

# Model of service quality: Customer loyalty for hotels

by Brenda Mak, Janet Sim, and David Jones

*The authors investigate the relationship between loyalty and perceived service quality of hotel customers and discuss managerial implications to develop strategies to enhance loyalty of hotel customers. A survey was conducted among customers in the San Francisco Bay Area. Results indicate that customer loyalty is dependent on perceived service quality, which is observed in terms of timeliness, facilities, and ambience.*

The hospitality industry has undergone tremendous tumult in recent years. Various factors have affected tourists in making traveling decisions. The danger of a terrorist attack, natural disasters such as the tsunami in South Asia, and epidemics such as the bird flu and SARS, might deter traveling and have an adverse effect on the hospitality and tourism industry. With the recent slowdown in demand and increase in competition, it is important that the hospitality industry look into factors that might improve customer loyalty and profitability.<sup>1,2</sup>

It has been shown that the cost of soliciting new customers is seven times higher than that of retaining old ones,<sup>3</sup> and that maintaining loyal customers will lead to profit increases. Customer loyalty is defined as the likelihood of a customer's return to a hotel.<sup>4</sup> A loyal customer may have an emotional attachment to the hotel,<sup>5</sup> may be more likely to repeat his or her stay at the hotel, may be less likely to switch because of price or other promotions from a competitor.<sup>6</sup>

In order to enhance the loyalty of customers, hotels have looked at various strategies that would improve the quality of their services. The service quality elements include ambience, facilities, and the timeliness of the service provided to the customer. Does better service quality always lead to better customer loyalty? Would loyalty of customers depend on the demographic characteristics of customers? Would customers with different demographic characteristics respond differently to different strategies of improving service quality? Understanding these relationships will shed light on how target segmentation

strategies should be set up to improve customer loyalty.

### **Service quality explored**

The focus of this research is to explore the antecedents of customer loyalty in the hotel industry. A survey was conducted among customers of the hotels in the San Francisco Bay Area. A confirmatory factor analysis was conducted to analyze the relationships among age, gender, perceived service quality, and customer loyalty. The latent factor of perceived service quality is exhibited in terms of ambience, facilities, and timeliness of service. The latent factor of customer loyalty is assessed in terms of perceived loyalty of the customer to the hotel.

The latent variable of perceived service quality affects the latent variable of loyalty. Studies have indicated that loyalty is affected by elements like responsiveness and services offered.<sup>7</sup> In this research, the focus is on the three observable dimensions of service quality: ambience, facilities, and timeliness (or responsiveness) of services.

Ambience, which refers to “the special atmosphere or mood created by a particular environment,” is an important dimension of service quality. (<http://www.dictionary.com>). Griffin<sup>8</sup> examined seven small lodging operations in San Jose, Costa Rica, and found that ambience was one of the factors contributing to the success

of the lodging operations. Research has indicated the ambience of the hotel affects customers' selection decision.<sup>9</sup> Link<sup>10</sup> suggested that hotel revisits could be enhanced by improving ambience to meet the needs of the target market segments. Better ambience will indicate better perceived service quality of the hotel.

A second dimension critical to the latent variable of service quality is the responsiveness or timeliness of hotel employee services. Pertrillose and Brewer,<sup>11</sup> using focus groups, found that customers perceived their experience as excellent when employees were courteous, friendly, helpful, and ready to respond. Skoglan and Sigauw<sup>12</sup> found that timeliness was an important measure of customer satisfaction with hotel employees.

A third dimension of the latent variable of perceived service quality is hotel facilities. Better amenities and design in the hotel would lead to better customer loyalty.<sup>13</sup> Wei, Ruys, and Muller<sup>14</sup> found that seniors and marketing managers in Australia considered hotel facilities to be the most important attribute in affecting customer satisfaction. O'Neill<sup>15</sup> also identified hotel facilities as a significant indicator of the hotel's property value.

### **Age, gender are influences**

Besides the latent variable of service quality, age and gender of the

customer may also affect the satisfaction and loyalty of the customer.<sup>16</sup> Oderkerken-Schroder, De Wulf, Kasper, Kleijnen, et al.<sup>17</sup> found that store loyalty was moderated by the age and gender of customers. Moutinho and Goode<sup>18</sup> found that female customers tended to have slightly lower brand loyalty (t statistic = 1.67). Sneath, Kennett, and Megehee<sup>19</sup> found that female customers were more risk averse and considered more social related factors in making purchase or adoption decisions.

Homburg and Giering<sup>20</sup> investigated the relationship between brand loyalty, age, and gender. They found that a man's decision to purchase the next car from the same dealer was strongly determined by his satisfaction within the functionality of the product itself; whereas a woman's loyalty to a car dealer was determined by her personal interaction during the sales processes. They also found that age affected brand loyalty. Older customers tended to focus their attention on their experienced-based evaluation of the product's key features, while younger customers would base their buying decision primarily on the information provided to them by the sales personnel.

It can be hypothesized that age and gender will have an impact on perceived service quality and customer loyalty. Perceived service quality in

turn has an impact on customer loyalty. Perceived service quality is observed in terms of facilities, timeliness of service, and ambience of the hotel. Figure 1 summarizes the hypothesized model.

### **San Francisco is site**

The survey was conducted among hotel customers in the San Francisco Bay Area. The majority of the respondents stayed at four-star hotels, while a few stayed at five-star and three-star hotels. A total of 139 usable questionnaires were obtained.

Of the 139 respondents, 40 percent were female; 31 percent were male, and the rest preferred not to state their gender. About 61 percent were between the ages of 26 to 45; 14 percent were under 25, 20 percent were older than 46, and 5 percent did not state their age. More than two thirds (70 percent) of respondents were employed. More than one fourth (26 percent) worked in hotels or restaurants, 13 percent in high-tech, 11 percent in education, 10 percent in healthcare, 12 percent in retailing, and 7 percent in government. Three fourths had completed bachelor's degrees or above, and 46 percent had degrees in business, science, or engineering.

The survey instrument was first developed using literature review and consultations with hotel industry experts. A pretest of the questionnaire

was then conducted among students in the Hospitality Management Department at San Francisco State University and the result was used to refine the instrument to improve its clarity and depth. Respondent's perceptions were measured using a Likert scale of six points.

Each of the observable variables was measured by several questions. The items for each variable were checked for construct validity and reliability using SPSS. Construct validity refers to whether all the items for the observable variable represent one single construct. Construct validity was established by checking the result of the factor analysis, with all the items representing one factor accounting for about at least 61 percent of variance. Reliability refers to the degree of stability of the scale.<sup>21</sup>

Reliability of the construct is demonstrated by checking the Cronbach alpha for the items for each construct and the correlation among the items for the construct. Typically, a scale is said to be reliable if alpha is 0.70 or higher. The items all had high reliability coefficients, ranging from 0.92 to 0.96.

#### **Model is adequate**

The survey data were analyzed with LISREL confirmatory factor analysis, a tool designed for the analysis of covariance structure model.<sup>22</sup> It captures the simultaneous

interaction among the constructs and probes into the nature of the latent variables. The final model is given in Figure 2. Insignificant relationships are indicated by dotted arrows. In the final model, "Service quality" is made up of three significant indicators, "Timeliness," "Facilities," and "Ambience." "Service quality" is significantly related to "Loyalty." The effect of "Age" on "Service quality" is positive and significant, but its effect on "Loyalty" is insignificant. The effects of "Gender" on "Service quality" and "Loyalty" are insignificant. "Loyalty" is observed in terms of "Perceived loyalty" as evaluated by the customer. Age and gender are indicated by the "Age measure" and "Gender measure" reported by the customer.

The adequacy of the model in Figure 2 is assessed using various measures.<sup>23</sup> In using structural equation models for testing, the null hypothesis is set up as a priori not to be rejected. The chi-square statistic tests whether the observed data fit the hypothesis of the proposed model, and a smaller chi-square value indicates a better fit.

Hence, when the chi-square values are statistically insignificant, the hypothesized model would have a pattern close to the observed data. However, for small sample sizes that might have slightly departed from

normality, the chi-squares are not good model fit indicators. The chi-square per degree of freedom should be used instead. A ratio of approximately five shows a reasonable fit, while a ratio between one and two is an excellent fit.<sup>24</sup> The ratio of the model in Figure 2 is 1.772 (chi-square = 10.63 with six degrees of freedom), indicating a very good fit.

Other measures of fit include the goodness of fit index (GFI) and normed fit index (NFI). Both the GFI and NFI are always between zero and one, with one indicating a perfect fit, and any value above 0.9 suggesting a good fit.<sup>25</sup> The model has a GFI of 0.97 and a NFI of 0.96. This shows a good fit. The adjusted goodness of fit (AGFI) is 0.91. This again shows a good fit. Similarly, the non-normed fit index (NNFI) and the comparative fit index (CFI) are two additional measures ranging from 0 to 1, where values close to or greater than 0.9 represent a reasonable model fit. The NNFI and CFI for the model are 0.98 and 0.95, respectively. Finally, the root mean squared residual (RMSR) shows the proportion of the variance not explained by the model. In general, a root mean squared residual of 0.08 or below indicates a reasonable model fit. The model has a RMSR of 0.075. Overall speaking, the GFI, AGFI, NFI, NNFI, CFI, and RMSR all indicate that the model has a good fit.

### **Ambience enhances quality**

Figure 2 summarizes the maximum likelihood parameter estimates and t-values for the model constructs. The model parameters  $\gamma_{11}$  are set to unity to define the unit of measurement for the latent variables "Service quality." As indicated,  $\gamma_{21}$  ( $t = 7.35$ ) is 1.83 and  $\gamma_{31}$  ( $t = 7.56$ ) is 1.85; both are significant at the 0.05 level. This suggests that "Timeliness," together with "Facilities" and "Ambience," are observable measures of the latent variable "Service quality." Since both  $\gamma_{21}$  and  $\gamma_{31}$  are positive, this shows that the better are the facilities and ambience as perceived by the customer, the more positive is the perceived service quality of the hotel. Since both  $\gamma_{21}$  and  $\gamma_{31}$  are greater than unity, this suggests that both "Ambience" and "Facilities" are more important indicators than "Timeliness" in measuring "Service quality." In addition, the magnitude of  $\gamma_{21}$  and  $\gamma_{31}$  are almost equal, suggesting that "Ambience" and "Facilities" are about the same in importance in measuring "Service quality."

In addition,  $\beta_{21}$  is 2.25 ( $t = 7.03$ ) and is significant at the 0.05 level. This shows that higher perceived service quality would lead to higher customer loyalty, with one unit increase in the level of perceived "Service quality" leading to 2.25 units increase in "Loyalty" levels of

the customer. "Service quality" as a latent variable is measured through "Timeliness," "Ambience," and "Facilities." Better "Timeliness," "Ambience," and "Facilities" would lead to better "Service quality," which in turn leads to better customer loyalty.

### **Loyalty can be improved**

In this study LISREL was applied to analyze the underlying relationships between age, gender, "Service quality," and "Loyalty" of customers at hotels. LISREL is a powerful tool in analyzing the simultaneous relationships among latent variables. It analyzes the underlying dimension of a latent variable and gives an accurate picture of the true model. This investigation furthers the understanding of the relationship between the latent constructs of "Service quality" and "Loyalty" of customers toward hotels.

The result of this study suggests that "Loyalty" of hotel customers can be improved by enhancing "Service quality" of the hotel as perceived by the customers. "Service quality" is composed of several aspects including "Timeliness," "Facilities," and "Ambience." To develop better perceived service quality, hotels need to consider how to improve on these areas of service delivery. Timeliness of the service delivery is certainly an

issue directly related to training. This would be especially critical for employees with direct customer contact (i.e., the boundary spanners), but it is also an important element in the training of the "back of the house" employee who must interact with the boundary spanner and ultimately the customers.

The importance of facilities and ambience to the perceived service quality would suggest that constant updating and maintenance of the hotel's facilities is paramount. This research provides support for including funds in the annual budget of a hotel for facilities improvements and other capital-related expenses designed to keep the service quality image and ambience of the hotel up to date. The psychical aspects of the hotel are the representation of intangible service quality provided and need to be addressed.

The effect of age of the customer on perceived service quality is positive and significant, indicating older customers may tend to rate service quality more positively. This suggests that hotels may need to consider the age of the customer when developing the service quality of the hotel. In particular, it would seem that the younger generation demands more from a hotel in order to rate its service quality more positively.

One limitation of this research is that only 71 percent of the

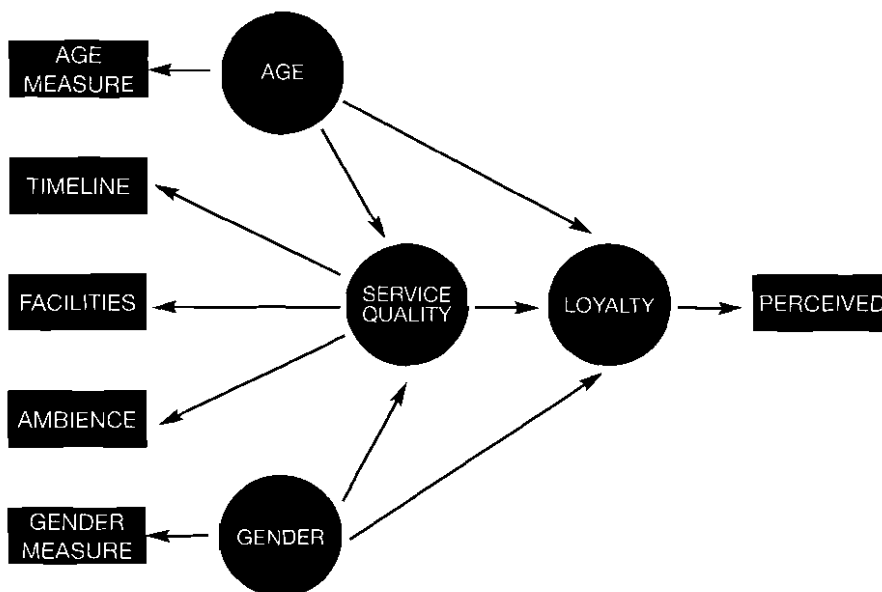
respondents indicated their gender. In future research the person administering the survey should report the gender of the respondents. The data then collected would allow a more accurate assessment of the effect of gender on perceived service quality and loyalty.

A second limitation of this research is that this study includes customers mostly from four-star hotels. Future research may consider collecting data from more of the three-star and five-star hotels and comparing customers among

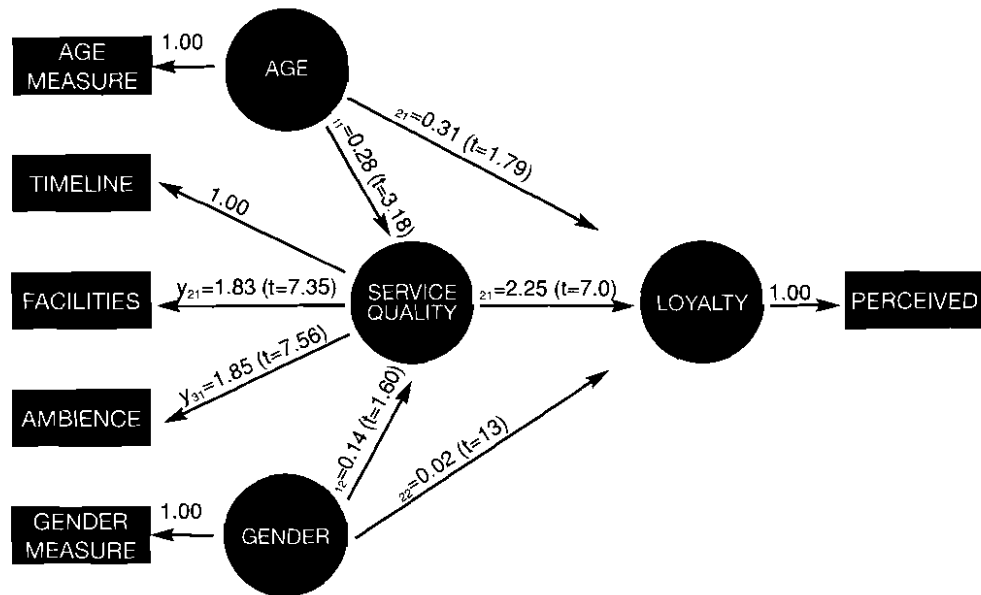
different types of hotels (e.g. five-star hotels versus three-star hotels). The factors that affect loyalty of customers may be different for different types of hotels.

In addition, it may be important to find out whether the respondent is a decision maker in the choice of a hotel. If customers are on business trips, the hotel decisions are made by companies. Analyzing the decision-making process involved in choosing hotels would enrich our understanding of the determinants of customer loyalty.

**Figure 1: Hypothetical model for relationships among age, gender, service quality, and loyalty**



**Figure 2 : Final model for relationships among age, gender, service quality, and loyalty\***



**Goodness of Fit:**

Chi-Square	10.63
Degree of Freedom (df)	6
Chi-Square / df	1.772
Goodness of Fit (GIF)	0.97
Adjusted Goodness of Fit (AGFI)	0.91
Normed Fit Index (NFI)	0.96
Comparative Fit Index (CFI)	0.98

\* Significant relationships are denoted as solid arrows and insignificant relationships are denoted as dotted arrows.

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