the Lower Mekong River Basin again in the future	SQ3

3.2. Research Methodology

The study was conducted in two steps: pilot research and full-scale research. The pilot study used Parasuraman’s 5- point Likert scale and consulted experts to develop an instrumentation that is appropriate to the peculiarities of tourism and culture in Vietnam. After standardizing the questionnaire and measurement scale, we started to conduct the research adopting a quantitative method with a sample of at least 110 observations (Hair et al., 2006). In this study, we selected 300 samples of customers using tourism services in the Lower Mekong Basin in December 2016 by random sampling and collected 244 valid samples, which met the sample size requirements. After being coded and cleaned, the data were processed via exploratory factor analysis (EFA), Cronbach's Alpha coefficient computation, multiple regression analysis, and Anova analysis. Specifically, this study used the Cronbach's alpha reliability coefficient and the EFA analysis to validate the measurement scale. The Cronbach's Alpha coefficient was used to eliminate unsatisfactory items. Items with an item-total correlation value of less than 0.3 would be omitted and those with an Alpha value of 0.6 or higher would be accepted. Consequently, items with factor loading less than 0.5 in the EFA analysis would again be eliminated. The method of coefficient extraction used was factor extraction and Varimax rotation with an eigenvalue of 1 as a cut-off value. The scale is accepted when the total variance is equal to or greater than 50% (Gerbing & Anderson, 1988).

IV. RESULTS AND DISCUSSIONS OF THE FINDINGS

4.1. Descriptive statistics

The descriptive statistics run for those factors affecting the tourism service quality in the Lower Mekong River Basin revealed that some dimensions yield just an average mean. See the details following:

+ Regarding Reliability, the collected data showed an average value only. Notably, the Food Safety and Hygiene issue was rated at 2.9, which might be a constraint for tourism in the region (see table 2).

Table 2. Perceptions of Reliability factor

Reliability	n	Mean	Standard Deviation	Perception level (*)
Security and political conditions	244	3.12	1.101	<i>Fairly satisfied</i>
Food safety and hygiene	244	2.95	1.234	<i>Fairly satisfied</i>
Sanitation	244	3.02	1.136	<i>Fairly satisfied</i>

Source: research data

+ Regarding the Responsiveness categorical variable, the recorded values also stood at an average range, with Souvenirs/ Local Produces being the lowest (see table 3).

Table 3. Perceptions of Responsiveness factor

Responsiveness	n	Mean	Standard Deviation	Perception level (*)
Souvenirs/ local produces	244	2.89	0.979	<i>Fairly satisfied</i>
Links across destinations	244	3.13	0.929	<i>Fairly satisfied</i>
Variety of foods	244	3.27	1.200	<i>Fairly satisfied</i>
Trip costs	244	3.19	1.110	<i>Fairly satisfied</i>

Source: research data

(*) Mean interpretations

Interval value = (Maximum – Minimum) / n = (5 - 1) / 5 = 0,8

Range:

- 1,00 – 1,80: Very dissatisfied
- 1,81 – 2,60: Dissatisfied
- 2,61 – 3,40: Fairly satisfied
- 3,41 – 4,20: Satisfied
- 4,21 – 5,00: Very satisfied

+ As for Competence factor, it is noticeable that this variable was highly evaluated, indicating that there has been substantial improvement in staff quality. (see Table 4).

Table 4. Perceptions of Competence factor

Competence	n	Mean	Standard Deviation	Perception level (*)
Professionalism of employees	244	3.73	1.187	Satisfied
Promptness of employees	244	3.77	1.131	Satisfied

Source: research data

+ The Empathy factor saw a fairly high value of greater than 3.7, proving that tourists were quite satisfied with those categories. (see Table 5).

Table 5. Perceptions of Empathy factor

Empathy	n	Mean	Standard Deviation	Perception level (*)
Communication skills of employees	244	3.77	0.983	Satisfied
Care and individualized attention of employees	244	3.71	0.925	Satisfied
Friendliness of local residents	244	3.70	0.997	Satisfied

Source: research data

+ Regarding Tangibles factor, while Traffic System and Natural Landscapes were ranked fairly high, other variables (i.e. Communication System, Dress Code of Employees, and Appearance of Employees) created a more negative perceptions for tourists (see Table 6).

Table 6. Perceptions of Tangibles factor

Tangibles	n	Mean	Standard Deviation	Perception level (*)
Natural landscapes	244	3.57	1.042	Satisfied
Entertainment activities	244	3.46	1.012	Satisfied
Traffic system	244	3.60	1.048	Satisfied
Communication system	244	3.26	1.076	Fairly satisfied
Restaurant and hotel system	244	3.53	0.966	Satisfied
Appearance of employees	244	2.99	0.979	Fairly satisfied
Dress code of employees	244	3.39	1.030	Fairly satisfied

Source: Research data

4.2. Measurement scale validation

The Cronbach's Alpha coefficients calculated for factors namely Reliability, Responsiveness, Empathy and Tangibles were greater than 0.6 across all factors. Also, all item-total correlation coefficients obtained were relatively high. Therefore, all those measurement variables could be used in the exploratory factor analysis (EFA).

The EFA results showed that with an Eigenvalue of 1, the factor extraction and Varimax rotation method allows for the extraction of 5 factors from 19 observed variables and the extracted variance stood at 66.379%, indicating that those 5 factors could explain 66,389% of the dataset variation. This value, which was greater than 50%, was thus accepted. The Rotated component matrix table also shows that all factors have a loading coefficient of greater than 0.5. Consequently, no variables were to be removed from the measurement scale.

Table 7. Factor analysis results

Observed variables	Factors				
	1	2	3	4	5
Security and political conditions	0.582				
Food safety and hygiene	0.693				
Sanitation	0.825				
Souvenirs/ local produces	0.544				
Links across destinations	0.570				
Variety of foods	0.614				
Trip costs	0.786				
Professionalism of employees					0.921
Promptness of employees					0.917
Communication skills of employees			0.820		
Care and individualized attention of employees			0.760		
Friendliness of local residents			0.796		
Natural landscapes				0.639	
Entertainment activities				0.772	
Traffic system				0.814	
Communication system		0.784			
Restaurant and hotel system		0.739			
Appearance of employees		0.733			
Dress code of employees		0.707			

Source: Research data

In the factor analysis results (see Table 7), there are five factors and their sub- dimensions. From the analysis of each variable, those factors with all variables having a factor loading value of greater than 0.5 would be revised and renamed.

The first factor, which was renamed "Reliability and Responsiveness", consists of two components: (1) Reliability (making up of REL1, REL2, and REL3 variables) and (2) Responsiveness (with 4 variables namely RES1, RES2, RES3, and RES4).

The second factor, which was made up of 4 variables namely T4, T5, T6, and T7 of the original Tangibles factor, was renamed "Facilities"

The third factor kept its initial name as "Empathy" with three variables namely E1, E2, and E3. This factor is composed of the original sub-dimensions of the original Empathy measurement scale.

The fourth factor was again called Tangibles with 3 observed variables including T1, T2, and T3.

The fifth factor also kept its name as "Competence", and includes the original C1 and C2 variables of the original Competence scale.

As a final result, the administered factor analyses generated a new Service Quality Measurement Model for tourism in the Lower Mekong River Basin. This is a combination of the following dimensions: (1) Reliability and Responsiveness, (2) Facilities, (3) Empathy, (4) Tangibles and (5) Competence (see Table 8).

Table 8. Factor Analysis results

Observed variables	Factors	Variance	% Cumulative
F1	Reliability and responsiveness		33.293
REL1	Security and political conditions	0.582	
REL2	Food safety and hygiene	0.693	

REL3	Sanitation	0.825	
RES1	Souvenirs/ local produces	0.544	
RES2	Links across destinations	0.570	
RES3	Variety of foods	0.614	
RES4	Trip costs	0.786	
F2	Facilities		43.043
T4	Communication system	0.784	
T5	Restaurant and hotel system	0.739	
T6	Appearance of employees	0.733	
T7	Dress code of employees	0.707	
F3	Empathy		52.073
E1	Communication skills of employees	0.820	
E2	Care and individualized attention of employees	0.760	
E3	Friendliness of local residents	0.796	
F4	Tangibles		60.170
T1	Natural landscapes	0.639	
T2	Entertainment activities	0.772	
T3	Traffic system	0.814	
F5	Competence		66.389
C1	Professionalism of employees	0.921	
C2	Promptness of employees	0.917	

Source: Research data

4.3. Regression analysis

The factor analysis results showed that the research model was adjusted to a 5 dimensional model: (1) Reliability and Responsiveness (2) Facilities (3) Empathy (4) Tangibles and (5) Competence. In other words, the quality of tourism services depend on five factors and the regression equation is as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + e_i \quad (1)$$

Y: Dependent variable (Service quality)

X1, X2, X3, X4, X5: Independent variables, (X1: Reliability and Responsiveness, X2: Facilities, X3: Empathy, X4: Tangibles, X5: Competence)

β_0 : Regression constant; β_i (with $i = 1,2,3,4,5$): regression weights; e_i : residual

By way of analyzing all 5 factors we obtained the following results:

Table 9. Variance analysis for the regression model

Source	SS	df	MS	F- value	P- value
Regression	122.605	5	24.521	57.325	.000^b
Residual	101.805	238	0.428		
Total	224.410	243			

Source: Research data

This result gives an adjusted R^2 value of 0.537, which indicates that the independent variables in the model can explain 53.7% of the variance of the dependent variables while the remaining 46.3% might have been influenced by other factors not included in the model.

In order to test the overall fit statistics, the F-value from the ANOVA analysis table is to be considered. Specifically, the F- value is recorded at 57.325, with a sig. value of 0.000, which suggests that the multivariate regression model is fitted to the data set and is usable. The Durbin-Watson $d = 1.985$, proving that there is no correlation between residuals. As such, it could be concluded that the given regression model does not violate the assumption of error independence. The variance inflation factor (VIF) of each factor has a value of less than 10, indicating that the regression model does not violate the multi-collinearity. In addition, the standardized residual plots show the approximately normal distribution (mean = 0 and Std.Dev. = 0.990). It can therefore be concluded that the assumption of the normal distribution of residuals is not violated. Meanwhile, the P-P plot also shows that the observed points are not scattered too far from the expected line, so it can be concluded that the standard distribution hypothesis is not violated.

Table 10. Coefficients of regression analysis

	β coefficient	Significance level (Sig.)	Variance inflation factor (VIF)	R ²	Adjusted R ²
(Constant)	3.451	0.000		0.546	0.537
Reliability and Responsiveness	0.566	0.000	1,000		
Facilities	0.319	0.000	1,000		
Empathy	0.267	0.000	1,000		
Tangibles	0.103	0.014	1,000		
Competence	-0.014	0.742	1,000		

Source: Research data

The results illustrated in Table 9 show that there are 4 variables in the model which are positively correlated with the quality of tourism services and that the Competence variable is not statistically significant because its Sig. is 0.742 (much greater than the two critical values of 5% and 10 %). As a result, this variable was excluded from the research model.

The regression coefficients show that two factors namely Reliability- Responsiveness and Facilities are the most important ones in exerting an influence to the tourism service quality, followed by Empathy and Tangible, whose influence is also rather significant.

V. CONCLUSIONS AND POLICY SUGGESTIONS

5.1. Conclusion

The study utilized Parasuraman et al.'s Servqual service quality measurement scale to measure the quality of tourism services in the lower Mekong River Basin. To this end, several components of the service quality measurement scale were adjusted and added. The researcher performed Cronbach Alpha analysis and EFA analysis for five factors affecting the quality of tourism services as follows: (1) Reliability and Responsiveness (2) Facilities (3) Empathy, 4) Tangibles and (5) Competence. The regression analysis results show that there are four factors that affect the quality of tourism services: (1) Reliability and Responsiveness (2) Facilities (3) Empathy and (4) Tangibles. It is also worth noticing that the sub-dimensions of each factor underwent modifications to a certain extent in comparison with the original model. The interpretation capacity of the components has also been reported to be different across factors. The Reliability and Responsiveness factor proved to have the greatest impact on the tourism service quality, followed by Facilities, Empathy and Tangibles.

5.2. Policy suggestions

Firstly, as the Reliability and Responsiveness factor is enhanced, the quality of tourism services will also see positive changes. Reliability and Responsiveness, especially those related to Environmental Sanitation, Security and Diversity of foods at the destination leave a fairly strong impact on tourism service quality. This suggests that ensuring security plays a key role in boosting tourism service quality. In addition, tourism businesses should pay more attention to the issue of food and at the same time be flexible and creative in maintaining a strong network aiming at sustainable tourism development.

Secondly, investing in facilities also leads to quality improvement for tourism services. This suggests that improving the quality of tourism infrastructure might positively raise the quality of tourism services.

Thirdly, tour guides' willingness to serve tourists and their problem solving skills exert a positive impact on the quality of tourism services. This implies that their communication and enthusiasm during the service will leave a strong impression on tourists concerning the tourism service quality they experienced.

Fourthly, if Tangibles related issues (i.e. Natural Landscapes, Traffic System, or Entertainment Activities...) are properly considered, the quality of tourism services is also enhanced. This proves that improving the quality of those systems and natural landscapes is a positive factor contributing to the quality improvement of tourism services.

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