

EXPLORING THE RELATIONSHIP BETWEEN SERVICE QUALITY AND CUSTOMER SATISFACTION IN CROATIAN HOTEL INDUSTRY

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Abstract

Purpose – The purpose of the present study was to examine the relationship between service quality and customer satisfaction. The main objective was to discuss the impact of perceived service quality dimensions on customer satisfaction in the hotel industry in Croatia.

Methodology – The data were collected using self-administered questionnaire. The questionnaire consisted of three parts. First, perceived service quality was measured using modified SERVQUAL model. Second, customer satisfaction was operationalized with one variable, representing overall satisfaction measure. Third, demographic variables were included. Questionnaires were distributed to domestic and international hotel guests in the Opatija Riviera (Croatia). Descriptive analysis, factor analysis, reliability analysis, correlation analysis, and multiple regression analysis were performed to analyze the data.

Findings – Factor analysis identified four dimensions of perceived service quality, namely reliability, empathy and competence of staff, accessibility and tangibles. Multiple regression analysis showed that reliability, accessibility and tangibles had a significant and positive effect on overall customer satisfaction. On the other hand, empathy and competence of staff positively influenced hotel guests' satisfaction, but this impact was not statistically significant when other dimensions were involved. These results indicate that hotel service quality is indeed a significant predictor of customer satisfaction. Thus, improving hotel service quality, results with higher satisfaction levels of hotel guests.

Value/originality – The present study focuses on determining relative importance of perceived hotel service quality dimensions in relation to customer satisfaction, reporting the findings from Croatia. Therefore, it contributes to the existing literature on service quality and customer satisfaction relationship in hotel industry.

Keywords service quality, customer satisfaction, SERVQUAL, statistical analysis, hotel industry, Croatia.

INTRODUCTION

Providing excellent service quality and achieving customer satisfaction is the most important and challenging issue facing the contemporary service industry (Hung et al., 2003). There has been a vast amount of studies that empirically investigated the relationship between these concepts, reporting significant influence that service quality exerts on customer satisfaction. However, only few of them examined the service quality dimensions that affect customer satisfaction in hotel industry.

Therefore, the main purpose of this study was to examine the relationship between perceived service quality and customer satisfaction in hotel industry in Croatia. The focus was to identify which hotel service quality dimensions were important to hotel guests and had significant influence on their overall satisfaction.

Specifically, the present study intended to answer the following research questions:

1. What is the factor structure of perceived service quality in Croatian hotel industry?
2. What is the nature of the relationship between perceived service quality dimensions and overall customer satisfaction in Croatian hotel industry?
3. To what extent perceived service quality dimensions determine overall customer satisfaction in Croatian hotel industry?
4. What perceived service quality dimension had the strongest impact on overall customer satisfaction in Croatian hotel industry?

The research findings are expected to fill the gap in the literature, and to provide useful guidance for academics and practitioners regarding service quality and customer satisfaction relationship in hotel industry in Croatia.

1. LITERATURE REVIEW

Considerable research has been conducted on service quality and customer satisfaction, as these concepts have been recognized as playing an important role for company's success in competitive market (Oh and Parks, 1997; Nadiri and Hussain, 2005). Many researchers have focused their attention on the nature of the relationship between service quality and customer satisfaction.

The most common definition of service quality is the comparison customers make between their expectations and perceptions of the received service (Parasuraman et al., 1988). In addition, perceived service quality has been defined as customer's judgement or attitude relating to the overall excellence or superiority of the service (Zeithaml, 1988). A number of researchers agreed that the concept is multidimensional, although it seems that there has been no consensus regarding the number and the nature of the dimensions (Lehtinen and Lehtinen, 1982; Grönroos, 1984; Parasuraman et al., 1985, 1988).

However, service quality is often measured using SERVQUAL instrument, developed by Parasuraman et al. (1985; 1988). It consists of 22 items which measure five service quality dimensions, namely, tangibles (physical facilities, equipment, and appearance of employees), reliability (ability to perform the promised service dependably and accurately), responsiveness (willingness to help customers and provide prompt service), assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence), and empathy (caring and individualized attention the firm provides its customers).

Customer satisfaction, on the other hand, has usually been defined as a postconsumption evaluative judgement (Fornell, 1992; Oliver, 1997). According to Oliver (1997), customer satisfaction is a judgement that product or service provides a pleasurable level of consumption related fulfilment.

A review of literature implies that service quality is one of the main antecedents of customer satisfaction. What is more, the relationship is positive, suggesting that higher service quality is likely to increase customer satisfaction. The relationship was examined in different service contexts and in different countries. Caruana (2002) (banking services in Malta), Kang and James (2004) (mobile phone services in Korea), Tsoukatos and Rand (2006) (insurance services in Greece), Hsu (2008) (online retail services in Taiwan), Bai et al. (2008) (hotel web-sites in China), Wang et al. (2009) (tourist destination in China), Huang et al. (2010) (tour guide services in Shanghai) confirmed that service quality is positively and significantly related to customer satisfaction.

Although researchers generally agree with the multidimensionality of service quality concept, only few empirical studies have reported the relationships between service quality dimensions and customer satisfaction. Andaleeb and Conway (2006) noted that responsiveness, food quality/reliability and price had a significant effect on customer satisfaction in full service restaurants in the USA. Kim et al. (2009) found that food quality, service quality, price and value, convenience, and atmosphere had significant relationship with customer satisfaction in university food service facilities in the USA. Mohammad and Alhamadani (2011) stated that five service quality dimensions (empathy, tangibles, reliability, responsiveness and assurance) had significant influence on customer satisfaction in commercial banks in Jordan.

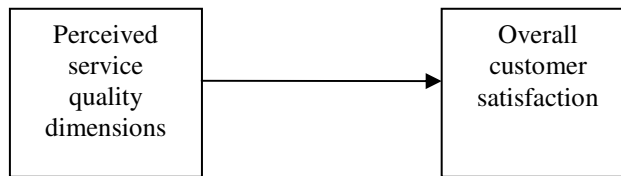
Furthermore, researchers reported that service quality significantly influenced customer satisfaction in hotel industry in the USA (Oh, 1999), Korea (Yoo and Park, 2007), Slovenia (Pisnik Korda et al., 2009). Even though the literature supports the idea that hotel service quality is related to customer satisfaction, a limited number of studies has actually examined the relationship and the importance of service quality dimensions and customer satisfaction in hotel industry. Choi and Chu (2001) found that the combination of staff service quality, room qualities, value, general amenities, IDD facilities, business services and security had significant impact on customer satisfaction in Hong Kong hotels. In addition, Fah and Kandasamy (2011) noted that tangibility, reliability and assurance, responsiveness and empathy, and ecological design and concept had significant relationship with customer satisfaction in Malaysian hotels.

2. METHODOLOGY

2.1. Study framework

The framework for the present study was developed based on the extensive literature review and is shown in Figure 1.

Figure 1: **Study framework**



Source: Authors

The study framework includes independent and dependent variables. Independent variable represents perceived service quality. Specifically, dimensions of perceived service quality that will be extracted with exploratory factor analysis. On the other hand, overall customer satisfaction represents dependent variable.

The purpose was to assess the relationship between service quality and customer satisfaction in the context of hotel industry in Croatia. Specifically, the study aims to discuss the impact of the identified dimensions of perceived service quality on overall customer satisfaction.

In order to meet study's objectives, following hypothesis is proposed:

H1: Perceived service quality dimensions have positive and significant effect on overall customer satisfaction.

2.2. Research instrument

The instrument for collecting primary data in this study was on-site and self-administered questionnaire. The questionnaire consisted of three parts, designed to measure perceived service quality, customer satisfaction and demographic information of the respondents.

The foundation for measuring perceived service quality was SERVQUAL model (Parasuraman et al., 1988) that was modified to meet specific features of hotel service. The modification resulted in the deletion of one original SERVQUAL item and the inclusion of eight new items, leaving a total of 29 hotel attributes. The original item "Guests feel safe in their transactions with employees" was deleted and replaced by the item "Guests feel safe and secure in their stay". The reason for this change is the confusing meaning of the word "transactions" and the fact that safety and security are regarded as an important factor in a hotel stay. Thus, out of 29 items, 21 were adapted from Parasuraman et al. (1988). Remaining 8 items were selected from following studies. One item ("parking area") was adapted from Pizam and Ellis (1999). Three items ("appropriate location", "available and clear information", "variety of facilities") were included from Snoj and Ogorelc (1998). Finally, four items ("clean and tidy hotel", "feeling safe and secure", "ease of finding a way around the hotel" and "typical service quality for hotel category") were chosen from Marković (2003). The final set of 29 hotel attributes represented seven dimensions: five original SERVQUAL dimensions (tangibles, reliability, responsiveness, assurance, and empathy) and two new dimensions, accessibility and output quality. Perceived service quality was

assessed with 7-point Likert-type scale, ranging from “strongly disagree” (1) to “strongly agree” (7).

Customer satisfaction was operationalized with one item, representing overall measure of customer satisfaction. Although some researchers stated that this concept should be measured on attribute level, thus employing a combination of service attributes, several researches were using one, overall measure (Yüksel and Rimmington, 1998; Choi and Chu, 2001; Akama and Kieti, 2003; Alén Gonzalez et al., 2007; Namkung and Jang, 2008). Therefore, it was justified to employ one-item approach for measuring customer satisfaction. Overall customer satisfaction was rated on 7-point Likert-type scale, ranging from “very dissatisfied” (1) to “very satisfied” (7).

Respondents’ demographic information included age, gender, country of residence, purpose of visit, level of education, duration of staying at a hotel, and hotel category. These characteristics were measured using nominal scale.

The questionnaire was prepared in the Croatian language and was additionally translated into the English, Italian and German language to capture both domestic and international hotel guest.

2.3. Sample

The target population for this study was domestic and international hotel guests in the Opatija Riviera (Croatia). To make the research more representative, questionnaires were distributed in 15 hotels of different sizes and categories. Before the data collection started, hotel managers were contacted for permission to take part in the study. Therefore, the questionnaires were administered only in those settings whose managers agreed to participate.

The reception desk employees helped to distribute and collect the questionnaires from the participating hotel guests. The questionnaires were distributed to those guests who were willing to participate in the research at the reception desk. Participation was voluntary. Therefore, the data were collected using a convenience sampling approach. No incentives were provided to the respondents.

A total of 960 questionnaires were administered and 265 were returned. After eliminating 12 questionnaires because of incompleteness, 253 useful questionnaires were obtained, yielding a 26.4 per cent response rate. Considering the issue of the sample size when conducting more complex statistical analysis, the sample of 253 valid questionnaires deemed satisfactory.

2.4. Data analysis

Descriptive statistics, exploratory factor analysis, reliability analysis, correlation analysis, and multiple regression analysis were performed to analyze the collected data.

Descriptive statistics was used to examine demographic profile of the respondents and to evaluate perceived hotel service quality and overall customer satisfaction.

The purpose for employing the exploratory factor analysis was to derive factors from 29 hotel attributes and to identify the main dimensions of perceived hotel service quality. This study adopted principal component analysis with varimax rotation. According to Hair et al. (2006), the appropriateness for conducting factor analysis was assessed with Kaiser-Meyer-Olkin's measure (KMO) and Bartlett's sphericity test. Further, the criteria for the number of factors extracted and variables retained were based on eigenvalues, percentage of variance, significance of factor loadings and number of variables in the extracted factor. Factors with eigenvalues equal or greater than 1, a solution with at least 60 per cent of total variance explained, factor loadings above 0.4, and factors that contained at least three items were regarded as satisfactory.

The Cronbach alpha coefficients were calculated to test the scale's reliability. Coefficients higher than 0.6 were considered acceptable, indicating reasonable internal consistency and reliability (Hair et al., 2006).

Correlation analysis and multiple regression analysis were used to explore how the dimensions of perceived service quality derived from factor analysis were related to the overall customer satisfaction. Specifically, correlation analysis was performed to assess relationships between each dimension and overall customer satisfaction. For this purpose, Pearson correlation coefficients were calculated. In addition, multiple regression analysis was adopted to examine the relationship between the combination of perceived service quality dimensions and overall customer satisfaction. This is a useful technique that can be used to analyze the relationship between a single dependent variable and several independent variables (Hair et al., 2006). Therefore it was conducted to test the main research hypothesis. The multiple regression analysis was performed using confirmatory (simultaneous) approach.

3. RESULTS

3.1. Demographic characteristics

Demographic profile of the sample is presented in Table 1.

Table 1: Demographic profile of the respondents (N=253)

| Items | Percentage | Items | Percentage |
|--------------------------|------------|--------------|------------|
| <i>Gender</i> | | <i>Age</i> | |
| Male | 51.8 | 16-25 | 3.6 |
| Female | 48.2 | 26-35 | 15.4 |
| | | 36-45 | 26.1 |
| <i>Purpose of visit</i> | | 46-55 | 19.4 |
| Business | 9.1 | 56-65 | 25.7 |
| Visit friends, relatives | 4.3 | 66 and above | 9.9 |
| Vacation | 86.2 | | |
| Others | 0.4 | | |

| Items | Percentage | Items | Percentage |
|---------------------------------------|------------|-----------------------------|------------|
| <i>Level of education</i> | | <i>Country of residence</i> | |
| Primary school | 3.6 | Austria | 11.1 |
| Secondary school | 29.2 | Croatia | 16.6 |
| Higher education | 24.1 | Italy | 20.9 |
| University and above | 36.4 | Germany | 14.6 |
| Others | 6.7 | Others | 36.8 |
| <i>Duration of staying at a hotel</i> | | <i>Hotel category</i> | |
| 1 – 3 days | 19.0 | 4-Star | 53.3 |
| 4 – 7 days | 49.8 | 3-Star | 33.3 |
| 8 – 15 days | 28.1 | 2-Star | 13.4 |
| Over 15 days | 3.2 | | |

Source: Authors

Among the 253 respondents in the sample, 16.6 per cent were domestic and 83.4 per cent were international tourists. The share of male respondents (51.8 per cent) was slightly larger than females (48.2 per cent). Most of the respondents (55 per cent) had more than 46 years of age. More than 60 per cent of hotel guests in the sample had a university or college education. About 86 per cent of the respondents indicated that the main purpose of their visit was vacation. Respondents who stayed at a 4-Star hotel accounted for more than half of the sample (53.3 per cent). Nearly half of them (49.8 per cent) stayed between four and seven days.

3.2. Perceived service quality dimensions

Hotel attributes were factor analyzed using principal component analysis with varimax rotation. The purpose was to identify the main perceived hotel service quality dimensions.

First, the appropriateness for conducting factor analysis was evaluated. KMO value was high and scored 0.932, indicating sufficient items for each extracted factor. Bartlett's Test was significant ($\chi^2=4987.728$, $df=406$, $Sig.=0.000$) meaning that there are strong correlations between the items in each factor. Hence, it was justified to conduct exploratory factor analysis. The results are reported in Table 2.

Table 2: **Factor and reliability analyses for perceived hotel service attributes (N=253)**

| Factor/Items (n=29) | Factor loading | Eigen value | % of Variance | Cronbach alpha |
|--------------------------------------|-------------------|----------------|------------------|-------------------|
| Factor 1 | | 5.551 | 19.142 | 0.916 |
| Interest in solving guests' problems | 0.751 | | | |
| Error-free service | 0.732 | | | |
| Knowing exact time when | 0.671 | | | |

| Factor/Items (n=29) | Factor loading | Eigen value | % of Variance | Cronbach alpha |
|---|---------------------------|------------------------|--------------------------|---------------------------|
| service will be performed | | | | |
| Service without delays | 0.658 | | | |
| Performing services right the first time | 0.648 | | | |
| Hotel's staff provides prompt service | 0.623 | | | |
| Convenient opening hours | 0.623 | | | |
| Performing service in the promised time | 0.586 | | | |
| Neat hotel staff | 0.505 | | | |
| Factor 2 | | 4.953 | 17.079 | 0.917 |
| Understanding guests' specific needs | 0.731 | | | |
| Hotel staff has time to answer guests' questions | 0.725 | | | |
| Hotel staff provides personal attention | 0.723 | | | |
| Providing an individual attention | 0.713 | | | |
| Hotel staff has knowledge to answer questions | 0.688 | | | |
| Hotel staff instils confidence | 0.632 | | | |
| Available and clear information in a hotel | 0.622 | | | |
| Factor 3 | | 4.284 | 14.774 | 0.869 |
| Appropriate location | 0.693 | | | |
| Ease of finding a way around the hotel | 0.686 | | | |
| Feeling safe and secure | 0.618 | | | |
| Courteous hotel staff | 0.554 | | | |
| Clean and tidy hotel | 0.549 | | | |
| Guests' best interest at heart | 0.537 | | | |
| Typical service quality for hotel category | 0.529 | | | |
| Willingness for helping guests | 0.482 | | | |
| Factor 4 | | 2.577 | 8.887 | 0.785 |
| Visually appealing physical facilities | 0.784 | | | |
| Modern-looking equipment | 0.748 | | | |
| Visually appealing materials (pamphlets, web-sites) | 0.501 | | | |
| Factor 5 | | 1.514 | 5.222 | - |
| Offering variety of facilities | 0.771 | | | |
| Parking area | 0.675 | | | |
| Total | | 18.879 | 65.104 | 0.953 |

Source: Authors.

The 29 variables representing hotel attributes were reduced to five factors, explaining 65.1 per cent of total variance in the data. Factor loadings were relatively high, ranging from 0.482 to 0.784. This indicates that correlation of the items with the factors on which they were loaded was reasonably high.

Factor 5 contained only two items and could not be considered as a factor. Thus, the final solution retained four factors that represent main dimensions of perceived service quality in the Croatian hotels. The four remaining factors are labelled as follows.

- Factor 1 – “reliability” contains nine items and indicates solving guests' problems and performing error-free service at promised time.
- Factor 2 – “empathy and competence of staff” is loaded with seven items that refer to staff knowledge and ability to provide individual attention.
- Factor 3 – “accessibility” gathered eight items reflecting appropriate location of the hotel and ease of communication and finding the way around the hotel.
- Factor 4 – “tangibles” includes three items referring to appearance of the facilities, equipment and communication materials.

Next, reliability analysis was performed. Results (Table 2) showed that Cronbach's alpha coefficients of the extracted factors ranged from 0.785 to 0.917. That is well above the minimum value of 0.60, which is considered acceptable as an indication of scale reliability (Hair et al., 2006). Thus, these values suggest good internal consistency of the factors. Finally, Cronbach's alpha value for the overall perceptions scale was 0.953 and indicates its high reliability.

Therefore, “reliability”, “empathy and competence of staff”, “accessibility” and “tangibles” can be regarded as reliable underlying dimensions of perceived hotel service quality in the Croatian hotels.

In addition, Table 3 indicates that hotel guests in the Opatija Riviera perceived “accessibility” as the most dominant service quality dimension (mean = 6.18), followed by “reliability” (mean = 5.99), “empathy and competence of staff” (mean = 5.99), and “tangibles” (mean = 5.46). The results indicate highly rated hotel performance.

3.3. Antecedents of overall customer satisfaction

Correlation analysis was used to examine the nature of the relationship among each perceived service quality dimension and overall customer satisfaction. In order to identify the relative impact of perceived service quality dimensions on overall customer satisfaction, multiple regression analysis was employed. Performing these analyses, the main research hypothesis was tested. For this purpose, four dimensions extracted in exploratory factor analysis were applied as independent variables and overall customer satisfaction as dependent variable. Following sub-hypotheses were postulated:

H1a: Reliability has positive and significant impact on overall customer satisfaction.

H1b: Empathy and competence of staff has positive and significant impact on overall customer satisfaction.

H1c: Accessibility has positive and significant impact on overall customer satisfaction.
 H1d: Tangibles has positive and significant impact on overall customer satisfaction.

Table 3: **Descriptive statistics and correlation matrix (N=253)**

| Variables | Mean | SD | 1 | 2 | 3 | 4 | 5 |
|-------------------------------------|------|-------|-------|-------|-------|-------|-------|
| 1. Reliability* | 5.99 | 0.721 | 1.000 | | | | |
| 2. Empathy and competence of staff* | 5.99 | 0.780 | 0.702 | 1.000 | | | |
| 3. Accessibility* | 6.18 | 0.662 | 0.778 | 0.725 | 1.000 | | |
| 4. Tangibles* | 5.46 | 1.100 | 0.609 | 0.551 | 0.484 | 1.000 | |
| 5. Overall customer satisfaction** | 6.21 | 0.816 | 0.732 | 0.584 | 0.732 | 0.541 | 1.000 |

Note: mean ranges from 1 to 7; SD – standard deviation; * - independent variable; ** - dependent variable; all correlation coefficients are significant at 0.01 level.
 Source: Authors.

Correlation matrix (Table 3) indicates that perceived service quality dimensions were moderately to strongly correlated with overall customer satisfaction. All the relationships were positive and statistically significant. According to the results, dimensions “reliability” and “accessibility” had the strongest correlations with the dependent variable ($r = 0.732$, $p < 0.01$), followed by “empathy and competence of staff” and “tangibles” ($r = 0.584$ and $r = 0.541$, $p < 0.01$, respectively).

Before applying multiple regression analysis, multicollinearity of variables should be examined. Multicollinearity occurs when any single independent variable is highly correlated with a set of other independent variables (Hair et al., 2006). Correlation coefficients (Table 3) were calculated to verify this assumption.

As noted in Table 3, all independent variables (perceived service quality dimensions) were intercorrelated with each other. The relationships were positive and statistically significant. However, correlation coefficients did not exceed cut-off value of 0.80, implying that multicollinearity problem did not occur in this research (Bryman and Cramer, 2009).

Using confirmatory approach, where all the independent variables are simultaneously added to the regression model, multiple regression analysis was performed. The results are presented in Table 4.

The multiple regression analysis revealed the following. The relationship between the combination of independent variables in the model and the dependent variable is strong ($R = 0.785$). According to the coefficient of determination ($R^2 = 0.617$) and adjusted coefficient of determination (adjusted $R^2 = 0.611$), the four perceived service quality dimensions explained approximately 61 per cent of variance in overall customer satisfaction. Since R^2 value and adjusted R^2 value are very similar (adjusted R^2 decreased for only 0.006 points), the regression model in this research has very good

explanatory power of the dependent variable. In addition, the significant *F*-ratio ($F = 99.780$, $p < 0.01$) suggested that results of the adopted regression model could have not occurred by chance and that combination of independent variables significantly predicted dependent variable.

Table 4: **Multiple regression analysis (N=253)**

| Model fit | | | | |
|---------------------------------|----------|-------------|----------|-------------|
| Multiple R | 0.785 | | | |
| R ² | 0.617 | | | |
| Adjusted R ² | 0.611 | | | |
| Standard error | 0.509 | | | |
| F ratio | 99.780 | | | |
| Significance | 0.000 | | | |
| Independent variable | b | Beta | t | Sig. |
| Constant | 0.328 | | 1.067 | 0.287 |
| Reliability | 0.383 | 0.338 | 4.797 | 0.000* |
| Empathy and competence of staff | 0.053 | 0.051 | 0.818 | 0.414 |
| Accessibility | 0.530 | 0.430 | 6.290 | 0.000* |
| Tangibles | 0.115 | 0.155 | 3.046 | 0.003* |

Note: Dependent variable: overall customer satisfaction; * - significant at 0.01 level
 Source: Authors

To assess the relative importance of each independent variable in determining the value of the dependent variable, beta coefficients are provided. According to Table 4, three out of four independent variables significantly influenced overall customer satisfaction. The dimension “accessibility” ($\beta = 0.430$, $p < 0.01$) had the highest statistically significant standardized coefficient. Therefore, this was the most important independent variable and had the highest impact on overall customer satisfaction. This was followed by the dimensions “reliability” ($\beta = 0.338$, $p < 0.01$), and “tangibles” ($\beta = 0.115$, $p < 0.01$). The least important independent variable in this regression model was “empathy and competence of staff” ($\beta = 0.051$, $p > 0.05$), meaning that this dimension had the smallest impact on overall customer satisfaction. In addition, this impact was not statistically significant.

However, since all the variables were considered together, the deletion of one independent variable (although not significant) can affect the significance levels of other independent variables (Leech et al., 2005). Therefore, multiple regression model in this study gives adequate and significant results, meaning that accessibility, reliability, tangibles, and empathy and competence of staff can be used as significant predictors of overall customer satisfaction in the Opatija Riviera hotels.

DISCUSSION AND CONCLUSION

The study reported here was designed to empirically examine the nature of the relationship between perceived service quality dimensions and overall customer satisfaction in the hotel industry in Croatia. Using several methods of statistical analysis, research questions were answered, objectives achieved and hypotheses tested.

The findings of factor analysis revealed that the main dimensions of perceived service quality in the Croatian hotels were “reliability”, “empathy and competence of staff”, “accessibility” and “tangibles”. Previous studies conducted in the hotel sector identified different outcomes with regard to the number and interpretation of dimensions guests use to assess perceived hotel service quality (Akan, 1995; Wong Ooi Mei *et al.*, 1999; Choi and Chu, 2001; Marković, 2003; Akbaba, 2006). This implies that the dimension structure depends on the measurement context. However, results revealed similarities to a certain extent. Namely, most common factors of perceived service quality in hotel industry appear to be “reliability”, “employees”, and “tangibles”. These dimensions are consistent with dimensions in the present study, as well. This means that hotel guests usually perceive service quality as reliable and error-free, with courteous, professional and neat hotel employees and visually appealing physical facilities.

Correlation analysis showed positive and significant relationships between each dimension of perceived service quality and overall customer satisfaction. This evidence supported the hypotheses H1a to H1d. Dimensions “reliability” and “accessibility” were strongly related, while “empathy and competence of staff” and “tangibles” were moderately related to overall customer satisfaction. These results suggested that increase in each service quality dimension is likely to lead to the increase in overall customer satisfaction. Similar findings were reported in context of hotel industry in Nepal (Pandey and Joshi, 2010), Malaysia (Fah and Kandasamy, 2011), Jordan (Al Khattab and Aldehayyat, 2011).

Multiple regression analysis indicated that perceived service quality is an important antecedent of overall customer satisfaction. The results revealed strong, positive and significant relationship between the combination of perceived service quality dimensions and overall customer satisfaction, implying that highly perceived “reliability”, “accessibility”, “empathy and competence of staff”, and “tangibles” lead to higher overall customer satisfaction in the Croatian hotels. In addition, about 61 per cent of variance in overall customer satisfaction can be explained by these dimensions. Thus, the explanatory power of the tested model in the hotel industry is satisfactory. These results confirm the main study hypothesis (H1).

The most important predictor of overall customer satisfaction in this study was dimension “accessibility”. Thus, appropriate location, ease of finding the way around the hotel, as well as hotel staff’s affability had the greatest impact on overall customer satisfaction. It should be noted that being accessible doesn’t refer only to hotel facilities, but considers hotel staff as well. According to the results, a one-unit increase in perceived quality with hotel service accessibility would result with 43 per cent increase in the hotel guests’ overall satisfaction with their stay in the Croatian hotels, other variables being held constant.

“Reliability” turned out to be the second most important dimension affecting overall customer satisfaction. Therefore, hotel managers should continue to insist on error-free service that is delivered in the promised time, and guests’ problems should be solved in an appropriate way in order to deliver satisfactory service to their guests. A one-unit increase in perceived quality with hotel service reliability would lead to 33.8 per cent increase in the hotel guests’ overall satisfaction with their hotel stay, other variables being held constant.

Furthermore, “tangibles” appeared to be the third dimension by importance of influencing overall customer satisfaction in this study. Hence, visually appealing physical facilities and materials affect overall customer satisfaction. The results showed that a one-unit increase in perceived quality with hotel service tangibles would result with 15.5 per cent increase in the hotel guests’ overall satisfaction with their hotel stay in Croatia, other variables being held constant.

Finally, although Pearson’s correlation coefficient between dimension “empathy and competence of staff” and overall customer satisfaction implied significant positive correlation, when three other dimensions were involved in the model, this dimension did not have statistically significant impact on overall customer satisfaction.

However, the combination of four perceived service quality dimensions tested in this study demonstrated significant impact on overall customer satisfaction. The findings confirm that higher reliability, accessibility, tangibles and empathy and competence of staff increase overall customer satisfaction in the hotel industry. Therefore, hotel managers should set priorities and continue to improve these important aspects of hotel service quality.

The indicators of multiple regression analysis in this study can be compared with similar studies conducted in the hotel industry. Adjusted R^2 in the present study, as well as in the studies conducted by Choi and Chu (2001) and Fah and Kandasamy (2011) indicated that the combination of perceived service quality dimensions explained rather high percentage of variation in overall customer satisfaction (61.1 per cent, 55.1 per cent, and 43.9 per cent, respectively). Moreover, all regression models were statistically significant. Choi and Chu (2001) reported that all seven independent variables (dimensions) in the regression model had significant effect on overall customer satisfaction. Regression model tested by Fah and Kandasamy (2011) had four of the five independent variables that significantly effected customer satisfaction. Out of four independent variables in the present study, three of them were found statistically significant. The greatest impacts on overall customer satisfaction had “staff service quality” (Choi and Chu, 2001), “tangibility” (Fah and Kandasamy, 2011), and “accessibility” (present study). The differences could occur due to different variable structure in regression models, different sample profiles (e. g. Asian and Western travellers in Choi and Chu’s study, Asian guests in Fah and Kandasamy’s study, and European guests in the present study) and different research area (Hong Kong in Choi and Chu’s study, Malaysia in Fah and Kandasamy’s study, and Croatia in the present study).

Based on the presented findings, the authors believe that the multiple regression model can be considered as strong evidence that improvements in perceived hotel service quality dimensions result in higher overall customer satisfaction with hotel stay. Hotel practitioners who want to increase the level of customer satisfaction should emphasize the excellence in providing reliable and accessible service that is delivered by empathetic and competent hotel staff in visually appealing facilities. Although tangible factor of hotel service has an important role in enhancing hotel guests' satisfaction, intangible factors on which hotel practitioners have even more control, are important as well and can gain greater competitive difference than tangible one. In addition, Nadiri and Hussain (2005) reported that tangibles and intangibles are predictors of customer satisfaction, where the later had higher relative effect. Thus, according to the present study, employees' interpersonal skills, courtesy, competence, ability to deliver promised service and their willingness and skilfulness to solve guests' complaints will be appreciated by hotel guests. Knowing the relative importance of each perceived service quality dimension can help hotel practitioners to more effectively deploy resources. What is more, this allows them to concentrate on those dimensions that have the greatest impact on customer satisfaction, and to improve others.

Beside practical implications, the study has academic contributions as well. Since there is a lack of research in the field of service quality dimensions and customer satisfaction relationship in the hotel industry, the present research may broaden the knowledge in this context. The results are also suitable for broader international comparisons. Generally, European studies on service quality and customer satisfaction relationship are rare, particularly in context of the hotel industry. What is more, the present study is the first that presents empirical evidence regarding the impact of perceived service quality dimensions on overall customer satisfaction in the hotel industry in Croatia.

However, the present research has several limitations that should be acknowledged. The limitations consider sampling procedure, limited geographical area and structure of hotel attributes. The convenience sampling procedure may have resulted with the sample that does not represent all the characteristics of the target population. A single, although important tourist destination, where the research was conducted can not represent all tourist destinations in Croatia. Although a set of hotel attributes included in the study covered variety of hotel service aspects, there can be other attributes that are likely to influence customer satisfaction. Nevertheless, these limitations do not diminish the significance of reported results as a whole. They serve to provide suggestions for future research.

Therefore, future research might use more representative sample in order to ensure more comprehensive results. What is more, other aspects of hotel service should be taken into account. Therefore, the model should include attributes like hotel technologies (e.g. wireless internet), ecological/environmental issues, security and safety. This would insure more precise and applicable survey for the hotel industry as a whole. Additionally, future research should address same research objectives in the other accommodation types (e.g. camp-sites, private accommodation, youth hostels), as well as in the other sectors of hospitality industry in Croatia (e.g. restaurant industry).

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