

Miroslav Pimic¹
City government of Valjevo

Ana Dukic²
Academy of applied studies Sumadija

Ivana Krsmanovic³
Technical college at applied studies, Čačak

ORIGINAL SCIENTIFIC ARTICLE

10.5937/ekonomika2301039P

Received: October, 15. 2022.

Accepted: November, 28. 2022.

EMPIRICAL RESEARCH ON THE IMPACT OF HOTEL SERVICE QUALITY ON GUEST LOYALTY AND SATISFACTION: A CASE STUDY SERBIAN HOTEL INDUSTRY

Abstract

The paper deals with the analysis of the implication of Total Hotel Service Quality (THSQ) on customer satisfaction and loyalty, as well as with identifying the key dimensions of Total Hotel Service Quality which significantly affect customer satisfaction and loyalty. The analysis was performed in the context of the national characteristics of the respondents (dimensions of national cultures determined by Hofstede) and the context of the demands of modern tourists. The empirical research included 175 participants who all were the hotel visitors. The results prove that the hypothesis of the significantly positive impact of THSQ on customer satisfaction and loyalty is valid. Also, the Assurance, Tangibility, and Empathy emerge as the key dimensions of quality while determining the level of satisfaction and loyalty of customers. The obtained results were verified using the Dufour Monte Carlo Simulation test procedure.

Key words: service quality, servqual, satisfaction, loyalty, Dufour test procedure

JEL classification: L83.

УТИЦАЈ ДИМЕНЗИЈЕ СЕРВОУАЛ НА САТИСФАКЦИЈУ И ЛОЈАЛНОСТ КУПАЦА: ЕМПИРИЈСКО ИСТРАЖИВАЊЕ ИЗ СРПСКЕ ХОТЕЛСКЕ ИНДУСТРИЈЕ

Апстракт

Рад се бави анализом импликација укупног квалитета хотелских услуга (ТХСК) на задовољство и лојалност купаца, као и идентификовањем кључних димензија укупног квалитета хотелских услуга које значајно утичу на задовољство и лојалност купаца. Анализа је изведена у контексту националних карактеристика испитаника (димензије националних култура које је одредио Хофстенде) и контекста захтева савремених туриста. Емпиријско истраживање је обухватило 175 учес-

¹ miroslavpimic@gmail.com, ORCID ID 0000-0002-7848-440X.

² adukic@asss.edu.rs, ORCID ID 0000-0003-2349-2805.

³ krsmanovici@gmail.com, ORCID ID 0000-0003-4793-628X.

*ника који су сви били посетиоци хотела. Резултати доказују да хипотеза о значајно позитивном утицају ТХСК-а на задовољство и лојалност купаца важи. Такође, осигурање, опипљивост и емпатија појављују се као кључне димензије квалитета, истовремено одређујући ниво задовољства и лојалности купаца. Добијени резултати су верификовани поступком испитивања *Difour Monte Carlo Simulation*.*

Кључне речи: квалитет услуге, задовољство, лојалност, Дуфоур тест процедура

Introduction

With the overall increased competition in the field of hotel management and more sophistication of potential guests, the quality of the service appears to be a condition of sine qua non-success of the business of hotel companies. The focus of the hotels on improving the quality of service comes with the desire to increase the core values of hotel services and provide their customers with a unique touristic experience. Quality service is provided by hotels that possess the capacity to adequately respond to the expectations of their guests. The appearance of service providers, attitude towards guests, readiness to respond to guest demands in a short time, reaction to the request to change bedding, are just some of the examples of aspects of quality (Cheng and Rashid, 2013). Since the image of the hotel is the result of a guest's perception of the functional, symbolic and experiential benefits achieved while staying at the hotel, it can be noted that good functional and corporate quality will be able to compensate for possible shortcomings in the physical aspects of the service. Kind staff, who meets the guest's needs at any moment, will leave a stronger impression in relation to not so comfortable bed. Interpersonal relations, as an immaterial element of the service, are not subject to standardization, cannot be copied, and therefore are a critical success factor in relation to the competition. Achieving a high quality of service should not be a goal per se, but a tool for achieving the satisfaction and loyalty of the guests. Customer satisfaction with hotel services influences his behaviour in the context of future visits.

In particular, it can be assumed that the high - quality service provided at the hotel will increase the loyalty of guests if after several visits the hotel has managed to fulfil the expectations and requirements of the guest. Satisfied and loyal guests are the most important investment for the hotel, which provides returns in the form of long-term profitability and sustainable competitive advantage. Accordingly, big hotels have to pay special attention to the quality of service, satisfaction and loyalty of guests, especially in big communities, where guests are overwhelmed by various hotel offers.

Satisfying all aspects of service quality is an extremely complex and expensive endeavour, especially when it comes to three- and four-star hotels, as they focus on clients who have lower purchasing power. For this reason, it is important to recognize which are the key dimensions of quality important to this type of guest. Given that the characteristics of national culture significantly influence the attitudes, values and behaviours of guests, it is important, generally speaking, to understand which dimensions of national culture affect which hotel guest requirements in terms of quality of hotels services requirements.

Hence the aim is to examine the dimensions of hotel service quality in the context of the characteristics of national guest cultures.

The paper has the following structure: The first section contains the introduction. In the second part of the paper, the research methodology was presented. In section four the final empirical research can be found with the presentation of the outcomes. The final section summarizes the conclusions.

1. Review of the scientific literature

1.1. Concept of service quality

Recently, the quality of service has been in the spotlight of practitioners, managers and researchers (Seth and Deshmukh, 2005). It has become a key success factor in highly competitive sectors such as the hotel sector. In this industry, the perception of service quality is formed based on guest attitudes (Cheng and Rashid, 2013). Zeithaml et al. (1990) define the perceived quality of services as an assessment of the customer's overall excellence or service superiority. The quality of services is not a unique but multidimensional phenomenon (Ladhari, 2009). The quality is a solid base that ensures the loyalty of the customers and attracts new guests, along with increasing the reputation and income of the hotel. According to UNVTO (2015), the number of stars allotted to a hotel is a good indicator of the quality of service despite the absence of the standards of the global classification. There should be a causal relationship between the hotel's attributes and the number of stars. Therefore, the category of the hotel reflects the level of commitment and quality of the hotel service. The hotel classification is the highest common and accessible indicator of hotel quality.

The higher the category of the hotel, the higher the cost for hotels to meet the standard of quality. Hotels offering higher value can also demand higher prices (Mohsin and Lengler, 2015). In addition, while investigating determinants of price elasticity Bolton and Myers (2003) concluded that the quality of services affected the price elasticity. The results of the study have shown that users who receive more appropriate services are less sensitive to a higher price than clients who receive less appropriate services.

Evaluation of the quality of the service from the consumer aspect includes the feelings of the guests that appear before, during and after using the service, which are the consumer expectations and the perception of the service (Gallarza et al., 2019). Consumers have expectations and beliefs that they will receive the service of the appropriate quality. Various factors affect consumers' expectations, such as previous consumer experience, a recommendation from their acquaintances, marketing activities and the image of the service provider (Cheng and Rashid, 2013). Contrary to expectations, perception is the feeling of a consumer-created during and after using the service. In the context of expectations and perceptions, the service will be assessed as of good quality only if the perceived performance of the service fulfilled or exceeded the expectations of the consumer. When consumer expectations go beyond perception or real experience, the service is of lower quality (Gallarza et al., 2019).

A consumer approach to defining the quality of service significantly impedes the ability to provide services of pre-determined quality (Ristova Maglovska, 2020).

Also, the question arises whether consumers make a final quality decision based on an overall assessment of the experience or individual service quality dimensions. To fulfil the expectations of different guest profiles, it is necessary to achieve superiority in all aspects of service.

The previous discussion shows that the quality of the service is a complex concept, which contains a large range of dimensions. The quality of services is difficult to measure objectively, especially since services are described as intangible, heterogeneous and inseparable. The ultimate customer judgment about the quality of service is a result of estimating different service dimensions. In a significant number of research papers, the measurement of service quality is based on the SERVQUAL model (Zeithaml et al., 1990). It is a multi-dimensional framework that considers quality as the synthesis of five key dimensions: tangibility, reliability, responsiveness, assurance and empathy. The model was developed based on the inconsistency between the expected and the perceived quality of services. This model compares the service with real performance as well as the perception of the guest about the quality of service and the willingness to recommend the company (Zeithaml et al., 1990). Boulding et al. (1993) consider that there are positive relationships between service quality and readiness to recommend a service. Saleh and Rian (1991) conducted a study in the hospitality industry and highlighted five dimensions of service quality that are different from those in the SERVQUAL model: socializing, tangible things, guarantees, avoiding sarcasm and empathy.

A generally accepted view is that there is a positive relationship between service quality and satisfaction (Batista et al., 2014). Also, theorists consider that the quality of services and satisfaction can lead to loyalty. In addition to having a direct impact on satisfaction, the quality of service indirectly affects customer loyalty (Vujić, et al., 2019). For example, some authors claim that the relationship between the quality of service and intent in behaviour is entirely determined by customer satisfaction. Their studies suggest that the perception of quality and customer satisfaction is an important determinant of customer loyalty (Khudri et al., 2015., Bihamta et al., 2017).

Luo and Qu (2016) were analyzed the impact of service quality in hotels with three and five stars in China. They find that quality of service is more difficult to define, measure, and manage than manufacturing products due to the unique characteristics of services. Hotels have to continually improve the level of customer satisfaction because it is a path leading to loyalty. Keshavarz and Jamshidi (2018) tested tourists staying at least one night in hotels with four and five stars in Kuala Lumpur. They conclude that customer loyalty depends on the customer's satisfaction with the offered quality of service. Some researchers have found a little impact on the customer's satisfaction on loyalty (Hultman et al., 2015, Park and Jang 2014)

1.2. Concept of customer satisfaction

The satisfaction of guests, although one of the most important items in a successful business, is often ignored in studies on the efficiency of hotel operations. Guest satisfaction can be defined as his/her perception of expectations of a product or service (Anderson and Fornell, 2000). Expectations relate to the perception of the level of service that consumers expect to receive from the hotel. At the assessment stage, the customer compares the service level with the level of expectation, which can result in satisfaction

or dissatisfaction. Also, satisfaction is in the function of expectation (pre-purchase) and received performance (after purchase). It is a concept of the paradigm of disconfirmation of expectations (Oliver, 1990). If the guest is dissatisfied, i.e. service performance is significantly below consumer expectations, a negative disconfirmation occurs. Matching guest expectations and service performance produce neutral disconfirmation or customer satisfaction. Positive disconfirmation arises as a result of performances that have significantly exceeded the expectations of the guest. This situation is the most favourable because it represents the highest degree of satisfaction, which can be transformed into loyalty (Heesup et al, 2018).

Satisfied guests are the most important investment for the hotel whose positive results can be expected in the medium or long term period (Crotts and Magnini, 2010). In order to initiate guest satisfaction, it is necessary to engage significant resources, which will be in the function of collecting data on the perception of guests, analysing the data and identifying, understanding and meeting the needs of guests. Satisfaction of guests is one of the important generators of income and profit, which the hotel will realize in the future because, without satisfied guests, hotels are not able to overcome their competitors (Gao and Lai, 2015). For this reason, hotels must pay great attention to a detailed analysis of the customer's satisfaction to identify their strengths and weaknesses, as well as the real needs and requirements of the guests, so that they can satisfy their own interests.

Johnson and Weinstein (2008) define satisfaction as a result of the immediate experience that the consumer experiences through the purchase and use of products or services. Satisfaction is a feeling that happens in the evaluation stage after the purchase and consumption of the product can be demonstrated in many ways. Firstly, it can be realized as a confirmation that a quality product or service has been purchased. Second, it can be seen as satisfaction with the performance of the purchased product and service. In addition, satisfaction can be expressed as a delight if the product's characteristics exceed consumer expectations (Gao et al., 2015). It is a position that can be measured as total satisfaction with different components of products and services (Bastič and Slavka, 2012). It represents an emotional reaction to the experience in relation to expectations. Wong (2004) sees satisfaction as a unity of cognitive and emotional reactions. Anderson and Fornell (2000) suggest that customer satisfaction is an after-consumption experience comparing perceptions of quality with expected quality, while the quality of services relates to a global assessment of the provision of hotel services.

Hotel guests can experience different levels of satisfaction. The first level is satisfaction when routine services in the hotel are delivered in a satisfactory manner. The second level is enjoyment when the experience of staying at the hotel makes the guest happy. The third level is excitement, when the guest is positively surprised and when his experience is above expectations. The fourth level is relief when the delivered service allows for overcoming some delicate situation and leads to satisfaction (Torres and Kline, 2006).

For many years it was considered that satisfied customers are loyal customers, but a recent study disputes the validity of such a claim (Gallarza et al., 2019; An and Shin, 2019). Skogland and Siguav (2004) argue that satisfied customers do not always have to be loyal. Customer satisfaction is not enough to keep customers, but it is one of the most important factors for retaining satisfied customers (Torres and Kline, 2006). The relationship between satisfaction and loyalty is not always directly conditioned. If the

consumer is satisfied with the specific product or service of a particular company, one should expect to re-purchase the same product or service or to transfer loyalty to other brands of the same company. However, this does not always happen, because a consumer can be satisfied with a product or service until a competitive product or service that better meets his expectations does not appear on the market. Therefore, a satisfied consumer is still able to change the company. Consumer satisfaction may decline over time as a result of higher expectations or weakening of the service company's performance. This is especially true in the hotel industry and tourism. For example, although a consumer is satisfied with his stay in a particular destination or hotel, he wants to try something new and go to another destination or a hotel. Other consumers find the price important, so they will look for the best offer, while some who do not find changing a hotel a problem, will look for the best offer for their money. Many researchers find that quality of service is the same as the consumer satisfaction. One group of authors finds that the quality of service is a pre-requisite for increasing satisfaction, the second argues that satisfaction is a pre-requisite for increasing the quality of service, while others emphasize that quality and satisfaction are independent from one another (Gallarza et al., 2019; Heesup et al., 2018; Chew Ging and Shi-Min, 2019). The literature is dominated by the view that the quality of service affects the creation of satisfaction and that satisfaction has a significant impact on the consumer's intent to purchase (Chew Ging and Shi-Min, 2019, Miletic et al. 2020).

In recent years, the excitement of the consumers in hotel industry has been given a special attention. Namely, the question arises how the guest reacts when satisfaction and expectations are exceeded. One view suggests that exceeding expectations can lead to enthusiasm, while in the second view enthusiasm is a separate category (Chew Ging and Shi-Min, 2019). Most researchers in recent literature suggest that consumer satisfaction and customer enthusiasm are separate concepts (Chew Ging and Shi-Min, 2019; Gayane, 2019; Cakici et al, 2019). Crotts and Magnini (2010) questioned whether surprise is necessary to delight the consumer. It has been found that surprise is an essential component of enthusiasm and is strongly associated with consumer loyalty. The enthusiasm of consumers is the highest level of experienced experience for the hotel guests. Delighted guests are those who had an extraordinary experience in the hotel, making their stay unforgettable.

1.3. Concept of customer loyalty

Loyalty can be defined as a commitment to a brand, object or supplier that is based on a strong positive attitude and is reflected in repeated purchases (Gursoy et al., 2018). This definition highlights two important dimensions on which loyalty is based: attitude and behaviour (Oly Ndubisi, 2007). If the consumer does not have a clear attitude and does not respond towards a particular brand of the product, it is clear that he will not be loyal. Poor attitude means that the consumer has no habit of buying a given product, and unresponsive behaviour indicates that the consumer is buying sporadically. If the consumer has a weak attitude, and the strong behaviour is doubtful loyalty. In this situation, although a consumer often makes purchases of a particular product, he does not have a strong attitude towards it, so in the long, a hotel cannot count on this consumer. On the contrary, the consumer may have a strong attitude and unresponsive behaviour. This

means there is latent loyalty when a consumer does not buy a particular product even if he/she has a strong attitude. High prices of services that are characteristic of certain hotel brands make potential guests decide not to stay in these hotels despite the strong attitude towards them. Strong loyalty to a particular brand of a product is a process in which the consumer has a strong positive attitude and strong responsive behaviour in relation to the purchase of a given product or service. Numerous studies have shown that customers re-use the hotel service if they were previously satisfied (Gao and Lai, 2005). Loyalty is the likelihood of a consumer returning, re-buying and using the products and services of a particular company, as well as disseminating positive experiences of products or services to their friends and acquaintances. In this way, loyal consumers contribute to the stability of operations and increase a company's income, which ultimately contributes to a better competitive position of the company on the market. Loyal consumers help service companies to achieve leading positions in the market because they primarily represent a stable source of demand and possess continuity in earning profits (Mohsin and Lengler, 2015).

One of the main objectives of marketing activities is to increase consumer loyalty and maintain a permanent relationship with them (Gursoy et al., 2018). In theory, there is Pareto's rule according to which 80% of the company's revenue comes from 20% of its consumers, which implies that the costs of retaining the existing identified consumer are much lower than the costs of acquisition of a new customer (Gursoy et al., 2018). One of the basic goals in the business of a hotel or a restaurant is to meet the expectations of guests, although in practice this is not always the case. Therefore, their satisfaction or lack of satisfaction directly influences the decision whether to use a certain service or not and in a longer period of time it influences building higher levels of loyalty of guests (Ndubisi, 2007). The loyalty of guests influences the increase of income, due to repeated purchases versus classical sales, in which communication with the consumer is interrupted by payment or delivery of a product or service (Kotler et al., 2009, Marcetic, 2016).

Today, many hotel companies offer their loyal guests various benefits under the loyalty program that depend on the frequency of their visits. Returning to the hotel brings points to the guests which can be used for a certain type of service (free nights, use of room with additional services, personal butler service, resort packages etc). This reward-and-benefit system works on the principle that every spent euro in the hotel is one point. Many programs rank guests in relation to the volume of services used. Those at the top of the list are entitled to lower prices and other benefits (Rauyruen and Miller, 2007). Many hoteliers use loyalty programs to give guests a bonus proportionally spent (Gursoy, 2018). Such programs can be considered limited because they offer fewer opportunities to develop an individual marketing relationship with each guest, so the likelihood of developing effective loyalty is less likely.

2. Research methodology

This research deals with three-star and four-star hotels in the Republic of Serbia. For collecting primary data for the research, the survey method was used. Questionnaires were sent to the addresses of 8 hotels with three stars and 5 four-star hotels. Empirical

research was conducted in the period July - October 2019. In the observed period, a total of 184 respondents completed a questionnaire, of which 175 were filled incorrectly. Out of the total number of respondents, 35% are women, and 65% are men. The educational structure of the respondents is as follows: 60% are college-educated, 10% with a high school and 30% with completed secondary school. All respondents are from the countries of the former Yugoslavia and members of the so-called baby boom generation.

Previous research in this area was consulted in order to create suitable statements for the questionnaire. The questionnaire consists of four parts. The first part of the questionnaire consists of 22 statements for assessing expectations about service quality dimensions. The second part lists 22 findings for assessing perceptions of service quality dimensions. The third part contains of two statements for determining the level of satisfaction and loyalty of guests. The last, fourth part of the questionnaire refers to identifying the demographic characteristics of the respondents. The questionnaire was modelled on the original SERVQUAL model, with certain modifications according to the needs of this research. All the findings were measured through Likert's five-point scale: 1 (I completely disagree) - 5 (I completely agree). Respondents were asked to round off one of the five responses offered.

The subject of the research will be to test six research hypotheses: The basic hypothesis (H1), from which the paper started is the statement that Total Hotel Service Quality has a significant and positive impact on customer satisfaction and loyalty. In addition to this hypothesis, certain sub-hypotheses have been set: (H1a) - tangibility has a significant and positive impact on customer satisfaction and loyalty; (H1b) - reliability has a significant and positive impact on customer satisfaction and loyalty; (H1c) - assurance has a significant and positive impact on customer satisfaction and loyalty; (H1e) - empathy has a significant and positive impact on customer satisfaction and loyalty.

3. Results and discussion

Verification of the reliability of the variables for further measurements was made using Cronbach's Alpha. For some variables to be reliable, Cronbach's Alpha value should be bigger than 0.6. The Cronbach's Alpha value for the variables in Table 1 ranges from 0.721 to 0.940, which implies that all tested variables are reliable for further observations.

Table 1: Cronbach's Alpha

Hotel Service Quality dimensions	Cronbach's Alpha	No. of items
Tangibility (E)	.721	4
Reliability (E)	.760	5
Responsiveness (E)	.750	4
Assurance (E)	.740	4
Empathy (E)	.814	5
Tangibility (P)	.860	4
Reliability (P)	.902	5

Responsiveness (P)	.867	4
Assurance (P)	.894	4
Empathy (P)	.895	5
Satisfaction	.915	2
Loyalty	.940	2

Source: Authors` calculation

To verify the reliability of the variables, in addition to the Cronbach's alpha coefficient, in the paper, Principal Component Analysis (PCA) was used. PCA was performed on the assumption that it is interval data, thus satisfying the assumption of normal distribution. This is important, because the PCA technique, when evaluating the parameters, relies on the technique of maximum likelihood. It is important to note that respondents who participated in the variable validation study were not involved in data collection on the impact of variables on satisfaction and loyalty. In this way, efforts were made to avoid bias in responses. As many as 120 respondents participated in the examination of the validity of the variables. A common rule of thumb is that a researcher at least needs 10-15 participants per item. The smaller the sample, the bigger the chance that the correlation coefficients between items differ from the correlation coefficients between items in other samples (Field, 2009). Since the sample size, in this case, is 120, to examine the adequacy of the sample size, the paper was used the Kaiser-Meyer-Okin measure of sampling adequacy (KMO).

To identify principal factors, Promax rotation (with Kaiser normalization) was used, which rotates the orthogonally rotated solution again as well as enabled correlations between factors. Based on this rotation, 5 principal factors of service quality were identified. Table 2 gives the percentage of explained variance of the extracted factors. It can be seen that the retained 5 factors corresponding to the aforementioned dimensions of quality of service explain about 88.267% of the total variance.

Table 2. Number of extracted factors and total variance explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	% of Variance	Cumulative %	Total	Total	% of Variance	Cumulative %	Total
1	26.518	30.747	30.747	26.518	30.747	30.747	15,736
2	6.007	18.888	49.635	6.007	18.888	49.635	14,656
3	5.329	17.504	67.139	5.329	17.504	67.139	12,272
4	5.029	14.889	82.028	5.029	14.889	82.028	10,197
5	4.793	6.240	88.268	4.793	6.240	88.268	15,245

Source: Authors` calculation

However, analysis of the matrix of components⁴ shows that there is a significant mixing of items in factors 2, 4 and 5. For this reason, the scores, which were used in the further analysis, were calculated on the basis of factor analysis and not on the basis of the original items.

Table 3 shows the gaps between perception and expectations for each of the five dimensions of service quality and for the overall quality of service. The difference between perception and expectation is negative in all dimensions of service quality, as well as in the overall quality of service. The guests have the highest expectations regarding dimension *Assurance* (M = 4.6425), *Responsiveness* (M = 4.4975) and *Reliability* (M = 4.484). Some weaker expectations of the guests have the dimensions of *Empathy* (M = 4.104) and *Tangibility* (M = 4.2625). After staying at the hotel, the guests rated the highest perception of quality for dimension *Assurance* (M = 4.1825), *Responsiveness* (M = 4.0775) and *Reliability* (M = 4.054), while the perceptions of quality for determinants were *Tangibility* (M = 3.9725) and *Empathy* (M = 3.912). The highest negative gap was recorded in the dimension of security, followed by reliability, responsibility, and the lowest negative gap was recorded by the dimensions of tangible and empathy. The overall quality of service quality is negative and is -0.3584.

Table 3. Hotel service quality dimension gap and Total Service Quality Gap

Hotel service quality dimension	Perception (P)	Rank	Expectations (E)	Rank	Total service quality gap (P-E)
Tangibility	3.9725	4	4.2625	4	-0.29
Reliability	4.054	3	4.484	3	-0.43
Responsiveness	4.0775	2	4.4975	2	-0.42
Assurance	4.1825	1	4.6425	1	-0.46
Empathy	3.912	5	4.104	5	-0.192
Total service quality gap	4.0397		4.3981		-0.3584

Source: Author's calculation

In the next step, tests of the normal distribution data Kolmogorov-Smirnov and Shapiro-Wilk were conducted in order to choose between parametric and non-parametric correlation. The significant values of these two tests (sig <0.05) imply that the data are not normally distributed, so in this case the nonparameters of the Spearman's coefficient of correlation technique is used. Otherwise, when sig > 0.05 there is a normal distribution of data, then the parametric correlation technique Pearson's coefficient of correlation is applied. From Table 4, the sig values for all variables are less than 0.05, which implies that data is not normally distributed, so Spearman's coefficient of correlation is required in the next step.

Table 4. Normality tests

Variables	Kolmogorov-Smirnov		Shapiro-Wilk	
	Statistic	Sig	Statistic	Sig
Tangibility (P-E)	0.198	0.000	0.918	0.000
Reliability (P-E)	0.165	0.000	0.888	0.000
Responsiveness (P-E)	0.192	0.000	0.931	0.000

⁴ The matrix of components is not shown, due to the volume of the paper. For the same reason, the matrix of scores is not presented in the paper.

Assurance (P-E)	0.195	0.000	0.872	0.000
Empathy (P-E)	0.177	0.000	0.898	0.000
Total Hotel Service Quality (P-E)	0.088	0.002	0.948	0.000

Note: *, **, *** indicate significance on 1%, 5% and 10% respectively.

Source: Author's calculation

Table 5 presents the results of the correlation analysis using the Spearman's coefficient of correlation, because these are data whose distribution is non-normal. There is statistically significant and positive correlation between all observed independent and dependent variables since $\text{sig} < 0.01$ for all variables and all Spearman's coefficient values are positive. Based on Spearman's correlation coefficient, it can be concluded that all the dimensions of quality of the hotel service positively correlate the customers loyalty and satisfaction ($\text{sig} < 0.01$; $0.3 < \text{coef correl} < 0.5$). Between the total hotel service quality, satisfaction and loyalty, there is a positive and very strong correlation ($\text{sig} < 0.01$; $0.5 < \text{coef correl} < 0.9$).

Table 5. Spearman's coefficient of correlation

Hotel Service Quality dimensions	Satisfaction	Loyalty
Tangibility (P-E)	.420**	.365**
Reliability (P-E)	.474**	.444**
Responsiveness (P-E)	.485**	.461**
Assurance (P-E)	.525**	.461**
Empathy (P-E)	.443**	.478**
Total Hotel Service Quality (P-E)	.753**	.729**

Note: *, **, *** indicate significance on 1%, 5% and 10% respectively.

Source: Author's calculation

By applying the method of a simple regression analysis, the impact of Total Hotel Service Quality on customer satisfaction and loyalty has been analyzed (Table 6). Total Hotel Service Quality has a significant, positive and strong impact on customer satisfaction ($\text{sig} < 0.01$; $B = .767$). This model (Model 1) explains for 58.8% of the consumer's satisfaction variability ($R^2 = .588$). According to the Model 2 Total Hotel Service Quality significantly, positively and strongly affects customer loyalty ($\text{sig} < 0.01$; $B = .734$). The Model 2 explains for 53.9% of consumer loyalty changes ($R^2 = .539$). The Models 1 and 2 neither have problem with multicollinearity ($\text{VIF} < 10$) nor with autocorrelation ($d_u < \text{Durbin-Watson} < 4 - d_u$).

Table 6. Simple regression analysis (dependent variables: customer satisfaction – Model 1 and loyalty – Model 2)

Variable	Model 1 (Satisfaction)				Model 2 (Loyalty)			
	Beta	R ²	VIF	Durbin-Watson	Beta	R ²	VIF	Durbin-Watson
Total Hotel Service Quality	.767**	.588	1.000	2.154	.734**	.539	1.000	2.110

Note: *, **, *** indicate significance on 1%, 5% and 10% respectively.

Source: Author's calculation

In the next step, using the multiple regression analysis method, simultaneous testing of the common impact of all five dimensions of the quality of the service on satisfaction and consumer loyalty was carried out (Table 7). The results of the analysis show that only three dimensions have a significant and positive effect on the satisfaction of guests (Model 3): *Assurance* (**B = .356; sig <0.01**), *Tangibility* (**B = .216; sig <0.01**) and *Empathy* (**B = .192; sig <0.05**). The remaining two dimensions, *Reliability* and *Responsiveness* do not have any significant effects. R Square for this model is 0.492, which means that 49% of the variability of satisfaction is explained by the changes in five dimensions of the quality of the service. In Model 4, where guest loyalty depends on the variable, *Assurance* (B = .309; sig<0.01), *Empathy* (B = .283; sig<0.01), and *Tangibility* (B = .201; sig<0.01) are the only dimensions that have significant and positive implications. For this model, the value of R² = 0.495, which implies that 49% of the variability in guest loyalty is explained by the changes in five observed service quality dimensions. Model 3 and Model 4 do not have problem with multicollinearity (VIF<10), and with autocorrelation ($d_u < \text{Durbin-Watson} < 4-d_u$).

Table 7. Multiple regression analysis (dependent variables: customer satisfaction – Model 3 and loyalty – Model 4)

Hotel Service Quality dimensions	Model 3 (Satisfaction)				Model 4 (Loyalty)			
	Beta	R ²	VIF	Durbin-Watson	Beta	R ²	VIF	Durbin-Watson
Tangibility	.216**	.492	1.672	2.077	.201**	.495	1.672	2.125
Reliability	.022		2.400		.048		2.400	
Responsiveness	.040		2.804		.025		2.804	
Assurance	.356**		2.920		.309**		2.920	
Empathy	.192*		2.316		.247**		2.316	

Note: *, **, *** indicate significance on 1%, 5% and 10% respectively.

Source: Authors' calculation

Since the application of OLS estimators in linear regression models is questionable, when it comes to ordinary data (for more details see Radivojevic et al, 2019), to verify the validity of estimates of model parameters 1, 2, 3 and 4, in the paper the Dufour

(2006) Monte Carlo testing technique was used for this purpose. Dufour (2006) proposed the Monte Carlo test procedure which allowed to obtain the null distribution of tests statistics infinite sample setting. The method has a great advantage of providing accurate tests based on any statistics whose finite sample distribution is intractable but can be simulated (Malecka, 2014). The procedure was performed on 10,000 simulations where the sample size equals the actual sample (N = 175). The results of the Dufour Monte Carlo test procedure are shown in Table 8.

Table 8. The results of the Dufour Monte Carlo test procedure

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
<i>Coefficient (beta)</i>	<i>p-value</i>	<i>p-value</i>	<i>p-value</i>	<i>p-value</i>
<i>Total Hotel Service Quality</i>	.034**	0.042**	/	/
<i>Tangibility</i>	/	/	.013**	.018**
<i>Reliability</i>	/	/	.059	.091
<i>Responsiveness</i>	/	/	.072	.106
<i>Assurance</i>	/	/	.009**	.002**
<i>Empathy</i>	/	/	.021*	.051**

Note: *, **, *** indicate significance on 1%, 5% and 10% respectively.

Source: Authors` calculation

The results confirm the findings that those only three dimensions have a significant and positive effect on the satisfaction of guests and guest loyalty. The results confirm the findings that those only three dimensions have a significant and positive effect on the satisfaction of guests and guest loyalty. This result is consistent with the research of Bulchand-Gidumal et al. (2013), Smith (2014), Heo and Hyun (2015), Tribe and Mkono (2017), Zaid and Law (2019). The results of these studies show that these three dimensions are statistically significant regardless of the category of hotel. However, the results of this study are not consistent with the findings of González-Mansilla (2019), Ahani et al. (2019), An and Shin (2019) and Gallarza et al. (2019), who found that the significance of the quality dimension depends on the hotel category. Although there are studies that have studied the dimensions of quality in the context of service appropriations, such as studies conducted by Kang and Gong (2019) and Kim et al. (2016), there are no studies that have interpreted the previously mentioned results in the context of the dimensions of national cultures.

It can be pointed out that the obtained results are expected when analyzed in the context of the national characteristics of the respondents (four Hofstede dimensions of national culture). Namely, the inhabitants of the countries that emerged from the disintegration of Yugoslavia are characterized by a high degree of avoidance of uncertainty, a high distance in power, women’s values, and a strong sense of belonging (collectivism). A high degree of avoidance of uncertainty means that guests from these countries are not willing to take risks, but to like to feel safe in hotels, that they feel safe in their transactions with the hotel, that employees of the hotel tell them exactly when services will be performed etc. These are all items that describe Assurance. Hence, it is not surprising that Assurance has been identified as a key dimension of hotel service quality. By the same principle, a connection can be established between women’s values

and collectivism and empathy. Members of nations with strong female values and a sense of belonging are characterized by caring for others, respect for the collective spirit and strong identification with certain groups. In other words, this means that guests from these countries like when the hotel has employees who give them personal attention understand their specific needs, who are willing to help guests, who are never too busy to respond to guest request etc. A sense of belonging influences the fact that guests from these countries strongly identify with the hotel. As all of these are items that determine empathy, it is therefore not surprising that Empathy has been identified as a key dimension of hotel service quality. Members of nations with strong female values express feelings for aesthetic values, hygiene, tidiness, cleanliness, pleasant ambience, and the like. Hence, it can be pointed out that this dimension of culture influences the identification of Tangibility as a significant dimension of the quality of hotel service. However, this could be explained by the fact that hotel products are intangible and as such guests used those aspects of the service, they could see to assess the hotels' service quality.

Having in mind the above, it can be concluded that the dimensions of national culture significantly determine the importance of different dimensions of hotel service quality. This implies that depending on which national culture the guests belong to, emphasis should be placed on the dimensions of the quality of hotel service.

Conclusion and discussion

In modern business conditions, service quality is an important aspect in getting ahead of the competition and improving the overall business performance of hotels. Recently, there has been an increasingly obvious demand for the quality of products and services in the tourism market. Among the many demands of today's consumers in the tourism industry, the quality of service is increasingly recognized as a critical success factor. Customers represent excellent sources of information for managing and organizing the provision of quality services. The quality of the service is based on the delivery of an optimal service offer, which will fully meet the requirements and expectations of the guests. The achieved results in the field of quality service improvement will be reflected in the increase in the number of satisfied and loyal guests. It is highly probable that those guests who are satisfied with the hotel, its services and overall cooperation, will become loyal to the hotel. Hotels can expect significant positive effects due to an increase in the number of satisfied and loyal guests who are willing to pay more for the new contents and services that the hotel has to offer; to share positive impressions of the hotel to their friends and family; give constructive suggestions on possible improvements to some of the hotel's service dimensions. The loyalty of guests is an important determinant of maximizing profits. Therefore, the cost of keeping the base of loyal guests is significantly lower than the cost of searching for new guests. Therefore, the issues of quality of service, satisfaction and loyalty of guests are becoming an important segment of the business strategy of successful hotel companies.

The discussion presented in this paper presents strong arguments for measuring satisfaction in service delivery in hotels, which will enable hotels to monitor the efficiency of operations and determine the future direction in the management of products and services. Analyzing insights about factors contributing to the loyalty of guests, it has

been concluded here that there is a positive relationship between the quality of the service process, the loyalty of the guests and the behaviour related to loyalty. It has also been proved that the key determinants of loyalty to guests are intangible elements of quality and diversity of supply.

The results of the empirical research imply that the modern and comfortable furniture, the attractive interior and exterior of the hotel, the comprehensibility and the picturesque nature of the materials related to hotel services and other tangible elements of the service positively influence the satisfaction and the intention of the guest to visit the hotel again, which confirms the first hypothesis H1a of the research.

Creating the atmosphere in which the guests will feel safe and have full confidence in the hotel transactions additionally improve the quality of the delivered service. Taking into account this fact, the H1d hypothesis can be accepted. Adapting the working time to the needs of guests, paying attention to the individual needs and wishes of guests, the readiness to hear the complaints of each guest and to make an apology after the mistakes, are just some of the dimensions of the empathy, which the guests have positively evaluated. This implies that the H1e hypothesis is accepted. The H1b and H1c hypotheses cannot be accepted as true because of the extremely low values of the standardized Beta coefficient and the values $\text{sig} > 0.05$.

By the method of simple regression analysis, the influence of Total Hotel Service Quality as a synthesis of five dimensions was tested on customer satisfaction and loyalty. The results obtained confirm the importance of Total Hotel Service Quality for improving customer satisfaction and loyalty.

The applied regression analysis method shows that Total Hotel Service Quality is essential customer satisfaction and loyalty predictor, but in Total Hotel Service Quality, dimensions of Assurance, Tangibility and Empathy are particularly distinguished in their impact. Besides the tangible elements of hotel services such as the comfort of accommodation, lobby appearance, food quality, drinks, the entire exterior and interior etc., in contemporary conditions, it appears that non-material aspects of the service are given greater attention. It is due to the assumption that the material elements are on the same or similar level in all hotels of the same category. In this paper, the dimensions of Assurance and Empathy were particularly emphasized, which implies that the competence, kindness, and willingness of the staff always to meet the requirements of the guest play an important role in assessing the quality of the hotel's service. Hotel management has the task to train staff further by organizing seminars and training to ensure the high quality of the service process. In addition, the improvement and maintenance of the quality of the service are based on the continuous improvement of contacts with the guests and the identification of the quality dimensions that are of key importance for the guests during their stay in the hotel.

The conducted research has several limitations that can be eliminated in subsequent studies. The research was carried out in a short period of time over different respondents, with the sample relatively small. In the future, studies in this area should include more guests and observe the behaviour of the same guests over a longer period, in order to more accurately measure the implications of the quality of hotel services to the behaviour of guests, especially in the domain of loyalty. In addition, it is necessary to apply additional methods of statistical analysis to obtain a clearer picture of the relations between the variables. The use of factor analysis should verify the validity of the statements used to

describe the selected elements of the quality of hotel services, while the application of the SEM model would enable the identification of direct and indirect relations between the observed variables.

References

- An, T.G., & Shin, L.S. (2019). The effects of marine ecotourism destinations attributes on perceived value, customer satisfaction, and loyalty. *International Journal of Innovative Technology and Exploring Engineering*, 8(3),169-174.
- Ahani A., et al. (2019). Revealing customers' satisfaction and preferences through online review analysis: The case of Canary Islands hotels. *Journal of Retailing and Consumer Services*, 51, 331–343.
- Anderson, E.W., & Fornell, C. (2000). Foundations of the American Customer Satisfaction Index. *Total Quality Management*, 11(7), 869-882.
- Bastič, M., & Slavka, G. (2012). Measurement scale for eco-component of hotel service quality. *International Journal of Hospitality Management*, 31, 1012-1020.
- Batista, M.G., Couto, J.P., Botelho, D., & Faias, C. (2014). Tourist satisfaction and loyalty in the hotel business: An application to the island of São Miguel, Azores, University of Azores, Economics and Management Department. *Tourism & Management Studies*, 10(1), 9501-801.
- Bulchand-Gidumal, J., Melián-González, S., Lopez-Valcarcel, B., (2013), A social media analysis of the contribution of destinations to client satisfaction with hotels, *International Journal of Hospitality Management*, Vol. 35, pp. 44 – 47.
- Bolton, R.N., & Myers, M.B. (2003). Price-based global market segmentation for services. *Journal of Marketing*, 67(3),108-128.
- Boulding, W., Karla, A., Staelin, R., & Zeithaml, V.A. (1993). A dynamic process model of service quality: From expectations to behavioural intentions. *Journal of Marketing Research*, 30(2), 7-27.
- Bihamta, H., Jayashree, S., Rezaei, S., Okumus, F. and Rahimi, R. 2017. Dual pillars of hotel restaurant food quality satisfaction and brand loyalty. *British Food Journal*, 119(12), 2597-2609.
- Cakici, A.C., Akgunduz, Y., & Yildirim, O. (2019). The impact of perceived price justice and satisfaction on loyalty: the mediating effect of revisit intention. *Tourism Review*, 74(3), 443-462.
- Chew Ging, L. and Shi-Min, H. (2019). Interactions between customer satisfaction and firm performance of a hotel. **International Journal of Tourism & Hospitality Research**, 30(3), 447-449.
- Cheng, B.L. & Rashid, M.Z.A. (2013). Service Quality and the Mediating Effect of Corporate Image on the Relationship between Customer Satisfaction, and Customer Loyalty in the Malaysian Hotel Industry. *Gadjah Mada International Journal of Business*, 15, 99-112.

- Cronin, J.J., & Taylor, S. A. (1992). Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing*, 56 (3), 56-68.
- Crotts, J., & Magnini, V. (2010). The customer delight construct: Is surprise essential? *Annals of Tourism Research*, 38(2), 719-722.
- Field, A. (2009). *Discovering Statistics using SPSS*. London: Sage.
- Gallarza, G.M., Arteaga, F., & Gil-Saura, I. (2019). Customer value in tourism and hospitality: Broadening dimensions and stretching the value-satisfaction-loyalty chain. *Tourism Management Perspectives*, 31, 254-268.
- Gao, B.W., & Lai, I.K.W. (2015). The effects of transaction-specific satisfactions and integrated satisfaction on customer loyalty. *International Journal of Hospitality Management*. 44, 38-47.
- Gavric, G., Simonovic, Z., Lazovic, K. (2015), Znanje kao faktor opstanka i konkurentnosti u savremenom poslovanju, *Anali Ekonomskog fakulteta u Subotici*, 33, 389-400.
- Gayane, T. (2019). Assessment of tourist satisfaction index: evidence from armenia. **Marketing & Management of Innovations**, 3, 22-32.
- González-Mansilla, Ó., Berenguer-Contrí, G., Serra-Cantallops, A. (2019) The impact of value co-creation on hotel brand equity and customer satisfaction. *Tourism Management*, 75, 51-65.
- Gronroos, C. 1984. A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- Gursoy, D., Chen, J., & Chi, C. (2018). Theoretical examination of destination loyalty formation. *International Journal of Contemporary Hospitality Management*, 26(5), 809-827.
- Johnson, W., & Weinstein, A. (2004). *Superior Customer Value in The New Economy*. New York: CRC Press LLC. etc.
- Heesup, H., Kiattipoom, K., Heekyoung, J., & Wansoo, K. (2018). The role of wellness spa tourism performance in building destination loyalty: the case of Thailand. **Journal of Travel & Tourism Marketing**, 35 (5), 595-610.
- Heo, C. Y., & Hyun, S. S., (2015). Do luxury room amenities affect guests' willingness to pay? *International Journal of Hospitality Management*, 46,161–168.
- Hultman, M., Skarmeas, D., Oghazi, P., & Beheshti, H.M. (2015). Achieving Tourist Loyalty through Destination Personality, Satisfaction, and Identification. *Journal of Business Research*. 68(11), 2227–31.
- Kang, M., & Gong, T. (2019) Dysfunctional customer behavior: conceptualization and empirical validation. *Service Business*, 13, 625 – 646.
- Kim, B., Kim, S., Heo, C.Y., (2016). Analysis of satisfiers and dissatisfiers in online hotel reviews on social media. *International Journal Contemporary Hospital Management*, 28(9), 1915–1936.
- Keshavarz, Y., & Jamshidi, D. (2018). Service quality evaluation and the mediating role of perceived value and customer satisfaction in customer loyalty. *International Journal of Tourism Cities*. 4(2), 220-244.

- Kotler, P., Keller, K.L., Brady, M., Goodman, M. & Hansen, T. (2009). *Marketing Management.*, Edinburgh Gate, Harlow, England: Pearson Education Limited.
- Khudri, M.M. & Sultana, S. (2015). Determinants of service quality and impact of service quality and consumer characteristics on channel selection. *British Food Journal.* 117(8), 2078-2097.
- Ladhari, R. (2009). Service quality, emotional satisfaction, and behavioural intentions - A study in the hotel industry. *Managing Service Quality: An International Journal.* 19(3), 308-331.
- Luo, Z., & Qub, H. (2016). Guest-Defined Hotel Service Quality and Its Impacts on Guest Loyalty. *Journal of Quality Assurance in Hospitality & Tourism*, Routledge, pp.1-23.
- Marčetić M., Čurčić V. N., Lazović K. (2016). Modaliteti evazije poreza na dodatu vrednost u Republici Srbiji, *Anali Ekonomskog fakulteta u Subotici*, 35, 237-248.
- Miletic, V., Čurčić V. N. Simonovic, Z. (2020), Standardizacija kvaliteta - faktor održive konkurentnosti preduzeća u Srbiji, *Anali Ekonomskog fakulteta u Subotici*, 44, 99-114.
- Mohsin, A., & Lengler, J. (2015). Service experience through the eyes of budget hotel guests: Do factors of importance influence performance dimensions? *Journal of Hospitality and Tourism Management.* 23, pp. 23-34.
- Oliver, R.L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research.* 17(4),460-469.
- Oly Ndubisi, N. (2007). Relationship Marketing and Customer Loyalty. *Marketing Intelligence and Planning.* 25(1), 98-106.
- Park, J.Y., & Jang, S. (2014). Why Do Customers Switch? More Satiated or Less Satisfied. *International Journal of Hospitality Management.* 37, 159–70.
- Radivojevic, N., et al. (2019). Econometric model of non-performing loans determinants. *Physica A: Statistical Mechanics and its Applications.* 520, April, 481-488.
- Radivojevic, N., Cvjetkovic, M., Stepanov, S. (2016). The new hybrid VaR approach based on EVT. *Estudios de Economia*, 43(1), 29-52.
- Radivojevic, N., & Jovović, J. (2017). Examining of determinants of non-performing loans. *Prague Economic Paper*, 26(3), 300-316.
- Rauyruen, P., & Miller, K.E. 2007. Relationship Quality as a Predictor of B2B Customer Loyalty. *Journal of Business Research.* 60(1), 21-31.
- Ristova Maglovska, C. (2020). What do hotel guests really want? An analysis of online reviews using text mining. *Hotel and Tourism Management*, 8(1), 37-48.
- Saleh, F. and Ryan, C. 1991. Analysing service quality in the hospitality industry using the SERVQUAL model. *Services Industries Journal*, 11(3), pp. 324-343.
- Seth, N.S.G. & Deshmukh, P.V. (2005). Service quality models: A review. *International Journal of Quality and Reliability Management.* 22(9), 913-949.
- Skogland, I., & Siguaw, J. A. (2004). Are Your Satisfied Customers Loyal? *Cornell Hotel and Restaurant Administration Quarterly*, 45(3), 221-234.

- Smith, O., (2014). British hotels among worst for Wi-fi charges. *The telegraph*.
- Torres, E., & Kline, S. (2006). From satisfaction to delight: a model for the hotel industry. *International Journal of Contemporary Hospitality Management*, 18(4), 290-301.
- Tribe, J., & Mkono, M. (2017). Not such smart tourism? The concept of e-lienation. *Annals of Tourism Research*, 66,105–115.
- Vujić, M., Đorđević, S., Lakićević, M. (2019). Service quality and customer satisfaction in the hotel industry in Serbia. *Hotel and Tourism Management*, 7(1), 61-70.
- Wong, A. (2004). The role of emotions in service encounters. *Managing Service Quality*, 14(5), 365-376.
- Zaid, A., & Law, R. (2019). Determinants of hotel guests' satisfaction from the perspective of online hotel reviewers. *International Journal of Culture, Tourism And Hospitality Research*, 13(1), pp. 84-97.
- Zeithaml, V.A., Parasuraman, A., & Berry, L.L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. New York: The Free Press.

