IPA AND SERVPERF QUALITY CONCEPTUALISATIONS AND THEIR ROLE IN HOTEL SERVICES SATISFACTION

Vesna Babić-Hodović
Maja Arslanagić-Kalajdžić
Amra Banda
Amina Sivac

Original scientific paper
Received 26 October 2018
Revised 14 December 2018
21 January 2019
Accepted 30 January 2019
https://doi.org/10.20867/thm.25.1.4

Abstract
Purpose – The purpose of this paper is twofold: (1) to assess importance-performance analysis (IPA) and service performance (SERVPERF) conceptualizations of service quality, and to establish which one excels in predicting the tourists’ satisfaction in hotel industry; and (2) to test the mediating role of satisfaction between quality conceptualization and hotel guests’ repurchase intentions and word of mouth recommendations regarding the hotel.
Design – A conceptual framework was empirically tested on a sample of 311 tourists staying in six hotels in Sarajevo (Bosnia and Herzegovina), which is a tourist destination with increased relevance internationally.
Methodology – Covariance-based structural equation modeling was used to estimate the model.
Approach – Two conceptualizations were firstly estimated separately then they were contrasted and compared.
Findings – The results showed a slight superiority of the IPA conceptualization over that of SERVPERF in predicting satisfaction and in affecting customer attitudinal and behavioral outcomes. This study also confirms the vital mediating role of satisfaction on customer outcomes.
Originality of the research – This study utilizes and compares two relevant conceptualizations of hotel service quality and is based on a conceptual framework that establishes which one is better for predicting tourists’ behavioral outcomes. The study is of practical relevance since it gives suggestions on tools that should be used by hotel managers in assessing the quality perceived by their guests.
Keywords service quality, Importance-Performance Analysis (IPA), SERVPERF, hotel industry

INTRODUCTION

Changes in tourists’ desires and needs, as well as market turbulence, increasing competition and the emergence of new competitors among service providers in the tourism and hotel industry (i.e., Airbnb; see Guttentag 2015; Altinay, Liu and Ramiksson 2017; Zervas et al. 2014), make customers’ perceptions of service quality, their satisfaction and loyalty more important than ever for hotel services. These trends are forcing hotels to make additional efforts in strengthening their competitiveness and improving services in order to increase customer satisfaction (Bodet, Anaba and Bouchet 2016; Manhas and Tukamushaba 2015). Thus, the hotel management must understand their customer requirements and provide adequate service quality (Lai and Hitchcock 2017). Service quality is generally accepted as a precondition for customer satisfaction,
which further results in increasing customer loyalty and, indirectly, financial and market performances, and the long-term business success of the hotel (Bitner and Hubbert 1994; Lai and Hitchcock 2016, 2017).

The conceptualisation of service quality has received much attention since the mid-1970s, and it represents one of the central issues in services research today (e.g., Koh, Yoo and Boger 2010; Oh and Kim 2017). The most known and used models for conceptualizing and operationalizing service quality are the SERVQUAL – SERVice QUALity model (Parasuraman et al. 1988) and the SERVPERF – SERVice PERFormance model (Cronin and Taylor 1992, 1994). The latter is practically a derivative of the SERVQUAL model, but it is focused on customers’ perceptions of service performances as the only relevant measure of service quality when relating it to consumer outcomes. In contrast, SERVQUAL treats customer expectations as an inevitable part of the service quality research. The Importance-Performance Analysis model (IPA model) (Martilla and James 1977) is another approach to quality conceptualisation and measurement, which is frequently used in services and in tourism and hospitality research (e.g., Bhattacharya and Dey 2015; Choi and Schwartz 2012; Koh et al. 2010) that joins the rating of importance for each quality attribute to the performance/perception evaluation.

Both models had several modifications in their operationalization, which are relevant (i.e., Knutson et al. 1990; Tsai, Hsu and Chou 2011) in different contexts, however, basic the conceptualisation of SERVQUAL/SERVPERF and IPA remains unchanged. Therefore, we focus on these, with specific attention to SERVPERF and IPA, and not to SERVQUAL since it assumes customers’ expectations and, hence, is not aligned with IPA, while SERVPERF is.

This study aims to provide more fine-grained guidelines into which conceptualisation – SERVPERF or IPA – would best serve to capture customers’ responses accurately in the context of the hospitality industry, with the aim to respond to two research questions. First, it examines which service quality conceptualisation better predicts customer satisfaction and, consequently, customer attitudinal and behavioural outcomes in the hotel industry setting. Providing an answer to this question will contribute to the present body of literature by offering suggestions on the appropriateness of the use of SERVPERF and IPA service quality conceptualizations in the hotel industry, based on new empirical evidence. Previous studies have contrasted expectations-performance (Parasuraman et al. 1988) with performance-only conceptualisations (Cronin and Taylor 1992), while importance-performance conceptualisation has not, until now, been compared to those two models. The originality of this study is in using the IPA model for modelling and explanatory purposes; according to the authors’ best knowledge, this approach has not been used in previous studies. Namely, the IPA approach has mainly been used as a great tool for clustering attributes and for offering managerial implications; however, it has not been used with the aim to predict and understand other concepts simultaneously. Therefore, the aim was to assess it’s standing compared to the SERVPERF approach and to access the IPA’s capacities for explaining the impact of service quality perception and customer reaction as the base for managers’ future decisions. The second research question of the study is what is the pathway through which service quality impacts tourists’ attitudinal (i.e., word of mouth) and behavioural
Tourism and Hospitality Management, Vol. 25, No. 1, 2019, 010204
Babić-Hodović, V., Arslanagić-Kalajdić, M., Banda, A., Sivac, A., IPA AND SERVPERF QUALITY ...

(i.e., repurchase intentions) outcomes? A mediating effect of satisfaction on the relation between the perceived quality and customer outcomes is proposed. By answering this question, the present study intends to contribute to a better understanding of the underlying mechanism through which tourists’ satisfaction with hotel services operates.

The next sections of the paper provide an overview of the IPA and SERVPERF conceptualisations of service quality. Then, a conceptual framework is developed that involves service quality, customer satisfaction and customer behavioural outcomes. Subsequently, the methodology and results of the conducted empirical study are presented. Finally, a discussion of the theoretical and managerial implications of the study, as well as its limitations and further research directions, are outlined.

1. SERVICE QUALITY CONCEPTUALISATIONS

1.1. IPA Conceptualisation of Service Quality

Martilla and James (1977) created the IPA model and it is widely accepted as a method that offers a pragmatic theoretical basis for the evaluation of service quality in marketing management (e.g., Ennew, Reed and Binks 1993; Matzler et al. 2004), as well as in tourism services (e.g., Janes and Wisnom 2003; Oh 2001; Pan 2015). The IPA method encompasses prioritizing attributes for improvements. The criteria for prioritizing are usually formulated according to the customers’ evaluations of the importance of each service attribute and performance (Sampson and Showalter, 1999).

Looking at tourism services, IPA is used as a powerful tool in tourism planning. Previous studies used IPA in settings such as: hotels (Albayrak and Caber 2015; Babic-Hodovic and Arslanagic-Kalajdzic 2017; Deng, Kuo and Chen 2008; Martin 1995), restaurants (Kim and Oh 2001), tour operators (Zhang and Chow 2004), and destination image (Joppe, Martin and Waalen 2001; O’Leary and Deegan 2005). Therefore, in the context of tourism and tourism management, IPA is considered to be a highly valuable “demand-based” tool for ensuring the continuous, dynamic and multi-perspective process of review and validation of tourism practices (Wade and Eagles 2003).

In the case of hotel services, previous studies have discussed the advantages and limitations of the IPA model applied for the identification of hotel guests’ preferences and potentials for managers’ decisions about resource allocation. Albayrak and Caber (2015) suggested that IPA allows managers to identify resource allocation priorities for improving overall customer satisfaction. Qu and Sit (2007) focused their attention on fulfilling promises given by hoteliers to guests. In their review of IPA studies in the hospitality context, Janes and Wisnom (2003) found that, in most of the cases, IPA was used for the evaluation of service quality from the point of view of existing customers, and that this should be taken into account when creating strategies for customer acquisition.

In the process of measuring and rating attributes, respondents are evaluating both the importance and performance of service attributes. While the performance of attributes is always assessed through a set of specific items (e.g., SERVPERF), importance is
understood as a general assessment of the attribute’s standing (Mittal and Kamakura 2001). The model itself recognizes four groups, categorized as a combination of the attributes’ importance and performances (high and low level), together with suggested strategies: (1) attributes evaluated as high in both importance and performance from the customers’ point of view – here providers have to keep the current strategy, i.e., “keep up the good work” (Chu and Choi 2000); (2) important, but still underperformed attributes, where service providers should apply a “concentrate here” strategy, i.e., improve service quality and redirect resources to these attributes (Albayrak and Caber 2015; Matzler, Sauerwein and Heischmidt 2003); (3) non-important but over-performed attributes belong to the “possible overkill” section of the IPA framework, with a suggested reduction of the investment strategy; and (4) “low priority” attributes cover non-important, and also underperforming, attributes.

Previous studies show differing findings regarding attribute classification, and their importance and performance in the hospitality, hotel and tourism services. When researching the importance of the attributes of hotel services, Beldona and Cobanoglu (2007) found a high level of correlation between travel frequency and hotel guests’ attitudes regarding technology elements. Their findings showed a greater importance of basic technologies (e.g., in-room temperature controls), which are considered by customers as an expected service and which still underperformed, than those of the latest technologies (e.g., in-room printers and faxes); thus, managers should re-shift their focus to fulfilling basic expectations first. Similar findings on the major importance of “basic attributes” can be found in Ryan and Huimin’s (2007) study, where it was shown that guests in Chinese hotels consider “cleanliness and bed comfort” as the attributes of the highest importance. In contrast, Albayrak and Caber (2015) identified “overall cleanliness” as a low priority attribute, together with “food and beverage quality” and “personnel”. Clearly, an improvement in performance of such attributes does not increase customer satisfaction, but due to its importance, low performances will cause customer dissatisfaction.

1.2. SERVPERF conceptualisation of service quality

The SERVPERF conceptualisation of service quality (Cronin and Taylor 1992) is a result of critiques of the disconfirmation-based models, specifically the SERVQUAL model, which measure service quality as the difference between customers’ experiences with service performances and their previous expectations (Parasuraman et al. 1988). The original SERVQUAL model starts with the assumption that customers’ evaluation of service quality depends strongly on their previous expectations regarding different dimensions of service quality; everything that they experience in the service process has been compared with “the standard of expectation”, which is different depending on the focus of undertaken studies. Expectations are not synonyms for the specific importance of those dimensions (as was the case in the IPA model), since they only contain assumptions on issues that will probably occur while using a particular type of service. The SERVPERF model consists of the same dimensions of quality as the SERVQUAL model (tangibles, reliability, responsiveness, assurance and empathy) and 22 specifically designed items, but it measures service quality only through the performances/perceptions of service quality. Namely, Cronin and Taylor (1992) claimed that expectation items are unnecessary in the process of service quality evaluation since
Tourism and Hospitality Management, Vol. 25, No. 1, 2019, 010204

Babić-Hodović, V., Arslanagić-Kalajdžić, M., Banda, A., Sivac, A., IPA AND SERVPERF QUALITY ...

customers implicitly compare perceptions and expectations when they are processing the evaluation. This approach also simplifies research administration, in particular, the respondents’ convenience when utilizing the measure (Caruana 2002).

When it comes to the hotel industry, SERVPERF has been used intensively and across a number of regions (e.g., Al Khattab and Aldehayyat 2011). It has also been applied to a wide range of other tourism-related services, such as the quality of the airline industry (Abdullah, Jan and Manaf 2012), tourism establishments (Attallah 2015), tourism products (Sanchez et al., 2006) and others, which confirms the ever-present relevance of SERVPERF to the operationalization of quality in tourism services.

2. CONCEPTUAL FRAMEWORK

In order to contrast IPA and SERVPERF conceptualisation of service quality, we embed it in a conceptual framework that encompasses the satisfaction of hotel guests, hotel guests’ repurchase intentions and their intended word of mouth recommendations (see Figure 1). It is a great challenge for hotel managers to sustain high quality services and ensure positive responses from guests because of their participation in the process (co-creation), the importance of employees’ empathy, and the heterogeneity of services offered in the hotel setting (Babic-Hodovic 2010). These factors also cause difficulties in measuring service performance and guests’ satisfaction with those hotel services. In this research, satisfaction is understood as the positive attitude of tourists that results from the superior service performances of the hotel provider (Back and Parks 2003).

Figure 1: Conceptual Framework of the Study

Previous studies have examined the link between service quality and satisfaction, confirming, in many cases, that quality predicts satisfaction in hospitality and tourism services, and in the service industry in general, and a plethora of studies have examined this link (e.g., Alexandris, Dimitriadis and Markat 2002; González and Brea 2007; Silvestro and Low 2006). Therefore, it has often been advised that researchers’ research perceptions of customer quality and satisfaction simultaneously with their behavioural (word of mouth) and attitudinal (repurchase intentions) loyalty (Cronin and Taylor 1992; Knutson et al. 1990; Markovic and Jankovic-Raspor 2013).

While it is not the aim of this study to re-establish the effect of quality on satisfaction (Chen 2012; Silvestro and Low 2006), the argument is that the IPA conceptualisation of service quality, which integrates the importance of specific attributes and, hence, the importance of a particular quality dimension, acts as a more relevant determinant of
Tourism and Hospitality Management, Vol. 25, No. 1, 2019, 010204
Babić-Hodović, V., Arslanagić-Kalajdžić, M., Banda, A., Sivac, A., IPA AND SERVPERF QUALITY ...

satisfaction than SERVPERF conceptualisation. Namely, measuring the importance of the attributes of the IPA model offers diagnostical opportunities, which are considered to be the key disadvantage of the SERVPEF in comparison to SERVQUAL model. We assume this issue affects the higher explanatory power of the IPA technique.

While SERVPERF has been used in many previous studies, Chu and Choi (2000) also underlined the great potential of the IPA technique for the measurement of tourism service quality and tourist satisfaction. Mohsin and Lockyer (2010) found that the importance of front office employees, room service and in-house cafés/restaurants in Hamilton hotels was significantly higher than their performance. This is due to the fact that, although tourists might perceive a specific dimension/attribute performing very well (i.e., reliability), they might consider it unimportant or less important than other dimensions (i.e., tangibles of the hotel or assurance provided by the hotel). This is why, Hypothesis 1 is as follows:

H1: The IPA conceptualisation of service quality better explains satisfaction with hotel services than the SERVPERF conceptualisation.

Furthermore, there is a general suggestion (Boulding et al. 1993; Caruana 2002; Cronin and Taylor 1992; Kandampully and Suhartanto 2000) that satisfaction has a mediating role between the customers’ perception of service quality and their behavioural intentions. Different studies have examined the role of tourists’ satisfaction in tourists’ behaviour, establishing the link between satisfaction and loyalty (Yoon and Uysal 2005), as well as quality, satisfaction and behavioural outcomes (Zabkar, Brencic and Dmitrovic 2010).

In this study, we focused on one attitudinal outcome (word of mouth, WOM) and one behavioural outcome (repurchase intention). WOM is known to increase product awareness and persuades people to try or use products or services. Namely, people often perceive this channel of communication to be more credible than traditional marketing and communication channels (Alsop, Basset and Hoskins 2007). Some authors explain WOM as the most effective, yet least understood, marketing communication instrument. Empirical studies (Harrison-Walker 2001) confirmed that service customers are more likely to rely on different types of interpersonal communication, including WOM, than provider-controlled communication channels; this is why it is a very important element in hotel communication strategies. WOM communication in marketing is defined as informal communication between customers (Westbrook and Oliver 1991), which is related to perceptions of a product or service quality and customer satisfaction; it elicits customers’ positive attitudes and their readiness for future cooperation (Bodet et al. 2016; Oh and Kim 2017). In their meta-analysis, Matos, Henrique and Rossi (2007) stressed that quality, value, satisfaction, commitment, trust, and loyalty are antecedents of word-of-mouth activities.

Besides WOM, repurchase intentions are also considered to be behavioural consequences of tourists’ experiences in hotels, which show their perceptions of quality and satisfaction (Maxham and Netemeyer 2002). Some authors insist on the independency of those two constructs (Gruen, Osmombekov and Czaplewski 2006; Maxham 2001); however, both are caused by customers’ experiences in the service
process and interactions with the provider. Repurchase intentions are often considered to be behavioural outcomes of customer satisfaction (Kwong and Candinegara, 2014).

Kwong and Candinegara (2014) stated that customer satisfaction is the only independent variable able to significantly influence consumer repurchases (as a behavioural component of loyalty) and positive WOM, while others have concluded that satisfaction is a reliable predictor of repurchase intentions (Bhattacharya and Dey 2015; Cronin, Brady and Hult 2000). More satisfied customers will complain less, while probably repurchasing and purchasing more, while dissatisfied ones are disloyal to the service provider; they often decide to switch to other companies and pass on negative WOM comments (Cronin et al. 2000; Maxham and Netemeyer 2002). Since all of the directional links (between satisfaction and outcomes) were tested in the previous literature, they are not hypothesized here. The aim is to establish the role of satisfaction in the relationship between quality and customer outcomes, and to test whether the mediating mechanism of satisfaction is applicable in the tourism and the hotel industry. Therefore, Hypothesis 2 is as follows:

H2: Satisfaction with hotel services mediates the effect of hotel service quality on (a) word of mouth, and (b) repurchase intentions.

3. METHODOLOGY

To empirically test the developed conceptual framework, a quantitative survey was conducted in Sarajevo (the capital city of Bosnia and Herzegovina), which in recent years has received increased attention from international tourists, being listed amongst the top 10 cities to visit in Europe by several world-leading recommenders (Casciato 2013; Rushby 2016). Sixty-six hotels are registered and listed for Sarajevo on Booking.com (as of August 2016) and six of these (10%) were randomly selected and contacted in order to gain approval to run the study during August 2016. Hotel receptionists contacted all guests who stayed at the hotel during that period, when they were leaving the facility, and 311 guests agreed to fill in the survey. The countries of origin of the hotel guests were very diverse, from regional tourists (e.g., Croatia, Serbia, Montenegro, and Slovenia); tourists coming from Western Europe (e.g., Germany, Austria, Switzerland, and Sweden), to tourists from Turkey, Qatar, Canada or Iceland. The average age of guests was 37, with the minimum age being 18 and the maximum being 67. On average, guests stayed in the hotel for 6 days. Concerning the gender of the respondents, 45% were female and 55% male? Furthermore, 56% of the respondents had finished their undergraduate studies.

Existing scales for measuring constructs in the focus of the research were used. Service quality was assessed through the 22 SERVPERF items (Cronin and Taylor 1992), while the IPA model attributes were evaluated along the same set of items, through the importance and performance prism, by multiplying performance and importance scores. Measures of satisfaction, word of mouth and repurchase intentions were also adapted from the literature (Maxham and Netemeyer 2002). All scales were measured on a 7-point Likert scale.
4. RESULTS

Confirmatory factor analysis (CFA) was conducted in LISREL 8.71 in order to test the psychometric properties of the selected measures. The results of the analysis are presented in Table 1.

Table 1: Confirmatory Factor Analysis

<table>
<thead>
<tr>
<th>Items</th>
<th>λ</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tangibles</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This hotel has up-to-date equipment.</td>
<td>0.760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This hotel’s physical facilities are visually appealing.</td>
<td>0.689</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This hotel’s employees are well dressed and appear neat.</td>
<td>0.736</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The appearance of the physical facilities of this hotel is in keeping with the type of services provided.</td>
<td>0.633</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When this hotel promises to do something by a certain time, it does so.</td>
<td>0.799</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When you have problems, this hotel is sympathetic and reassuring.</td>
<td>0.593</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This hotel is dependable.</td>
<td>0.688</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This hotel provides its services at the time it promises to do so.</td>
<td>0.705</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This hotel keeps its records accurately.</td>
<td>0.607</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Responsiveness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This hotel tells customers exactly when services will be performed.</td>
<td>0.770</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You receive prompt service from this hotel’s employees.</td>
<td>0.608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees of this hotel are always willing to help customers.</td>
<td>0.600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees of this hotel are not busy to respond to customer requests promptly.</td>
<td>0.620</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assurance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>You trust employees of this hotel.</td>
<td>0.779</td>
<td></td>
<td></td>
</tr>
<tr>
<td>You feel safe in my transactions with this hotel’s employees.</td>
<td>0.698</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees of this hotel are polite.</td>
<td>0.731</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees get adequate support from this hotel to do their jobs well.</td>
<td>0.705</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Empathy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This hotel gives you individual attention.</td>
<td>0.810</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees of this hotel give personal attention to you.</td>
<td>0.683</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees of this hotel know what your needs are.</td>
<td>0.769</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees of this hotel have your best interests at heart.</td>
<td>0.626</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees of this hotel have operating hours convenient to all their customers.</td>
<td>0.649</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am very satisfied with the overall experience with this hotel.</td>
<td>0.811</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the services this hotel provides me.</td>
<td>0.799</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is a pleasure to be a guest of this hotel.</td>
<td>0.793</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with this hotel.</td>
<td>0.815</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Word of Mouth</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am likely to say good things about this hotel.</td>
<td>0.865</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will recommend this hotel to my friends.</td>
<td>0.832</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will recommend this hotel to my family.</td>
<td>0.802</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Repurcahse Intentions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I plan to use services of this hotel when we are able.</td>
<td>0.867</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to remain a client of this hotel.</td>
<td>0.757</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I plan to use this hotel in the future.</td>
<td>0.802</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fit indices: $\chi^2 = 946.914$, df = 436, $p = 0.0$, $\chi^2$/df = 2.17, RMSEA = 0.064, NNFI = 0.975, CFI = 0.978, SRMR = 0.058, GFI = 0.838
The values of composite reliability (CR) and average variance extracted (AVE) are above the cut-off values (Bagozzi and Yi 2012), and the estimated CFA model exhibits an excellent model fit ($\chi^2 = 946.914$, df = 436, $p = 0.0$, $\chi^2/df = 2.17$, RMSEA = 0.064, NNFI = 0.975, CFI = 0.978, SRMR = 0.058, GFI = 0.838).

To evaluate the reliability of the constructs, both convergent and discriminant validity were assessed. The factor loadings for all constructs were high and significant ($p < 0.001$), and all AVE values were above the 50% cut-off criteria (Fornell and Larcker 1981), which indicates the convergent validity of the constructs. CR values were well above the critical level of 0.60. The correlation matrix of all constructs is provided in Table 2. Furthermore, all correlations were lower than the squared roots of the AVE scores, which confirm that the discriminant validity was obtained.

### Table 2: Correlations and Discriminant Validity

<table>
<thead>
<tr>
<th>#</th>
<th>Construct</th>
<th>Mean (S.D.)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tangibles</td>
<td>6.096 (0.811)</td>
<td>0.725</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Reliability</td>
<td>6.108 (0.774)</td>
<td>0.466</td>
<td>0.708</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Responsiveness</td>
<td>6.045 (0.806)</td>
<td>0.392</td>
<td>0.520</td>
<td>0.711</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Assurance</td>
<td>6.252 (0.797)</td>
<td>0.398</td>
<td>0.443</td>
<td>0.452</td>
<td>0.729</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Empathy</td>
<td>6.180 (0.743)</td>
<td>0.387</td>
<td>0.413</td>
<td>0.364</td>
<td>0.472</td>
<td>0.711</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Satisfaction</td>
<td>6.114 (0.851)</td>
<td>0.370</td>
<td>0.375</td>
<td>0.347</td>
<td>0.389</td>
<td>0.372</td>
<td>0.805</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Word of Mouth</td>
<td>6.173 (0.908)</td>
<td>0.329</td>
<td>0.301</td>
<td>0.222</td>
<td>0.346</td>
<td>0.271</td>
<td>0.524</td>
<td>0.834</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Repurchase Intentions</td>
<td>6.050 (0.939)</td>
<td>0.296</td>
<td>0.321</td>
<td>0.306</td>
<td>0.286</td>
<td>0.265</td>
<td>0.489</td>
<td>0.482</td>
<td>0.800</td>
</tr>
</tbody>
</table>

Notes: S.D. = standard deviation, correlations are below diagonal, square root AVEs are on the diagonal in bold; All correlations are significant at the $p < 0.001$ level.

We further continued with the assessment of the structural part of the model, by analyzing two covariance-based structural equation models (SEMs) in LISREL 8.71. Model 1 used SERVPERF as a quality measure, where the selected items were evaluated along the perceived performance dimension, while Model 2 used IPA as a quality measure, where the perceived performance dimensions are multiplied by the importance score for the each item. The results are shown in Table 3.

### Table 3: Results and Comparison of the Models

<table>
<thead>
<tr>
<th>Path</th>
<th>Model 1: SERVPERF as a quality measure</th>
<th>Model 2: IPA as a quality measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>S.E.</td>
</tr>
<tr>
<td>Quality → Satisfaction</td>
<td>0.616 (0.078)</td>
<td>0.380</td>
</tr>
<tr>
<td>Satisfaction → Word of Mouth</td>
<td>0.889** (0.076)</td>
<td>0.791</td>
</tr>
<tr>
<td>Satisfaction → Repurchase Intentions</td>
<td>0.877** (0.076)</td>
<td>0.796</td>
</tr>
</tbody>
</table>

Fit indices

$\chi^2 = 213.253$, df = 87, $p = 0.0$, $\chi^2/df = 2.45$, RMSEA = 0.067, NNFI = 0.982, CFI = 0.985, SRMR = 0.039, GFI = 0.918

$\chi^2 = 212.672$, df = 87, $p = 0.0$, $\chi^2/df = 2.44$, RMSEA = 0.066, NNFI = 0.983, CFI = 0.986, SRMR = 0.045, GFI = 0.919

Notes: ** - $p<0.001$
One can observe that in both models all paths are positive and significant. This means that the model also confirms the effects of service quality perception on tourist satisfaction previously established in the literature. Quality is positively related to satisfaction, while satisfaction positively influences tourists’ word of mouth and repurchase intentions. The effect of quality on satisfaction in Model 1 is $\beta = 0.616$, $p<0.001$, while the effect of quality on satisfaction in Model 2 is $\beta = 0.655$, $p<0.001$. Furthermore, the explanatory power of quality in Model 1 ($R^2 = 0.380$) is weaker than the explanatory power of quality in Model 2 ($R^2 = 0.429$).

However, comparison between Model 1 and Model 2 cannot be done by observing SEM results. Hence, in order to formally test the difference between the two models (Hypothesis 1), an additional test was employed, using a step-wise hierarchical regression (Hair et al. 2010). Since the focus of the first hypothesized effect is only on the predictive power of different quality measures, aggregated SERVPERF measures and IPA measures were regressed on satisfaction. Furthermore, since SERVPERF and IPA measures are highly correlated, the two measures were orthogonalized by using the approach recommended by Little, Bovaird and Widaman (2006), that is – by saving unstandardized residuals. The resulting regression model shows: (1) SERVPERF explains 32% of variance in satisfaction (slightly less than in the above presented structural model since part of the information is lost due to aggregation), (2) adding weights based on importance to the model significantly improves the $R^2$ for 6% ($F$-change = 27.36***; $df = 308$) and (3) there is no multicollinearity issue in this model due to the unstandardized residual use. Overall, in this way, the higher and significant contribution of IPA measure for determining satisfaction is statistically validated. Therefore, Hypothesis 1 is confirmed.

SEM results (see Table 3) also show that the mediation effect is present in both models. However, in order to assess the meditational relationship more strictly, the mediation hypothesis was tested using the PROCESS procedure in SPSS (Preacher and Hayes 2004), which allows testing of indirect effects using a bootstrapping method with bias-corrected confidence intervals (Hayes 2013). In the tested model, bias-corrected 95% confidence intervals of the indirect effects were obtained with a 5,000 bootstrap resample. In the bootstrapping method, a sole requirement for demonstrating mediation is a significant indirect effect. The results are presented in Table 4, using the SERVPERF model as a quality measure, and in Table 5, using the IPA model.

Table 4: Mediation Test with SERVPERF as a Quality Measure

<table>
<thead>
<tr>
<th></th>
<th>Satisfaction $\beta$(S.E.)</th>
<th>Word of Mouth $\beta$(S.E.)</th>
<th>Repurchase intentions $\beta$(S.E.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>0.717*** (0.059)</td>
<td>0.087ns (0.061)</td>
<td>0.082ns (0.067)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.767*** (0.048)</td>
<td>0.759*** (0.053)</td>
<td></td>
</tr>
<tr>
<td><strong>Indirect effect</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction as a mediator</td>
<td>0.549*** (0.140)</td>
<td>0.533*** (0.144)</td>
<td></td>
</tr>
<tr>
<td>Confidence Interval</td>
<td>(0.297-0.837)</td>
<td>(0.285-0.843)</td>
<td></td>
</tr>
<tr>
<td><strong>Mediation effect size</strong></td>
<td><strong>0.219</strong></td>
<td><strong>0.199</strong></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.321</td>
<td>0.571</td>
<td>0.523</td>
</tr>
</tbody>
</table>

Notes: Bias corrected confidence intervals; 5000 bootstrapped samples; S.E. = standard error; **-p<0.05, ***-p<0.001, ns – not significant
Table 5: Mediation Test with IPA as a Quality Measure

<table>
<thead>
<tr>
<th></th>
<th>Satisfaction (β(S.E.))</th>
<th>Word of Mouth (β(S.E.))</th>
<th>Repurchase intentions (β(S.E.))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>0.078*** (0.006)</td>
<td>0.012** (0.006)</td>
<td>0.007** (0.007)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.744*** (0.050)</td>
<td>0.759*** (0.055)</td>
<td></td>
</tr>
<tr>
<td><strong>Indirect effect</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction as a mediator</td>
<td>0.056* (0.012)</td>
<td>0.058* (0.012)</td>
<td></td>
</tr>
<tr>
<td>Confidence Interval</td>
<td>(0.036-0.080)</td>
<td>(0.285-0.832)</td>
<td></td>
</tr>
<tr>
<td><strong>Mediation effect size</strong></td>
<td>0.265</td>
<td>0.225</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.376</td>
<td>0.573</td>
<td>0.522</td>
</tr>
</tbody>
</table>

Notes: Bias corrected confidence intervals; 5000 bootstrapped samples; ** p<0.05, *** p<0.001, ns – not significant.

Both tests of the indirect effect (for SERVPERF as a measure and for IPA as a measure) confirm that satisfaction acts as a vehicle for the effect of quality on word of mouth and repurchase intentions. This confirms Hypothesis 2 of the study.

**CONCLUSION**

This study has important implications both for theory and for hotel managers. Its primary contribution is in applying and contrasting two different conceptualisations of service quality measures in the tourism industry – IPA and SERVPERF – and analysing their predictive power when embedded in the conceptual framework consisting of the satisfaction and attitudinal and behavioural outcomes of tourists. The results showed that both measures of service quality were positively related to satisfaction, which is in line with previous conclusions about the role of perceived service quality as an antecedent of tourists’ satisfaction (e.g., Chen 2012; Silvestro and Low 2006). However, all things being equal, the IPA conceptualisation, operationalized as performance multiplied by importance (Kim et al. 2012), had a stronger effect, and this explains the higher proportion of variance than SERVPERF conceptualisation. To the authors’ best knowledge, a similar comparative analysis cannot be found in previous research. This suggests that adding importance to the perceived performance has benefits in helping us to understand tourists’ satisfaction, as well as of the service of customers in general. This confirms the previous assumption that IPA analysis, as a two-dimensional analysis, has great capacity to show the strengths and weaknesses of the service dimensions and might be used as an adequate instrument for setting priorities for improving service quality (Kim et al. 2012; Qu and Sit 2007).

The second theoretical contribution is in adding unambiguous evidence of the mediating role of tourists’ satisfaction on the impact of perceived service quality to customers’ behavioural outcomes. This study shows that in both conceptualisations of service quality, satisfaction is still used as a vehicle through which the effect of quality is transferred to word of mouth and repurchase intentions. Although some authors (e.g., Cronin et al. 2000) argued that there are also direct relationships between quality and customer behaviour, this has not been confirmed in the present study. On the contrary, no direct effect between perceived quality and behavioural outcomes (repurchase intentions) was found in this research, showing that this effect has been fully led by
satisfaction, while, on the other hand, quality, conceptualized through the IPA measure, also has a direct effect on the attitudinal outcomes (word of mouth) of hotel guests, which complements the effect mediated by satisfaction. This could be a consequence of the fact that hotel guests base their evaluations on importance, as well as on service quality performance. Namely, the perception of a high level of performance of hotel services initiates guests to make additional purchases, but if specific dimensions are not perceived as important, there is no motive (interest) to share the positive experience. This could explain the partial mediation of satisfaction in the case of WOM and again demonstrates the greater strength of IPA conceptualisation in comparison to SERVPERF conceptualisation. This also supports the thesis that, as in the cases of other weighted service quality models (i.e., weighted SERVQUAL), which could be generalized for tourists and customers across similar industries, that is, that tourists/customers react differently depending on the importance of the specific dimensions evaluated.

IPA conceptualisation is also efficient when aiming to assess the effects of service quality on satisfaction and customer outcomes. This implies that hotel managers should pay particular attention to what is shown to be important to guests, since their reaction to the improvement of different service quality dimensions and behaviour are not the same. Therefore, the hotel management’s aim should be to excel in the most important areas in order to increase guests’ satisfaction and, ultimately, their future behaviour in terms of positive word of mouth recommendations and their potential return to the hotel (repurchase intentions).

Further managerial implication is related to future opportunities: identifying the most important factors that can be used to attract new (potential) guests and those that have the highest impact on positive decisions about staying in a hotel. Tracking quality perception, changes in the importance of attributes and satisfaction gives hotel managers crucial information about the attributes that will help them to retain guests and to improve their hotel’s profile; it will especially help them to differentiate themselves from their competitors and to delight guests, both of which are crucial for improving a hotel’s business performance. Finally, once more the study underlines how important quality and satisfaction are for shaping the attitudinal and behavioural outcomes of hotel guests, as well as for tourists in general.

The study is not without its limitations. Hotel businesses and operations are only one dimension of the tourism destination offered, meaning that the evaluation of hotel service quality is only one part of tourists’ experiences at a destination and that overall satisfaction can only be studied as a composite of customer reactions to the other experiences. Other conceptualisations of service quality should also be assessed and contrasted to the IPA and SERVPERF conceptualisation, not only to improve the hotel, but also the destination management approach, as well as to gain a clear theoretical foundation into what is the most efficient quality measure in the tourism industry. In the light of recent trends, the research could be extended to the context of (hotel) service amenities (Hamilton et al. 2017), which are shown to be relevant and profitable for hotels. Industry disruptors (Guttentag 2015) in the form of shared economy providers (e.g., Airbnb) can also be included in further studies, in order to identify possible differences in the importance and perceptions of attributes in hotels and in shared services. This would allow researchers and practitioners to formulate practical guidelines.
for attracting and retaining guests. Furthermore, the superiority of IPA conceptualisation should be additionally confirmed by adding further empirical evidence from different service industries.

REFERENCES


Vesna Babić-Hodović, PhD, Full Professor
University of Sarajevo, School of Economics and Business
Department of Marketing
Trg oslobođenja – Alija Izetbegović 1, 71000 Sarajevo, Bosnia and Herzegovina
Phone: +38733275975
E-mail: vesna.babic-hodovic@efsa.unsa.ba

Maja Arslanagić-Kalajdžić, PhD, Assistant Professor (Corresponding Author)
University of Sarajevo, School of Economics and Business
Department of Marketing
Trg oslobođenja – Alija Izetbegović 1, 71000 Sarajevo, Bosnia and Herzegovina
Phone: +38733251883
E-mail: maja.arslanagic@efsa.unsa.ba
Amra Banda, MA, Senior Teaching Assistant
University of Sarajevo, Faculty of Science
Department of Geography
Zmaja od Bosne 33-35, 71000 Sarajevo, Bosnia and Herzegovina
Phone: +38733723803
E-mail: amra.banda@pmf.unsa.ba

Amina Sivac, MA, Senior Teaching Assistant
University of Sarajevo, Faculty of Science
Department of Geography
Zmaja od Bosne 33-35, 71000 Sarajevo, Bosnia and Herzegovina
Phone: +38733723722
E-mail: amina.sivac@pmf.unsa.ba

Please cite this article as:

Creative Commons Attribution – Non Commercial – Share Alike 4.0 International