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Research and concepts
Analysing service quality in the hospitality industry

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Keywords

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Abstract

Examines the dimensions of service quality in the hospitality industry by extending the SERVQUAL scale to include eight new items that specifically pertain to the hospitality industry, subsequently referred to as HOLSERV. A total of 1,000 questionnaires were distributed at five mid-luxury hotels in Australia during July to October 1998 and a response rate of 15.5 per cent achieved. Key findings of the study are that service quality is represented by three dimensions in the hospitality industry, relating to employees (behaviour and appearance), tangibles and reliability, and the best predictor of overall service quality is the dimensions referred to as "employees". The findings also show that the one-column format questionnaire provides a valid and reliable, but much shorter, survey. The major implication for managers is that improvements in the behaviour and appearance of their employees is most likely to enhance consumer perceptions of service quality.

Introduction

Services are taking on increasing importance both domestically and internationally. In today's changing global environment, many businesses are facing intensifying competition and rapid deregulation, and in order to achieve competitive advantage and efficiency, businesses have to seek profitable ways to differentiate themselves. One strategy that has been related to success is the delivery of high service quality, especially during times of intensive competition both domestically and internationally (Rao and Kelkar, 1997). This concept has been the subject of many conceptual and empirical studies, and it is generally accepted that quality has positive implications for an organisation's performance and competitive position. However, despite the vast amount of research done in the area of service quality, quality related issues have received little research attention within the hospitality context (Harrington and Akehurst, 1996). Further, authors of studies conducted on quality in the service industries have also expressed concern regarding the quality dimensions in hotels and, in particular, with methods used to measure customer perceptions of hotel service quality (Johnston *et al.*, 1990).

As service quality is becoming a major part of business practice, it is important to be able to measure and research its effectiveness. The purpose of this paper is to examine the different dimensions of service quality and determine which dimensions best predict overall service quality in the hospitality industry by applying a modified version of SERVQUAL (Parasuraman *et al.*, 1988). This kind of information has practical implications for managers of hotels as they can direct their resources to improving weak service dimensions and to refining their marketing efforts so that customer expectations are met by the service delivered.

Early research on quality

From the review of literature on quality, it has been found that early research efforts concentrated on defining and measuring the quality of tangible goods and products, while the seemingly more difficult services sector was ignored. Gronroos (1990) has noted that product quality was traditionally linked to the technical specifications of goods, with most definitions of quality arising from the

manufacturing sector where quality control has received extensive attention and research. Conversely, Crosby (1979) defined quality of goods as "conformance to requirements"; Juran (1980) defined it as "fitness for use"; while Garvin (1983) measured quality by counting the incidence of "internal" failures (those observed before a product left the factory) and "external" failures (those incurred in the field after a unit had been installed). These product-based definitions of quality may be appropriate to the goods-producing sector, however, knowledge about the quality of goods is insufficient to understand service quality (Parasuraman *et al.*, 1985).

Service quality in the hospitality industry

Services are generally described in terms of four unique attributes, namely:
(1) intangibility;
(2) heterogeneity;
(3) inseparability; and
(4) perishability

(Bateson, 1977; Lovelock, 1981; Gronroos, 1990; Zeithaml and Bitner, 1996). In the hospitality industry, other attributes, such as imprecise standards and fluctuating demand have been identified and further complicate the task of defining, delivering and measuring service quality. For example, while firms in the hospitality industry have established policies, rules and procedures to govern the standardisation of their product, many aspects of service quality do not lend themselves to standards. Quality aspects such as "friendliness", "helpfulness" and "politeness" are likely to be interpreted differently by various guests and are assessed subjectively.

Moreover, demand for service in the hospitality industry is generally clustered around peak periods of the day or year, such as check-out time or holiday season (Sasser *et al.*, 1978) and these peaks create an environment which make it difficult to provide consistent service quality.

Measuring service quality

One of the most widely used instruments to measure service quality is the SERVQUAL scale developed by Parasuraman *et al.* in 1985, and then refined in 1988 and 1991. The model on which SERVQUAL is based proposes that customers evaluate the quality of a service on five distinct dimensions:

(1) reliability;
(2) responsiveness;
(3) assurance;
(4) empathy; and
(5) tangibles

and that service quality is the difference between a customer's expectations and perceptions of the quality of a service. In order to operationalise this model, the authors developed 22 items that were designed to capture, in two separate columns, customers' perceptions and expectations of a service on those dimensions, making a total of 44 questions in all.

Despite SERVQUAL's wide usage by academics and practicing managers in various industries, across different countries, a number of studies have questioned the conceptual and operational base of the model (Babakus and Boller, 1992; Carman, 1990; Teas, 1994). More specifically, these studies have failed to confirm the five dimension structure across different industries. For example, a study conducted in the hospitality industry reported five dimensions of service quality, and these differed from those in SERVQUAL (Saleh and Ryan, 1991). These findings suggest that further customisation of the scale for the hospitality industry is necessary.

To address concern about the soundness of using a perceptions minus expectations score, researchers have combined the expectations and perceptions scores into a single measure. They subsequently found the reliability and validity of this single measure superior to the score based on the difference method (Babakus and Boller, 1992; Brown *et al.*, 1993). In 1991, Parasuraman *et al.* published their own one-column scale format which cuts the questionnaire size in half and reduces the time required for completion (Bouman and Van der Wiele, 1992), thus minimising the likelihood of response error.

Aims of the study

The specific aims of the study are to:
(1) test the reliability and validity of a customised SERVQUAL scale;
(2) establish the number of dimensions of service quality in the hospitality industry; and
(3) determine which dimension is the best predictor of overall service quality.

In order to distinguish between the revised SERVQUAL (Parasuraman *et al.*, 1991)

and the version customised for this study, the latter will now be referred to as HOLSERV.

Methodology

Development of the HOLSERV scale

The definition of service quality adopted in this study, is "the degree of discrepancy between customers' normative expectations for the service and their perceptions of the service performance" (Parasuraman *et al.*, 1988, p. 17). Thus the study pursues hotel guests' perceptions of the quality they receive, compared to their expectations in a one-column format (Table I).

Modification to suit the hospitality setting resulted in changes to some existing items, the inclusion of new items and deletion of items (see Appendix). For example, an original assurance item: "Guests feel safe in their transactions with employees", an item that was felt to be confusing because of the unclear meaning of "transactions", was replaced by "Guests feel safe in the delivery of service". In addition, a new item, "Guests feel safe and secure in their stay" was included in the questionnaire, as security is regarded as an important issue in a hotel stay. In all, eight items were either modified or added to the original SERVQUAL scale, and three items were deleted, leaving a total of 27 items in final scale.

As shown in Table I, the items in the questionnaire were measured on a seven-point scale ranging from "completely failed to meet my expectations" to "far exceeded my expectations", consistent with the earlier work of Parasuraman *et al.* (1991). In addition, a separate overall service quality measure that used a single rating ten-point scale (1 = very poor, and 10 = excellent) was included to enable identification of the best predictor of overall service quality.

The sample

A total of 1,000 questionnaires and covering letters were distributed to guests of five hotels in Australia, ranging in standard from three to five stars. The recruitment process for this study took place for a duration of four months, from July to October 1998. A sample size of 155 participants was collected, representing a response rate of 15.5 per cent which compares favourably to other hospitality studies (Barsky and Huxley, 1992; Danaher and Haddrell, 1996).

The participants of this study are predominantly business travellers, as 72 per cent of the respondents described the purpose of their visit as being a business trip. Thirty-two per cent of the respondents were female, and most of the respondents were between 41 and 50 years of age. Forty per cent of the respondents in this study were staying for one night, 43 per cent for two to three nights, and 17 per cent for more than three nights. Finally, 28 per cent of the respondents were new customers who have not stayed at the hotel before, while 71 per cent are repeat travellers.

Results

Reliability of the HOLSERV scale

Using the approach of Hunter and Gerbing (1982), confirmatory analysis is performed to establish reliability. In the confirmatory process, the authors outline three tests that must be conducted to accomplish this task: internal consistency, parallelism and reliability. To test for unidimensionality-internal consistency, the individual items and their respective SERVQUAL dimensions are correlated. Next, to test for parallelism, each of the five SERVQUAL dimensions are correlated with the other dimensions. Finally, the coefficient alpha of each SERVQUAL dimension was tested separately to assess the reliability of the scale. Table II shows the reliability and correlation coefficients for the extended SERVQUAL (HOLSERV) scale using the established generic dimensions.

The item-dimension correlations for each of the five dimensions are relatively tight as required by the unidimensionality test (Hunter and Gerbing, 1982). With the exception of tangibles, the other four dimensions pass the parallelism criterion, based on the average correlation among them. Finally, the

Table I An example of the one-column format questionnaire

	Completely failed to meet expected service level				Far exceeded my expected service level		
1 When Hotel XYZ promises to provide a service, it does so	1	2	3	4	5	6	7

Table II Reliability and correlation coefficients of the HOLSERV scale

Dimension	Number of items	Item-dimension (range)	Dimension-dimension (average)	Reliability (alpha)
Reliability	4	0.59-0.89	0.73	0.88
Responsiveness	4	0.59-0.92	0.77	0.91
Assurance	6	0.54-0.91	0.80	0.93
Empathy	4	0.51-0.90	0.75	0.89
Tangibles	9	0.41-0.82	0.65	0.90
Combined scale	–	–		0.97

alpha value for the total index is high, while the reliability coefficients (alpha levels) for the five dimensions exceed the 0.70 cut-off recommended by Nunnally (1967). The high alpha values indicate good internal consistency among the items, and the high alpha value for the overall scale indicates that the convergent validity of HOLSERV is met (Parasuraman *et al.*, 1991). In view of the above figures, the reliability of the instrument is established.

Dimensions of service quality in the hospitality industry

To explore the dimensions of quality in the hospitality industry, a factor analysis was performed and the results subjected to varimax rotation. Factors with eigenvalues greater than one have been extracted. The general pattern of loadings is shown in Table III, which suggests that, in this study, three factors emerge as dimensions of service quality in the hospitality industry, and that two of these are similar to the SERVQUAL model.

The structure shown in Table III explains 67.74 per cent of the variance in service quality with employees (factor 1) accounting for 53.29 per cent of the total variance. Also, factor 1 contains 13 of the 27 items from the scale (48 per cent). A summary of the essential content of the dimensions of service quality in hospitality is shown in Table IV.

As seen in Table IV, factor 1 has been named "employees" as it includes items that are specifically related to the behaviour and appearance of employees. Based on the factor analysis, these elements appear to be particularly important contributors to service quality evaluation in the hospitality industry. However, to further investigate this assumption, regression analysis was used to explore the best predictor.

Table III Rotated component matrix – service quality

	1	2	3
REL1	0.408		0.613
REL2			0.702
REL3			0.792
REL4	0.406		0.684
RES1	0.460		0.649
RES2	0.661		0.431
RES3	0.819		
RES4	0.767		
ASS1	0.753		
ASS2	0.683		0.467
ASS3	0.445	0.427	0.493
ASS4	0.770		
ASS5	0.681		0.412
ASS6	0.709		
EMP1	0.851		
EMP2	0.823		
EMP3	0.796		
EMP4	0.662		
TAN1		0.773	
TAN2		0.835	
TAN3	0.540	0.512	
TAN4		0.788	
TAN5		0.728	
TAN6		0.683	0.476
TAN7		0.651	
TAN8		0.550	
TAN9		0.521	

Note: Rotation converged in seven iterations; items with values less than 0.4 were excluded

Predictors of overall service quality in the hospitality industry

Table V shows the results of an analysis in which the service quality dimensions were used as independent variables in a regression against a separate measure of overall service quality. The results $F(3,155) = 48.47$, $p < 0.000$, are significant with the largest T and beta value found for employees (factor 1), followed by tangibles (factor 2) and reliability (factor 3). Therefore, the best predictor of

Table IV Dimensions of service quality in the hospitality industry

Factor	Elements from SERVQUAL	Main emphasis
Employees (factor 1)	Responsiveness (3) Assurance (5) Empathy (4) Tangibles (1)	Prompt service, willingness to help, confident in the delivery of service, polite, knowledgeable, skilful, caring, understanding, sincere, neat and professional employees
Tangibles (factor 2)	Tangibles (8)	Modern-looking equipment, fixtures and fittings, appealing facilities and materials, comfort, cleanliness, user-friendly equipment and facilities, variety in food and beverages, operation of services at a convenient time
Reliability (factor 4)	Reliability (4) Responsiveness (1) Assurance (1)	Keeping promises, accurate and timely service, safe and secure stay

Table V Results-regression analysis, overall service quality against the dimensions of quality

Model		Standardised coefficients beta	t	Significance
1	(Constant)		101.758	0.000
	Employees	0.551	8.796	0.000
	Tangibles	0.422	6.709	0.000
	Reliability	0.313	4.975	0.000

Note: Dependent variable – overall service quality

overall service quality consists essentially of the responsiveness, assurance and empathy items as they relate to employees.

The implications of the above result suggest that managers of the hotels should concentrate their efforts on improving the items in employees (factor 1), which consists more of the functional aspects of service quality (how it is done) rather than the technical aspects (what is done). In doing so, the hotels should allocate resources to the training of employees, so that employees will feel confident and able to provide prompt, personalised and caring service to guests. In addition, in order to meet guests' individual needs, employees should be empowered to operate outside standard procedures of the hotel. Finally, another important aspect is the appearance of employees as guests clearly expect them to be clean, neat and appropriately styled.

The tangibles dimension is also a significant predictor of overall service quality and this implies that managers of the hotels should ensure that their hotel is appealing and attractive, with up-to-date, clean and comfortable equipment, fixture and fittings. Furthermore,

it should reflect the image and price range of the property. This implication is supported by a study conducted by Knutson, Stevens, *et al.* (1992), which found that guests expect up-to-date equipment such as key cards, computerised accounting and fast, efficient elevators.

Implications and recommendations for managers

For hotels that are consistent with the sample in this study, the following recommendations are proposed:

- The use of the one-column customised format of SERVQUAL, referred to as HOLSERV, is recommended.

  The one-column format questionnaire has overcome some problems associated with operationalising the SERVQUAL instrument, HOLSERV, has produced a reliable and robust instrument specifically for the hospitality industry. Finally, the HOLSERV scale is a shorter, more user-friendly version of SERVQUAL.

- While the HOLSERV scale is a short and reliable version of SERVQUAL, it should only be applied as appropriate.

  This study has demonstrated that, for the sample of participating hotels, HOLSERV is reliable and applicable. However, questions about the generalizability of the scale mean that it should be applied with some caution. That is, managers of hotels should bear in mind the type of hotel and the range of facilities available. The questionnaire in this study caters for three to five star hotels

and as such items in the questionnaire are designed to cover facilities such as restaurants and lobby, as well as equipment such as television and sofa. Hence, managers of other types of hotels might consider further modification or deletion of items in order to customise the questionnaire for their guests.

• Assessment of service quality should be based, as a minimum requirement, on dimensions scores.

This study indicates that managers will get much more useful data if they base their assessment of service quality more explicitly on dimensions scores, rather than a general overall score where results are aggregated. Dimensions scores, and the items within dimensions, give very useful information about aspects of service that can be specifically targeted for improvement, and use of these scores is likely to result in more appropriate decision-making. The management of the various dimensions must be tailored to the key items for a particular dimension, rather than one strategy being broadly applied across the whole dimension.

• Managers of hotels should supplement the HOLSERV scale with additional qualitative research.

Finally, to uncover the causes underlying the key problem areas identified in this study, managers of hotels should supplement the refined HOLSERV scale with additional qualitative research such as in-depth interviews or focus group discussions. In this case, HOLSERV should be treated as a useful starting point, and not the final answer for assessing and improving service quality.

Directions for future research

Future research could consider whether the factor structure proposed in this study is valid in other classes of accommodation, such as caravan parks, bed and breakfast, motels as well as resorts. In addition, future research may also look at whether the perceived service quality levels differ by countries. This study was conducted solely in Australia, and the findings are somewhat different to findings from studies conducted in Canada (Saleh and

Ryan, 1991) and the USA (Knutson *et al.*, 1990).

Conclusion

This study has contributed to knowledge about the service quality construct in the hospitality industry in Australia by refining and developing the existing SERVQUAL scale. The findings suggest that there are three dimensions of service quality:
(1) employees;
(2) tangibles; and
(3) reliability

and that the employees dimension emerged as the best predictor of overall service quality. Additionally, these findings have demonstrated that the HOLSERV instrument is suitable for use by managers in the hospitality industry, so that they can confidently design service strategies that meet guests' expectations.

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Appendix. Modifications of the SERVQUAL scale

No.	Basic wording	Origin	Grouping
REL1	Promises to provide a service and does so	SERVQUAL	Reliability
REL2	Shows dependability in handling service problems	SERVQUAL	Reliability
REL3	Performs the service right the first time	SERVQUAL	Reliability
REL4	Provides services at the time it promises to do so	SERVQUAL	Reliability
RES1	Tells guests exactly when the services will be performed	SERVQUAL	Responsiveness
RES2	Gives prompt service	SERVQUAL	Responsiveness
RES3	Always willing to help	SERVQUAL	Responsiveness
RES4	Never too busy to respond to guests' requests	SERVQUAL	Responsiveness
ASS1	Instils confidence in guests	SERVQUAL	Assurance
ASS2	Guests feel safe in the delivery of services	Customised	Assurance
ASS3	Guests feel safe and secure in their stay	New	Assurance
ASS4	Polite and courteous employees	SERVQUAL	Assurance
ASS5	Have the knowledge to answer questions	SERVQUAL	Assurance
ASS6	Have the skill to perform the service	New	Assurance
EMP1	Gives individual attention	SERVQUAL	Empathy
EMP2	Deals with guests in a caring fashion	SERVQUAL	Empathy
EMP3	Has guests' best interests at heart	SERVQUAL	Empathy
EMP4	Understands guests' specific needs	SERVQUAL	Empathy
TAN1	Equipment, fixtures and fittings are modern looking	SERVQUAL	Tangibles
TAN2	Facilities are visually appealing	Customised	Tangibles
TAN3	Neat and professional employees	SERVQUAL	Tangibles
TAN4	Materials are visually appealing	SERVQUAL	Tangibles
TAN5	Fixture and fittings are comfortable	New	Tangibles
TAN6	Equipment and facilities are easy to use	New	Tangibles
TAN7	Equipment and facilities are generally clean	New	Tangibles
TAN8	Variety of food and beverages meet guests' needs	New	Tangibles
TAN9	Services are operated at a convenient time	SERVQUAL	Tangibles

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