



# Determination of Hospitality Services Quality and Customer Satisfaction – a Holserv Approach

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## Abstract

This study examines the relationship between quality of perceived service and level of satisfaction customer attained in Tourism. Although the aforesaid relationship discussions proliferated, studies have employed customised SERVQUAL for tourism remains dearth. This research attempts to fulfil the gap by using HOLSERV measurement instrument. HOLSERV is developed to measure the service quality in tourism, comprised with three factors named employee, tangibles, and reliability. Data have been collected from guests of the luxury hotels located in Pondicherry (Puducherry). 344 samples were used for data analyses after eliminating the unusable data by preliminary psychometric test. Confirmatory Factor Analysis (CFA) followed by Structural Equation Modelling (SEM) was employed to examine the postulated relationship. The results supported the proposed hypotheses. Employees, tangibles, and reliability are confirmed as factors of hospitality service quality by CFA. Employee factor ascertained to be an important factor by SEM. From the results and findings of this study, implications have been drawn, limitations were given, and recommendations were made for future researchers.

**Keywords:** Customer Satisfaction, Tourism, Service Quality, SERVQUAL, and HOLSERV.  
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## 1. Introduction

Quality of perceived service and level of satisfaction customer attained received substantial attention from academicians as well as practitioners as they have had significant impact on organisation goodwill and financial benefit (Gundersen et al., 1996). In tourism both quality and satisfaction are deemed to be imperative elements since wide range of services can be provided by this industry (Su, Swanson, & Chen, 2015). Tourism and tourism has been deemed as one of the essential source for economic development (Ivanov and Webster, 2012). As per Indian Brand Equity Foundation (IBEF) report, the market size of Indian tourism is expected to reach \$420 billion by 2025. Hotels are implementing various measures to acquire new customers as well as retain existing customers (Kim, Cha, Singh, & Knutson, 2013). Tourism experiences high competition thus it is imperative to identify customers' expectation and provide best service to meet their expectation to survive in this industry (Akroush et al., 2012). Services marketing researchers identified that quality

of service provided to customers has directly influenced customers' satisfaction and to re visit (Rajib Lochan Dhar, 2014). Having witnessed numerous studies in hotel industry since 1980 (Barrington & Olsen, 1987), academicians and practitioners gave attention to service quality merely from 1990s (Lassar, Manolis, & Winsor, 2000), Nemours empirical studies conducted related to service quality in hotel industry, but nonetheless, application of customised SERVQUAL measurement scale (HOLSERV) is relatively limited. Furthermore previous studies that focused on customer satisfaction were used expectation disconfirmation theory variables (Bearden & Teel 1983; Oliver & Burke, 1999). Yet, studies that examined the relationship between HOLSERV and customer satisfaction were certainly limited, and studies that employed intricate research design such as structural equation modelling are still dearth. Prior studies have been carried out to examine the relationship between aforesaid variables in European countries, very limited studies have conducted in Asian context. There is a lack of empirical studies to provide with sophisticated



statistical evidence in Indian context. This study ascertains the impact of tourism service quality on customer satisfaction and further examines the tourism service quality dimensions impact on customer satisfaction. Theoretical implications for academicians and researchers have been provided from the findings of statistical analyses. Factors that have significant influence on customer satisfaction also been suggested in practical implications section.

## **2. Review of Literature**

### **2.1 Service quality**

The degree to which the service given meets the customers' expectations is what is referred to as service quality (Lewis & Booms, 1983). The concept, dimensions, and measurement models of service quality have been the subject of in-depth research over the past few decades since they directly affect businesses' financial performance (Spreng & Mckoy, 1996). The gap between customers' expectations and perceptions affects how highly they rate the perceived quality of the services they receive (Grönroos, 1984; Parasuraman et al., 1988; Bitner, 1990; Clow & Beisel, 1995; Sankar, Valan, & Siranjeevi, 2020). The aforementioned idea inspired Parasuraman et al. (1988) to postulate an instrument called SERVQUAL, a five-dimension measuring scale that was created to gauge the perceived quality of service. The scale, called SERVQUAL by the authors, includes the qualities of reliability, responsiveness, assurance, empathy, and tangibles. Despite the scale's criticism and doubts, researchers have embraced and frequently use it (Cronin & Taylor, 1992). The SERVQUAL has been examined by numerous authors in numerous sectors. A modified version of the SREVQUAL measurement scale was created by advocates of service quality for that specific industry and situation. The SERVQUAL scale has been used in a variety of businesses with industry-specific adjustments (Ladhari 2008).

### **2.2 Tourism service quality**

Numerous research backed the SERVQUAL paradigm for tourism (Wilkins et al., 2007). To assess service quality in tourism, some researchers have used

customised SERVQUAL. Based on SERVQUAL dimensions, Knutson et al. (1991) created a new scale called LODGSERV to gauge service quality in the lodging sector. In hotels in the United Kingdom, Oberoi and Hales (1990) established two elements of service quality. When Getty and Thompson (1994) created LODGQUAL, they noted that two SERVQUAL aspects apply to the hotel business in general. In a research on Turkish tourism that used an accepted version of SERVQUAL, Akan (1995) discovered seven characteristics of service quality. Stevens, Knutson, and Patton (1995) created the DINESERV model with five SERVQUAL parameters to gauge the calibre of restaurant service. According to Ekinci et al. (1998), the dimensions of service are tangibles and intangibles quality in Turkish resort industry. Mei, Dean, and White (1999) identified the service quality elements of Australian tourism and developed the HOLSERV scale to measure the quality of hospitality services. Juwaheer (2004) evaluated the service quality of Mauritius hotels, used a modified SERVQUAL, and determined nine service quality constructs. The scale with six dimensions, created by Khan, was used by ECOSERV to evaluate the expectations for service quality in eco-tourism (2003). Five new constructions of service quality were reported in the US hotel industry by Getty and Getty (2003) after testing several service quality characteristics and creating an instrument termed the "lodging quality index." All of the aforementioned models have been used to describe the updated SERVQUAL and have made an effort to look at the service quality in various service situations. HOLSERV was created to evaluate service quality in tourism by Mei et al. (1999). The authors identified three facets of service quality named employees, tangibles, and reliability in the Australian hotel industry. The SERVQUAL scale's detractors have been silenced by the single column format (perception only), and the HOLSERV is a more user-friendly variant of the original SERVQUAL (Mei et al., 1999).

Based on prior research of Mei et al. (1999), the researchers postulate the following hypothesis:



H1. Perceived service quality is comprised of three dimensions named employees, tangibles, and reliability.

### **2.3 Customer satisfaction**

Customer satisfaction is described by the World Tourism Organization (1985) as "a psychological notion that involves the sensation of well-being and pleasure that arises from receiving what one wishes for and anticipates from an appealing product and/or service" (cited in Pizam & Ellis, 1999). The term "post-purchase appraisal and affective response of a consumer to the total product or service experience" refers to satisfaction (Oliver, 1992). Customer happiness has been viewed as a crucial element for surviving in the cutthroat business world. Customer loyalty results from customer happiness, which is a crucial factor in gaining a competitive edge (Lewin, 2009). According to Naumann (1995), numerous studies have revealed that "it costs approximately five times as much in time, money, and resources to recruit a new customer as it does to keep an existing customer." The cheapest form of promotion was discovered to be customer happiness (Pizam & Ellis, 1999). Numerous tourist studies have determined the importance of consumer happiness (Chen & Chen, 2010; Su & Hsu, 2013; Su, Hsu, & Swanson, 2014). The literature on hospitality frequently examines the subject of customer satisfaction (Torres & Kline, 2013). Approximately 15,000 publications on this subject were written between 1980 and 1990. (Peterson & Wilson, 1992).

### **2.4 Quality of perceived service and level of customer satisfaction**

According to Parasuraman et al. (1994), "customer satisfaction is one of the key effects of service quality and can decide the long-term performance of a service organisation." Practitioners now pay closer attention to the perceived service quality and level of customer satisfaction (Reichheld & Sasser, 1990). Regarding quality and satisfaction, academic literature has also been discussed over the years (Churchill & Surprenant, 1982; Parasuraman et al., 1985; Fornell, 1992; Bitner & Hubbert, 1993; Boulding et al., 1993; Oliver, 1993). In business,

economics, and management journals between 1992 and 2011, roughly 1088 studies about the perceived service quality and degree of customer satisfaction were published. It was determined from 315 articles how well customers were treated and how satisfied they were with the service (Agbor, 2011). Numerous studies indicate that one of the most important factors affecting customer happiness is service quality (Cronin et al., 2000; Meuter et al., 2000; Brady et al., 2001; Olorunniwo et al., 2006; Orel & Kara, 2014).

Based on the previous findings, the following hypothesis is proposed:

H2. Perceived service quality dimensions have a significant influence on customer satisfaction

## **3. Research Methodology**

### **3.1. Construct measurement**

HOLSERV was introduced to examine quality of perceived service exclusively in tourism by Mei et al. (1999). The HOLSERV is adopted from SERVQUAL (Parasuraman et al., 1988), but is designed exclusively for hospitality service quality. HOLSERV is customised version of SERVQUAL for tourism. Eight variables were modified from the SERVQUAL scale, and three variables were removed, leaving a total of 27 variables in final scale. The variables were measured on a five point Likert scale ranging from "completely failed to meet my expectations = 1" to "far exceeded my expectations = 5", consistent with the SERVQUAL.

This study adopted well recognised expectancy disconfirmation approach of customer satisfaction by Richard Oliver (1980), the multi item satisfaction construct were measured on Likert- type (five point) scale ranging from "1 = strongly disagree to 5 = strongly agree". Lewin's (1938) "expectancy theory" is a basic idea for disconfirmation model of customer satisfaction, which postulates that "satisfaction judgment is based on comparisons between expectations held a priori and the perceived performance post hoc by a customer with an evaluative norm" (Cardozo, 1965). The expectancy disconfirmation paradigm has been the prevalent



method for evaluating customer satisfaction in marketing (Mckinney et al., 2002). The expectancy disconfirmation theory is most extensively applied in customer satisfaction literature (Bearden & Teel 1983; Oliver & Burke, 1999).

**3.2. Data collection**

Pondicherry was selected for this study; it is one of the most famous tourist destinations in South India. With a robust historical background, the town has a special ambience such as “blend of spiritual aura, French colonial heritage, Tamil culture, stretch along a grid of clean straight streets which house French institutions, Hotels, Guest Houses, Restaurants, Boutiques and private homes, including the sprawling premises of the famous Sri Aurobindo Ashram and the cosmopolitan flair of many nationalities in a small but varied town” (PTDC). This study merely focused on luxury hotels in Pondicherry. Convenience sampling technique was employed as hotels did not allow to interact with guests. Questionnaires were hand delivered to the human resource manager who distributed them to guests of the hotels through room service employees. 600 questionnaires were distributed, 476 were returned by the hotels. Among the returned questionnaires, 344 were identified as usable. Remaining were committed the any of following errors: missing code, more than one response for same question, omission of questions, and same response for all questions. The sample comprised of 58 percent males and 42 percent females. Of the respondents 323 were domestic guests, and 61 percent were between the ages of 18 to 29 years.

**4. Results and Discussions**

A number of preliminary checks with the measurement tool and the data acquired are required before testing the defined hypotheses in order to conduct further analysis. Several tests were used to examine the distribution of the data, the psychometric features of the measurement tool, and the presence of common method variance on the scale. Confirmatory Factor Analysis (CFA) was used to confirm the aspects of service quality described in the literature after preliminary data validation (measurement

theory). Finally, the effects of service quality on customer satisfaction were examined.

**4.1. Common method bias**

Questionnaire used in this study was comprised of (predictors and criterion) service quality variables and customer satisfaction variables. When single instrument was used to collect data, researcher needs to ensure the common method variance in the data. Common method variance is defined as “variance that is attributable to the measurement method rather than to the constructs” (Podsakoff et al., 2003). In behavioural studies the common method variance can often create a problem and deceived the results (Podsakoff et al., 2003). Harman’s (1967) one-factor test was employed to verify the common method variance. Table 1 shows the result of principal components factor analysis with varimax rotation, depicts 31% variance was accounted by one factor. Which ensures common method bias is unlikely to be an issue with this data.

**Table 1: Total Variance**

Items	Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance percentage	Cumulative percentage	Total	Variance percentage	Cumulative percentage
1	10.145	31.704	31.704	10.145	31.704	31.704
2	4.929	15.403	47.107			
3	3.262	10.192	57.299			
4	2.191	6.847	64.146			
5	1.203	3.759	67.904			
6	.989	3.092	70.996			
7	.967	3.022	74.018			
8	.854	2.670	76.688			
9	.763	2.384	79.072			
10	.665	2.077	81.149			
11	.644	2.011	83.161			
12	.565	1.765	84.926			
13	.507	1.583	86.509			
14	.480	1.501	88.010			
15	.430	1.344	89.354			
16	.375	1.170	90.524			
17	.338	1.055	91.579			



18	.307	.958	92.537		
19	.299	.933	93.470		
20	.250	.780	94.250		
21	.240	.749	94.999		
22	.228	.712	95.712		
23	.200	.624	96.336		
24	.194	.607	96.942		
25	.169	.528	97.471		
26	.157	.490	97.960		
27	.147	.459	98.420		
28	.134	.419	98.838		
29	.102	.320	99.158		
30	.093	.291	99.450		
31	.090	.280	99.730		
32	.086	.270	100.000		

Source: Primary; Extraction Method: Principal Component Analysis.

#### 4.2. Psychometric properties

The psychometric characteristics of the measurement model have been evaluated using the individual item reliability, the composite reliability, the convergent validity, and the discriminant validity. The reliability and validity of the measuring scale were confirmed using predefined and well-established techniques. Reliability scores ranging from 0.89 to 0.93, which exceeded the threshold level of 0.7 set by Nunnally (1978), were used to evaluate the internal consistency of the adopted multi-item scale for all three components (Table 2)

A crucial assumption for multivariate analysis is normality. It refers to the distribution of our data and how closely that distribution resembles the normal distribution (Hair et al., 2006). In this study, statistical tests were used to look at the distribution of the data.

According to Hair et al. (2006), the manifest variables of a given latent construct should share a lot of variation, and the correlation between the many variables of a construct defines convergent validity proof of the model (Churchill, 1999). Variance extraction is thought to be a stricter test of convergent validity (Fornell & Larcker, 1981). The latent construct's capacity to capture indicators' variance is estimated by AVE; the amount of unexplained variance is referred to as error variance (Fornell & Larcker, 1981; Hair et al., 2006). AVE greater than 0.5 denotes that the latent construct accounts for more than 50% of the variance in the indicator (Fornell & Larcker, 1981). The research recommends a value of

0.5 or above as an appropriate convergence (Hair et al., 2006) (Table 2).

The most stringent test is average variance extracted (AVE), which evaluates the constructs' discriminant validity (Fornell & Larcker, 1981). If a construct's correlation with an indicator (such as the square root of AVE) is higher than its correlation with any other constructs, this is strong support for the discriminant validity of the construct (Fornell & Larcker, 1981; Barclay et al., 1995) This criteria is met by the study model constructs (Table 3).

**Table 2:** Psychometric Properties

Factors	Indicators	Factor loadings	Composite reliability	Average Variance Extracted (AVE)
Employees	Emp1	0.860	0.935	0.530
	Emp2	0.673		
	Emp3	0.791		
	Emp4	0.900		
	Emp5	0.749		
	Emp6	0.646		
	Emp7	0.925		
	Emp8	0.818		
	Emp9	0.802		
	E10	0.853		
	Emp11	0.640		
	Emp12	0.781		
	Emp13	0.930		
Tangibles	T1	0.769	0.897	0.528
	T2	0.726		
	T3	0.710		
	T4	0.440		
	T5	0.771		
	T6	0.840		
	T7	0.840		



	T8	0.675		
Reliability	R1	0.901	0.908	0.631
	R2	0.657		
	R3	0.663		
	R4	0.654		
	R5	0.912		
	R6	0.957		

Source: Primary; Note: all factor loadings are significant at  $p < 0.001$

**Table 3:** Discriminant validity

	Employees	Tangibles	Reliability
Employees	<b>0.728</b>		
Tangibles	0.204	<b>0.794</b>	
Reliability	0.230	0.324	<b>0.727</b>

Conformity Factor Analysis (CFA) was performed to confirm the dimensionality of service quality. Table 4 depicts the fit indices of the measurement model with recommended values, the postulated measurement model was acceptable with the fit indices surpassed the recommended values.

**Table 4:** Fit indices for CFA

Fit indices	Attained value	Suggested value (Hair et al., 2006)
CMIN/DF ( $\chi^2/df$ ) (Absolute Fit Indices)	2.841	< 3
RMSEA (Absolute Fit Indices)	0.073	< 0.09
CFI (Incremental Fit Indices)	0.923	> 0.9
AGFI (Parsimony Fit Indices)	0.813	> 0.8

Source: Primary

As shown in table 4, all fit indices were greater than the recommended values, signifying the model fit. Having witnessed all the recommended results we accept the first hypothesis H1.

### 4.3. Influence of Service quality on customer satisfaction

Hypothesis H2 related to dimensions of service quality influence on customer satisfaction were tested. Standardized regression weights and the significance of the postulated relationships were used to examine the hypotheses in the structural model.

**Table 5:** Path co efficient values

Path	Path coefficient	Significance level
Reliability CSAT	0.188	0.000
Employees CSAT	0.352	0.000
Tangibles CSAT	0.093	0.00

Among the three constructs, employees construct registered highest path coefficient (0.352) followed by reliability (0.188), and tangibles (0.093). All three hypotheses (H2A, H2B, H2C) were accepted. Fit indices of structural model were surpassed the recommended values except AGFI. Table 6 depicts the structural model fit indices.

**Table 6:** Fit measures for SEM

Fit indices	Attained value	Recommended value (Hair et al., 2006)
CMIN/DF ( $\chi^2/df$ ) (Absolute Fit Indices)	2.734	< 3
RMSEA (Absolute Fit Indices)	0.071	< 0.09
CFI (Incremental Fit Indices)	0.913	> 0.9
AGFI (Parsimony Fit Indices)	0.793	> 8

According to reports, the normed chi square ( $\chi^2/df$ ) was less than the 3 criterion (2.734). The model's RMSEA was 0.071, which is a very little level of error. According to stated fit measures of the structural model, the data overall fit the theoretical model, making it a good fit model.

### 4.4. Discussions of the Study

This research was attempted to study the service quality facets established in tourism by Mei et al. (1999), and to identify the factors that influence



customer satisfaction. Despite the plethora of study evidence for service quality measurement, very few studies had used HOLSERV, a customised version of SERVQUAL for tourism. Prior hospitality research on service quality hadn't employee HOLSERV even though it characterises hospitality service quality dimensions. In keeping with predefined service quality model was operationalised. The data indicates that hospitality service quality has a three dimensions structure, representing reliability, employees, and tangibles. The application of confirmatory factor analysis permitted us to test existing service quality model in tourism perspective. The results contribute to hospitality service quality model HOLSERV with statistical evidence.

Three facets were confirmed as service quality constructs by measurement model. Among the three constructs, employees construct were confirmed to have greater impact on customer satisfaction by structural model followed by reliability and tangibles. As tourism is deemed as a people intensive industry, employees play a substantial role in customer satisfaction. This construct has identified as a best predictor of customer satisfaction (Mei et al. (1999). Customers evaluate the quality of service based on the interaction at moment of truth, where the employees play vital role (Gronroos, 1982). This study ascertained that employees, reliability, and tangibles are the facets of hospitality service quality. Aforesaid constructs found to have positive significant influence on customer satisfaction, of the three employees construct identified as substantial predictor of customer satisfaction.

## 5. Conclusion

This study results yield some implications for both academicians and practitioners. The present study demonstrated that satisfaction level of customers have been certainly influenced by quality of service provide at moment of truth. It was identified that employees play a vital role at moment of truth, where customers evaluate the quality of provided services. Thus, managers should focus on employees. Conduct periodic meeting with employees particularly customer contact employees, encourage to discuss about their expectation, identify their needs and wants

from job, and empower them to take decision at the time of service failure. Different facets of employee satisfaction would be measured and those facets impact on customer satisfaction can also be tested.

This study has some limitations so does other empirical studies. Cross-sectional data were used in this study to examine causal relationships, further longitudinal and/or experimental studies are required to support the evidence. Data were obtained from luxury hotel customers, it is therefore necessary to replicate the study in other category hotels as well. As hotel management did not allow to interact with their customers, convenience sampling technique were employed. Future researchers should consider more generalizable random sampling techniques and geographically diverse populations. This study model ascertained the service quality impact on customer satisfaction, future research could investigate consequences of customer satisfaction. The mediation and moderation relationship among the aforesaid constructs have to be tested.

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