
Importance-performance analysis of service quality dimensions for the Bangladeshi hotel industry

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Abstract: In global competitive markets, hoteliers are looking to satisfy guests for repeat customers. Achieving satisfied guests is not an easy task. This study evaluates the service quality of Bangladeshi hotels using gap analysis, SERVQUAL and importance-performance analysis (IPA). The results showed that hotel guests' satisfaction regarding service attributes are lower than the importance assigned to the measurement attributes. The widest gap was found in staff response and additional amenities, especially the commitment of hotel staff towards their guests. Also, the IPA grid showed that eight services attributes fell into the 'concentrate here' quadrant. This means that hotel management should take immediate action on these attributes for the betterment of the industry.

Keywords: service quality; gap analysis; SERVQUAL; IPA grid; hotel industry; importance-performance analysis; IPA; Bangladesh.

Reference to this paper should be made as follows: Rahman, M. and Islam, R. (2018) 'Importance-performance analysis of service quality dimensions for the Bangladeshi hotel industry', *Int. J. Business and Systems Research*, Vol. 12, No. 4, pp.365–390.

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1 Introduction

Most of the hotels in today's competitive global marketplace are facing a tough competitive environment as many share similar luxurious physical facilities. For most hotels, survival depends on the delivery of quality service aimed to please guests (Abukhalifeh, 2015). Better service quality can differentiate an organisation from others and gain competitive advantage by improving customer satisfaction (Wu and Hsieh, 2012). Numerous empirical studies have found that customer satisfaction, customer loyalty and customer retention directly affect company's profits (Deng et al., 2008; Burnham et al., 2003; Rosidah et al., 2010; Han and Ryu, 2012; Bernhardt et al., 2000; Zeithaml, 2000). Hence, hoteliers have to continuously seek the ways to improve the quality of their services by satisfying their guests. For this, hotel management needs to know the importance guests place on the individual components of the service experience and how the hotel performs in relation to those components (Wilkins, 2010).

In this sense, the importance-performance analysis (IPA) enables an understanding of the dimensions where hotels meet, exceed, or under-perform customer importance. This technique can help to divide the hotel services into four identifiable quadrants so that management can understand the perception of hotel guests about their services, and management can easily find where problems exist (Chu and Choi, 2000). Ultimately, the goal of the entire system is to enhance customer satisfaction and achieve better business results through quality implementation and improvement. However, the validity of this managerial and analytical tool has frequently been questioned (Oh, 2001; Bacon, 2003). Recognising this, modified or an alternative approach of IPA is proposed.

This study attempts to identify a list of service quality attributes and examine the importance of these attributes from the perspective of hotel guests, their satisfaction level on those attributes and the gap between guests' assigned importance and satisfaction of an attribute. This will help hotel management develop marketing strategies to cater for their target guests.

2 Literature review

2.1 Exploring service quality in the hotel industry

Service quality is the comparison that customers make between expectation and perception of the perceived services (Wang et al., 2007). The concept of service quality implies perceived quality which cannot be measured objectively. Hence, scholars believe that crucial dimensions should be considered while assessing the service quality of an organisation. For instance, Garvin (1996) stated that the evaluation of service quality depends on eight aspects, namely performance, features, reliability, conformance,

durability, serviceability, aesthetics, and perceived quality. However, Davidson (2003) commented that exploring the quality of service encompasses three main facets comprising performance standards, customer's appreciation of service quality and employee/customer interface.

Thus, for the most widely used service quality model, SERVQUAL was developed by Parasuraman et al. (1988) which consists of five dimensions namely tangibles, reliability, responsiveness, assurance, and empathy. SERVQUAL was developed to identify the service quality gap between the perceptions of the service provider and the customer. It has been used in many contexts, including service industries such as hospitality (Renganathan, 2011), banking (Hong and Marimuthu, 2014), education (Galeeva, 2016) and healthcare (Ayoubian et al., 2015). It is to be noted that the dimensions of SERVQUAL are not necessarily generic or universal. It should be modified both for the specific service situation and for the environmental context within which it is used, to make it a more valuable tool (Akbaba, 2006).

While studying service quality in the hotel industry, most researchers applied a modified SERVQUAL model considering the characteristics of service attributes. Saleh and Ryan (1991) identified five dimensions of hotel service quality, namely transparency, tangible, trust, sarcasm avoidance, and empathy. Ekinci et al. (1998) developed a model based on tangible and intangible quality determinants while conducting research on Turkish hotels. Knutson et al. (2009) discovered four factors: environment, accessibility, driving benefit, and incentive as SERVQUAL determinants while measuring the hotel guests' experience. Blešić et al. (2014) identified seven service quality dimensions namely assurance, food and benefits, empathy, entertainment, recreation facilities and wellness, responsiveness and reliability while studying in spa hotels in Serbia.

Investigating service quality in the hotel industry of Scotland, Briggs et al. (2007) found that the major inconsistencies in service quality performance occur due to the absence of the personal touch and staff dealing with the complaints of hotel guests. Supporting this, Brewster (2012) argued that a hotel's service quality may fail because of a lack of commitment on the part of management and staff. Similarly, Saleh and Ryan (1991) sought staff performance as an important contributor to hotel performance. Other factors affecting perceived levels of hotel performance include location, hotel quality and price (Barsky and Labagh, 1992); housekeeping standards (Gundersen et al., 1996); cleanliness (Lockyer, 2002); comfortable beds, rooms (Weaver and Oh, 1993); safety and security (Lockyer, 2002); and additional amenities (Weaver and Oh, 1993). It is noted that numerous studies of service quality in hotels continue to be undertaken in different parts of the globe.

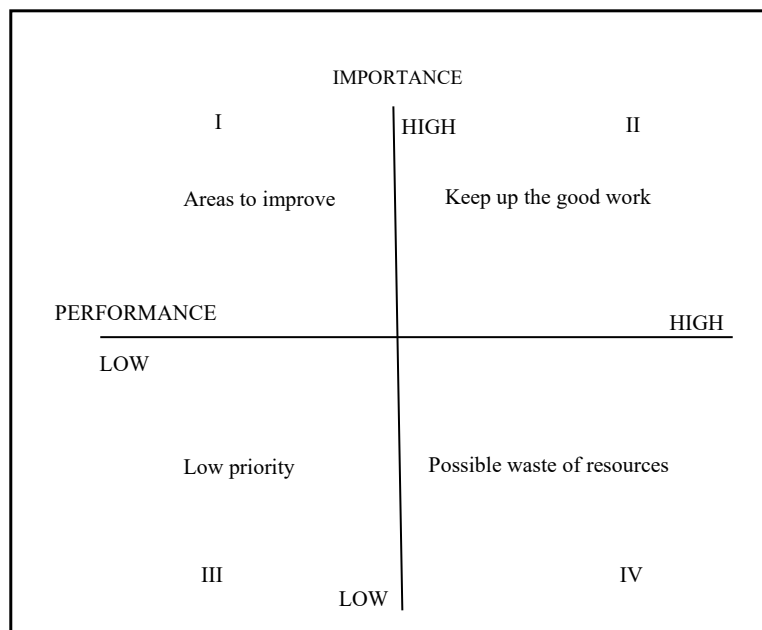
2.2 Importance-performance analysis

Martilla and James (1977) first introduced IPA to identify the strengths and weaknesses of a market offering. Kitcharoen (2004) stated that conceptually IPA is a multi-attribute model which considers two criteria that consumers use in making a choice. The first criterion is the relative importance of attributes and the second is consumers' evaluation of the offering in terms of those attributes. Thus, the firms can identify which product or service attributes they should focus on to enhance customer satisfaction (Matzler et al., 2004). IPA can be used as an effective means to evaluate the competitive position of a firm in the market, improvement opportunities and efforts of strategic planning (Hawes

and Rao, 1985). Moreover, firms can get insightful hints about critical aspects of service and minimise the expenses in less-important areas by this graphical tool (Frauman and Banks, 2011).

The IPA model has gained popularity among researchers in the hotel industry (Blešić et al., 2014; Abukhalifeh, 2015; Dabestani et al., 2016; Wilkins, 2010) together with other management fields including tourism and leisure services (Oh, 2001; Wade and Eagles, 2003; Griffin and Edwards, 2012), food services (Tzeng and Chang, 2011; Hu et al., 2009) education (Kitcharoen, 2007; 2004; O'Neill and Palmer, 2004) healthcare (Wu and Hsieh, 2012) information system (Ainin and Hisham, 2008) and employment services (Chang, 2013; Hamid et al., 2014), among many other disciplines.

Figure 1 Importance-performance map



In the case of IPA, four steps are taken into account (Lai and To, 2010). First, the list of key service attributes are identified for the purpose of evaluation. Then, the importance of each attribute, as well as the performance, are rated. Afterwards, the data are examined by pairing the mean scores for each attribute. Finally, plotting the mean scores on a two-dimensional grid and its quadrant is established. The vertical axis of the IPA grid usually represents the importance data, and performance data is displayed along the horizontal axis. Then, the data are mapped into four quadrants, namely areas to improve, keep up the good work, low priority, and possible waste of resources (Martilla and James, 1977; Geng and Chu, 2012), as depicted in Figure 1.

In the context of hotel service, each quadrant shows the importance and performance rating of service attributes assigned by guests. The first quadrant – areas to improve – encompasses the attributes that are perceived to be important by the hotel guests, but the

service has failed to fulfil their expectations. This suggests that hotel management need to give top priority to improvement efforts, and corrective action must be taken to increase overall satisfaction. The second quadrant – keep up the good work – contains the attributes that are perceived by the hotel guests as high, both in importance and performance. This indicates that the service provider performs well in particular service attributes. Hence, hotel guests are highly satisfied regarding these attributes and management should continue their performance without changing policy. The third quadrant – low priority – represents the attributes that are perceived low in performance and at the same time, the hotel guests do not care about them. Since these attributes are not perceived as critical, rather than overly concentrate, hotel management needs to spend limited resources on these low priority attributes. Finally, the fourth quadrant – possible waste of resources – comprises attributes that are perceived by hotel guests as low in importance, but high in performance. Hence, management should not unnecessarily continue the present effort on these attributes and might consider reallocating the resources elsewhere.

IPA helps management to evaluate which service attributes need to give urgent attention and which do not need immediate attention. Therefore, management can identify the service attributes that need to be concentrated on for future improvement and the action that should be taken to reduce the gap between importance and performance. Hence, this study used IPA together with SERVQUAL to identify the gap between importance and performance of hotel service quality.

3 Method

Generating a list of attributes is an important part of the IPA procedure. For the purpose of this study, a list of service quality attributes was developed by reviewing previous studies. This procedure generated a list of 44 service attributes. These attributes focused on reliability; assurance; empathy; tangible; staff response and additional amenities; and room quality. Two academic experts reviewed this list for content validity. They were asked to respond in an evaluation form of the statements in terms of understanding, missing items, the length of the questionnaire and redundancy and ambiguity in questions. The feedback from the experts was examined for improvement, and decisions were made to maintain, modify or exclude items from the final questionnaire draft. Their feedback resulted in a final list of 41 attributes.

As mentioned previously, the focus of this study is to identify and evaluate the perception of guests towards a hotel's service quality. For this, a random sampling method was used for data gathering. Targeted respondents were those persons who have some experiences of staying in some hotels in Bangladesh. The survey questionnaire was distributed online as well as by hand. Of the 433 questionnaires emailed, 201 were submitted by the respondents (response rate 46%) whereas of the 185 questionnaires distributed by hand and 110 questionnaires were returned (response rate 59%). Thus, a total of 311 questionnaires were returned and of them 296 were usable for further analysis.

4 Data analysis

4.1 Demographic profile of the respondents

Table 1 shows the distribution of respondents by their gender, age, nationality, marital status, educational qualification and occupation. Out of 296 respondents, 77.7% were male and 22.3% were female. The maximum number of respondents belongs to the age group of 25–34 years (54.1%), followed by 35–44 years (22.5%), below 25 years (13.2%) and 45–54 years (10.1%). The oldest age group was 55 years and above which represents the smallest percentage (3.4%). In terms of nationality, the majority of respondents were Bangladeshi. The Bangladeshis make up 97.0% of the respondents whereas only 3% were from other countries. In terms of marital status, the majority of respondents were married (65.9%), followed by single (33.1%). A negligible percentage (1%) came from others. A total of 64.9% of respondents had master's degrees. This was followed by those with a bachelor's degree (19.6%) and professional degree (7.1%). PhD holders constituted 4.1% of the total respondents followed by diplomas 2.4% and undergraduate only 2%. The majority of respondents work as an executive (37.5%), followed by students (15.2%), government employees (11.1%), professionals (10.5%), academics (9.1%), businessmen (8.1%) and self-employed (5.7%). The least percentage of respondents (2.7%) were retired persons, housewife, etc.

Table 1 Demographic profile of respondents (n = 296)

<i>Description</i>	<i>Frequency</i>	<i>Percentage</i>
Gender		
Male	230	77.7
Female	66	22.3
Age		
Below 25 years	39	13.2
25 years–34 years	160	54.1
35 years–44 years	57	19.3
45 years–54 years	30	10.1
55 years or above	10	3.4
Nationality		
Bangladeshi	287	97.0
Others	9	3.0
Marital status		
Married	195	65.9
Single	98	33.1
Others	3	1.0
Educational background		
Undergraduate	6	2.0
Bachelor's degree	58	19.6
Master degree	192	64.9
Doctorate degree	12	4.1
Diploma	7	2.4
Professional degree (doctor/engineer/lawyer, etc.)	21	7.1

Table 1 Demographic profile of respondents (n = 296) (continued)

<i>Description</i>	<i>Frequency</i>	<i>Percentage</i>
Occupation		
Self-employed	17	5.7
Professionals (lawyers, doctors, engineers)	31	10.5
Students	45	15.2
Executives	111	37.5
Government employees	33	11.1
Businessmen	24	8.1
Academics	27	9.1
Others (e.g., retired person, housewives)	8	2.7

4.2 Stay-related data of the respondents

Besides the respondents' demographic information, the respondents were also asked additional questions related to staying in hotels which include: last stayed in hotel, purpose of stay, class of hotel they stayed and location of the hotel. Table 2 summarises the stay-related data of the respondents.

Table 2 Stay-related statistics (n = 296)

<i>Description</i>	<i>Frequency</i>	<i>Percentage</i>
Last stayed in hotel		
Within three months	104	35.1
Three months to six months	52	17.6
Six months to one year	60	20.3
One year to 1 and 1/2 years	24	8.1
1 and 1/2 year to two years	21	7.1
More than two years	35	11.8
Purpose of stay		
Business	32	10.8
Leisure	37	12.5
Holiday	60	20.3
Conference	23	7.8
Tour (family, medical, study, official, tourism)	117	39.5
Others	27	9.1
Class of hotel		
1 star	18	6.1
2 star	35	11.8
3 star	91	30.7
4 star	54	18.2
5 star	57	19.3
Others (including motel, cortege and resort)	41	13.9

Table 2 Stay-related statistics (n = 296) (continued)

<i>Description</i>	<i>Frequency</i>	<i>Percentage</i>
Location of hotel		
Dhaka	67	22.6
Chittagong	36	12.2
Sylhet	39	13.2
Cox's bazar	115	38.9
Others	39	13.2

It shows that 35.1% of the respondents stayed in Bangladeshi hotels within the last three months, followed by 20.3% within six months to one year, 17.6% within three months to six months, 11.8% more than two years ago, 8.1% within one year to one and half years and 7.1% within one and a half years to two years. A maximum number of respondents (39.5%) stayed in Bangladeshi hotels for tour purpose like – family, medical, study, official, tourism, etc. followed by holiday (20.3%), leisure (12.5%), business (10.8%) and 9.1% for other purposes. The least percentage of respondents (7.8%) stayed in hotels when they move for the conference. For hotel class, 30.7% of the respondents stayed in three-star hotels, followed by 19.3% in five stars, 18.2% in four stars, 13.9% in another type of hotel including motel, cottage and resort, while 11.8% and 6.1% of total respondents stayed in two stars and one-star hotels respectively. Among the respondents, the majority (38.9%) stayed in hotels of Cox's Bazar, while 22.6% in Dhaka. Further, Sylhet and other districts represent the same percentage each (13.2%). The Chittagong district covered 12.2% in terms of location of the hotels.

4.3 *Analysis based on demographic information*

An independent samples t-test and one-way analysis of variance (ANOVA) were conducted to gain a better understanding of whether any significant differences exist in hotel customers' statement of importance and perceptions rating owing to gender, education level, occupation and the class of hotels.

4.3.1 *Independent samples t-test*

The t-test of independent samples was applied based on gender and educational qualification of two groups of respondents with the aim of comparing the attitudes towards hotel services. The results shown in Tables 3 and 4 indicate that in both cases, the p-values of all the SERVQUAL dimensions are more than .05. This means that there is no statistically significant difference with respect to gender (male and female) and education level (bachelors and masters) in both the cases of importance and perception of the quality of hotel service. Thus, the study can conclude that the respondents equally estimate all determinants of service quality.

Table 3 Results of t-test analysis for gender

Factors	Importance				Satisfaction			
	Means		t-value	P value	Means		t-value	P value
	Male (n = 230)	Female (n = 66)			Male (n = 230)	Female (n = 66)		
Reliability	4.12	4.28	-1.763	.079	3.68	3.80	-1.376	.1710
Assurance	4.25	4.36	-1.419	.157	3.73	3.83	-1.177	.240
Empathy	4.15	4.23	-0.912	.362	3.66	3.76	-1.264	.207
Tangible	4.09	4.11	-0.160	.873	3.64	3.67	-.0270	.787
Staff response and additional amenities	4.05	4.18	-1.603	.110	3.55	3.73	-1.864	.063
Room quality	4.22	4.35	-1.542	.124	3.68	3.84	-1.597	.111

Table 4 Results of t-test analysis for education level

<i>Factors</i>	<i>Importance</i>				<i>Satisfaction</i>			
	<i>Means</i>		<i>t-value</i>	<i>P value</i>	<i>Means</i>		<i>t-value</i>	<i>P value</i>
	<i>Bachelors (n = 58)</i>	<i>Masters (n = 192)</i>			<i>Bachelors (n = 58)</i>	<i>Masters (n = 192)</i>		
Reliability	4.19	4.14	0.508	.612	3.66	3.71	-515	.607
Assurance	4.22	4.29	-0.852	.395	3.72	3.78	-655	.513
Empathy	4.07	4.19	-1.400	.163	3.63	3.68	-616	.538
Tangible	3.96	4.12	-1.669	.096	3.49	3.66	-1.508	.133
Staff response and additional amenities	4.02	4.09	-0.895	.372	3.61	3.57	.370	.712
Room quality	4.18	4.25	-0.717	.474	3.61	3.72	-942	.347

4.3.2 One-way ANOVA

ANOVA was employed to examine whether there were any significant differences in the way that hotel customers rated the importance and satisfaction of different SERVQUAL dimensions. In terms of occupation of the respondents, the result shows that students, executives and government employees have no difference while rating the importance of SERVQUAL dimensions. However, they have significant differences in all the SERVQUAL dimensions except staff response and additional amenities with respect to satisfaction rating. The result of one-way ANOVA regarding occupation is shown in Table 5.

Table 5 One-way ANOVA with respect to occupation

<i>Dimensions</i>	<i>Importance</i>		<i>Satisfaction</i>	
	<i>F</i>	<i>Sig.</i>	<i>F</i>	<i>Sig.</i>
Reliability	.146	.864	3.207	.043
Assurance	.621	.539	6.119	.003
Empathy	2.520	.083	4.519	.012
Tangible	1.097	.336	6.823	.001
Staff response and additional amenities	.334	.716	1.888	.154
Room quality	1.210	.300	7.672	.001

Table 6 shows the relationship between three-star, four-star and five-star hotels and customers' importance and satisfaction rating in SERVQUAL dimensions. The result shows that in terms of importance rating, the class of hotels where the respondents stay does not matter. But, they have significant differences in all the SERVQUAL dimensions with respect to satisfaction. Hence, it can be concluded that there exist significant differences in satisfaction among the respondents of three classes of hotels.

Table 6 One-way ANOVA with respect to hotel class

<i>Dimensions</i>	<i>Importance</i>		<i>Satisfaction</i>	
	<i>F</i>	<i>Sig.</i>	<i>F</i>	<i>Sig.</i>
Reliability	.083	.920	9.710	.000
Assurance	.249	.780	10.528	.000
Empathy	1.356	.260	10.729	.000
Tangible	.783	.458	14.040	.000
Staff response and additional amenities	1.367	.257	13.747	.000
Room quality	1.412	.246	11.926	.000

The significance of ANOVA test does not indicate which of the three groups have significant differences with respect to the SERVQUAL dimensions. Multiple post hoc comparison tests were conducted to identify which groups have a significant difference with respect to the variable tested. The result of post hoc analysis with respect to occupation is shown in Table 7.

Table 7 Post hoc analysis of customer satisfaction on SERVQUAL dimensions with respect to occupation

<i>Dependent variable</i>	<i>(I) Occupation</i>	<i>(J) Occupation</i>	<i>Mean difference (I-J)</i>	<i>SE</i>	<i>Sig.</i>
Reliability	Student	Executive	-.23363	.10876	.102
	Executive	Government employees	.22555	.12202	.184
	Government employees	Student	.00808	.14104	.998
Assurance	Student	Executive	-.31547*	.10084	.008
	Executive	Government employees	.26218	.11314	.071
	Government employees	Student	.05328	.13078	.920
Empathy	Student	Executive	-.31637*	.10533	.012
	Executive	Government employees	.10627	.11817	.668
	Government employees	Student	.21010	.13660	.309
Tangible	Student	Executive	-.47097*	.12871	.002
	Executive	Government employees	.20666	.14441	.361
	Government employees	Student	.26431	.16692	.288
Room quality	Student	Executive	-.48100*	.12650	.001
	Executive	Government employees	.00971	.14192	.998
	Government employees	Student	.47128*	.16405	.018

The result of post hoc analysis regarding occupation shows that there exists a difference between students' and executives' satisfaction level in the case of four factors of service quality, namely assurance, empathy, tangible and room quality. Moreover, the satisfaction of government employees differs from students in the case of room quality dimension. Although the ANOVA table shows that regarding occupation the perception of hotel guests is different with respect to reliability ($p = 0.043$), the post hoc analysis could not find significant difference in any pair; this could be due to marginal significant difference in ANOVA test.

Comparing the class of hotels, the result of post hoc analysis (Table 8) shows that the satisfaction level of respondents who stayed in five-star hotels is significantly different from the respondents of three-star hotels in all the dimensions of SERVQUAL. Also, with the exception of reliability, the perception of respondents who stayed in four- and five-star hotels is different. However, there are no significant differences between the perceptions of service quality of the respondents who stayed in three stars and four-star hotels.

Table 8 Post hoc analysis of customer satisfaction on SERVQUAL dimensions with respect to hotel class

<i>Dependent variable</i>	<i>(I) Hotel class</i>	<i>(J) Hotel class</i>	<i>Mean difference (I–J)</i>	<i>SE</i>	<i>Sig.</i>
Reliability	3 star	4 star	–.16207	.09230	.217
	4 star	5 star	–.23782	.10204	.069
	5 star	3 star	.39988*	.09076	.000
Assurance	3 star	4 star	–.03480	.09323	.933
	4 star	5 star	–.36623*	.10307	.002
	5 star	3 star	.40103*	.09168	.000
Empathy	3 star	4 star	–.03678	.09096	.922
	4 star	5 star	–.35892*	.10056	.002
	5 star	3 star	.39570*	.08944	.000
Tangible	3 star	4 star	–.26519	.11052	.059
	4 star	5 star	–.30880*	.12218	.043
	5 star	3 star	.57400*	.10868	.000
Staff response and additional amenities	3 star	4 star	–.22295	.09973	.085
	4 star	5 star	–.29059*	.11025	.033
	5 star	3 star	.51354*	.09807	.000
Room quality	3 star	4 star	–.14161	.10927	.433
	4 star	5 star	–.37942*	.12080	.008
	5 star	3 star	.52103*	.10745	.000

4.4 Pearson correlation analysis

In this study, Pearson correlations for importance and satisfaction of SERVQUAL variables were calculated to identify the correlations between the two variables. According to Cohen (1988), there are three types of strengths of correlation coefficient, which are small or weak, medium, and large or strong. Cohen (1988) also mentioned that if the Pearson correlation value (r) ranges from 0.10 to 0.29 or -0.10 to -0.29 , then it is considered a small or weak relation, from 0.30 to 0.49 or -0.30 to -0.49 is considered a medium relation and from 0.50 to 1.0 or -0.50 to -1.0 is considered a large or strong relation. However, Field (2009) suggested that the correlation coefficient value should not be above 0.8 to avoid multicollinearity. Based on the Pearson correlation test, the highest correlation coefficient value for importance and satisfaction variables are 0.716 and 0.781 respectively, which is less than 0.8. Thus, there is no multicollinearity problem in this research (see Tables 9 and 10).

Table 9 Pearson correlation for importance of SERVQUAL variables

<i>Variables</i>	<i>Mean</i>	<i>S.D.</i>	<i>Reliability</i>	<i>Assurance</i>	<i>Empathy</i>	<i>Tangible</i>	<i>Staff response and additional amenities</i>	<i>Room quality</i>
Reliability	4.1574	.62073	1					
Assurance	4.2728	.54160	.716**	1				
Empathy	3.6791	.60061	.152**	.132*	1			
Tangible	4.0974	.64439	.496**	.645**	.140*	1		
Staff response and additional amenities	4.0792	.57931	.517**	.574**	.176**	.606**	1	
Room quality	4.2481	.60171	.561**	.587**	.141*	.528**	.686**	1

Notes: *Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

Table 10 Pearson correlation for satisfaction of SERVQUAL variables

<i>Variables</i>	<i>Mean</i>	<i>S.D.</i>	<i>Reliability</i>	<i>Assurance</i>	<i>Empathy</i>	<i>Tangible</i>	<i>Staff response and additional amenities</i>	<i>Room quality</i>
Reliability	3.7041	.62316	1					
Assurance	3.7551	.59835	.679**	1				
Empathy	3.6791	.60061	.605**	.760**	1			
Tangible	3.6470	.75756	.588**	.673**	.750**	1		
Staff response and additional amenities	3.5922	.67061	.555**	.670**	.709**	.781**	1	
Room quality	3.7143	.72624	.589**	.677**	.694**	.768**	.766**	1

Note: **Correlation is significant at the 0.01 level (2-tailed).

4.5 Importance-performance analysis

The mean scores, standard deviations (s.d.) and Cronbach's alpha (α) of the importance (I) and satisfaction (S) of the service quality dimensions perceived by the hotel guests are provided in Table 11. The mean scores of the attributes range from 3.64 to 4.58 for importance and 3.20 to 4.03 for satisfaction, and the overall mean scores of importance and satisfaction of SERVQUAL dimensions are 4.18 and 3.68, respectively. The standard deviations of all these attributes are less than unity. The reliability test of Cronbach's alpha for both performance and satisfaction are > 0.7 . Table 11 also indicates the gap scores for importance and satisfaction for the attributes of service quality of hotels. The gap was calculated by using the following formula:

$$\text{Gap} = [(5 - \text{mean satisfaction (S)}) \times \text{mean importance (I)}] / 5$$

Table 11 Importance-performance analysis

SL	Items	Importance		Satisfaction		Gap	Rank of gap
		Mean	S.D	Mean	S.D		
<i>Variable: reliability</i>		$(\alpha = .733)$		$(\alpha = .772)$			
X1	The hotel solves my problems efficiently e.g., an error in a bill	4.13	.912	3.75	.840	1.03	17
X2	The hotel completes tasks of what has been promised to guests	4.31	.825	3.76	.840	1.07	15
X3	The hotel performs the right service first time	4.19	.875	3.78	.774	1.02	18
X4	The hotel has sufficient resources to maintain error-free services	4.12	.942	3.60	.937	1.15	7
X5	Employees of the hotel tell me exactly when services will be performed	4.04	.903	3.63	.907	1.11	11
<i>Variable: assurance</i>		$(\alpha = .814)$		$(\alpha = .846)$			
X6	The hotel has a safe environment where guests feel secured to stay	4.58	.798	4.03	.886	0.89	24
X7	The hotel offers the guests a hassle-free stay	4.39	.884	3.90	.871	0.97	22
X8	The hotel has knowledgeable staff who can provide information and assistance to guests in areas they would require (shopping, museums, places of interest, etc.)	4.05	.864	3.59	.908	1.14	8

Table 11 Importance-performance analysis (continued)

<i>SL</i>	<i>Items</i>	<i>Importance</i>		<i>Satisfaction</i>		<i>Gap</i>	<i>Rank of gap</i>
		<i>Mean</i>	<i>S.D</i>	<i>Mean</i>	<i>S.D</i>		
<i>Variable: assurance</i>		<i>($\alpha = .814$)</i>		<i>($\alpha = .846$)</i>			
X9	In the hotel, complaints and problems are handled graciously	4.31	.815	3.60	.912	1.21	3
X10	If I make a request at the hotel, no matter how large or small, it is handled appropriately	4.05	.862	3.61	.869	1.13	9
X11	The behaviour of employees of the hotel instils confidence in customers	4.31	.771	3.75	.836	1.08	14
X12	The employees of the hotel show consistent courtesy	4.32	.787	3.83	.776	1.01	19
X13	The hotel has operating hours convenient to all its customers	4.17	.787	3.73	.831	1.06	16
<i>Variable: empathy</i>		<i>($\alpha = .820$)</i>		<i>($\alpha = .826$)</i>			
X14	The hotel served hygienic food and beverages	4.44	.884	3.78	.969	1.08	14
X15	The hotel served adequate food and beverages	4.26	.859	3.69	.963	1.12	10
X16	I feel comfortable leaving business papers and/ or valuable items in my room at the hotel	4.35	.843	3.82	.926	1.03	17
X17	I know my room reservation will be in order when I arrive at the hotel	4.31	.850	3.93	.818	0.92	23
X18	The hotel has employees who give me personal attention	3.82	.879	3.52	.859	1.13	9
X19	The hotel has guests' best interest at heart	4.02	.845	3.51	.883	1.20	4
X20	Employees of the hotel understand my specific needs	4.07	.867	3.58	.883	1.16	6
X21	The hotel has employees who are competent	4.09	.910	3.60	.842	1.15	7

Table 11 Importance-performance analysis (continued)

SL	Items	Importance		Satisfaction		Gap	Rank of gap
		Mean	S.D	Mean	S.D		
<i>Variable: tangible</i>		$(\alpha = .839)$		$(\alpha = .879)$			
X22	The hotel has modern looking equipment, e.g., dining facility, crockery, cutlery, air conditioner, furniture, elevator, communication devices, etc.	4.19	.878	3.72	1.011	1.07	15
X23	The service units of the hotel have adequate capacity e.g., dining room, meeting room, swimming pools, business centre facilities, etc.	4.09	.826	3.58	1.015	1.16	6
X24	The hotel has visually appealing facilities, e.g., buildings, signs, dining room, decoration and furnishing, lighting, carpet, etc.	4.06	.868	3.69	.942	1.06	16
X25	The hotel has adequate and sufficient materials associated with the service, e.g. pamphlets, statements, serviettes, etc.	3.89	.876	3.51	.894	1.16	6
X26	The hotel has easy to access facilities (transportation, loading and unloading area, car parking area, etc.)	4.21	.897	3.67	.937	1.12	10
X27	The hotel has good seating arrangement in restaurants and/or bars	4.14	.850	3.72	.953	1.06	16
<i>Variable: staff response and additional amenities</i>		$(\alpha = .822)$		$(\alpha = .863)$			
X28	Employees of the hotel are never too busy to respond to my requests	4.09	.793	3.56	.821	1.18	5
X29	Employees communicate with the attitude that my needs are important to them	4.15	.774	3.64	.799	1.13	9

Table 11 Importance-performance analysis (continued)

<i>SL</i>	<i>Items</i>	<i>Importance</i>		<i>Satisfaction</i>		<i>Gap</i>	<i>Rank of gap</i>
		<i>Mean</i>	<i>S.D</i>	<i>Mean</i>	<i>S.D</i>		
<i>Variable: tangible</i>		<i>($\alpha = .839$)</i>		<i>($\alpha = .879$)</i>			
X30	The hotel has neat-looking staff e.g., uniform, grooming, etc. who communicate in a friendly and personal manner	4.12	.864	3.69	.951	1.08	14
X31	The hotel has staff who are ever willing to help	4.18	.754	3.68	.877	1.10	12
X32	The hotel has promotional strategies to project the image of the hotel	3.80	.912	3.40	.918	1.22	2
X33	The hotel respects environmental norms (e.g., monitor water and energy consumption, improve waste management, limit noise pollution, improve air quality inside buildings, etc.)	4.12	.901	3.52	.963	1.22	2
X34	The hotel ensures regular maintenance of hotel lawn and green space	4.09	.818	3.66	.990	1.10	12
<i>Variable: room quality</i>		<i>($\alpha = .827$)</i>		<i>($\alpha = .868$)</i>			
X35	The hotel has spacious bedrooms	4.24	.791	3.84	.899	0.98	21
X36	The hotel has neat and tidy bedrooms	4.34	.884	3.81	.919	1.03	17
X37	The hotel has clean and hygienic bedrooms	4.48	.732	3.90	.935	0.99	20
X38	The hotel has clean and comfortable bathrooms	4.57	.778	3.81	.935	1.09	13
X39	The hotel has tea/coffee making facilities in the rooms	3.64	1.111	3.20	1.262	1.31	1
X40	The hotel room provides utmost privacy to guests	4.39	.836	3.79	.881	1.06	16
X41	The furnishing and decoration of hotel room is visually appealing	4.07	.831	3.65	.916	1.10	12
Overall mean value		4.18		3.68			

The table shows that, overall, the hotel guests' importance scores are greater than their satisfaction scores. The attribute with the largest gap between means are the hotel has: tea/coffee making facilities in the rooms; promotional strategies to project the image of the hotel; respects environmental norms (e.g., monitor water and energy consumption,

improve waste management, limit noise pollution, improve air quality inside buildings etc.) and handles complaints and problems graciously. This implies that the hotel guests are less satisfied with these matters and hotel management should find ways to improve additional room facility and handle the complaints of the guests more promptly. Moreover, the management should give more emphasis on promotional strategies and environmental norms so that the image of the hotel establishments can be enhanced. On the other hand, the items with the lowest gap scores are the hotel has a safe environment where guests feel secured to stay; offers the guests a hassle-free stay; up to date room reservation system; and spacious, clean and hygienic bedrooms. It means that the hotel guests are particularly satisfied with a security system, flexible room reservation and quality of bedrooms.

On the basis of the gap analysis results in Table 11, the IPA map was generated as shown in Figure 2. Referring to Figure 2, the X-axis shows mean levels of satisfaction and the Y-axis shows mean levels of importance. On the basis of the overall mean importance and satisfaction, the IPA map was divided into four quadrants. The IPA map and Table 12 show that most of the attributes (18 attributes) fall in the upper right quadrant (keep up the good work), suggesting that the importance and satisfaction of the attributes to the hotel guests are high. Thus, all the activities and resources should be maintained. In contrast, eight attributes fell in the upper left quadrant (areas to improve), which means that the attributes are perceived important by the guests, but satisfaction levels are low. This suggests that improvement efforts and corrective actions must be taken to improve overall satisfaction on these eight attributes. It is also noted that 15 attributes received low scores on both importance and satisfaction, thus indicating that these attributes possess low priority and are not perceived important. Hence, hotel management should not overly concentrate on these attributes. Lastly, no attribute was rated low in importance and high in performance.

Figure 2 Map of SERVQUAL attributes

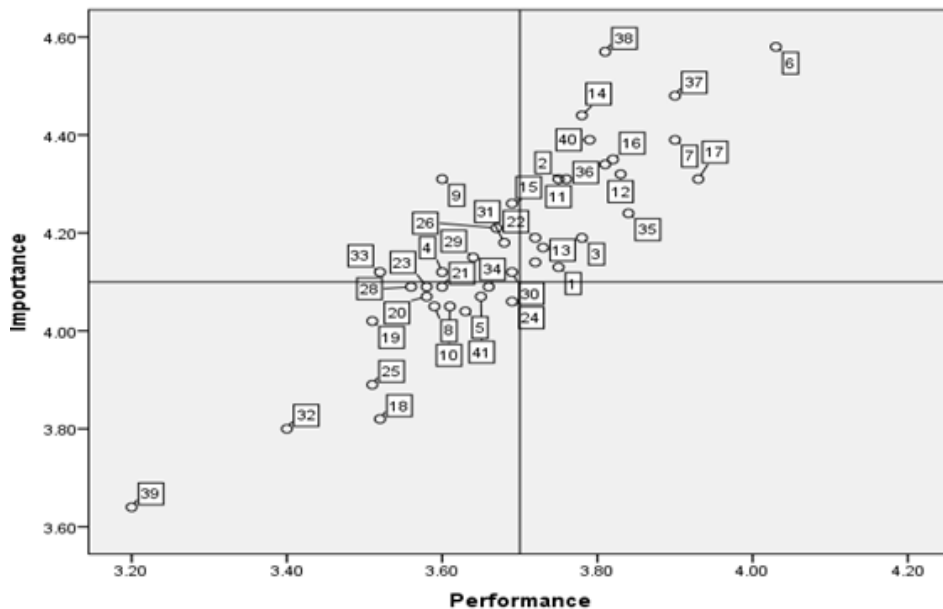


Table 12 Classification of items based on IPA map

<i>High performance – high satisfaction (keep up the good work) quadrant (II)</i>	
X1	The hotel solves my problems efficiently e.g., an error in a bill
X2	The hotel completes tasks of what has been promised to guests
X3	The hotel performs the right service first time
X6	The hotel has a safe environment where guests feel secured to stay
X7	The hotel offers the guests a hassle-free stay
X11	The behaviour of employees of the hotel instils confidence in customers
X12	The employees of the hotel show consistent courtesy
X13	The hotel has operating hours convenient to all its customers
X14	The hotel served hygienic food and beverages
X16	I feel comfortable leaving business papers and/or valuable items in my room at the hotel
X17	I know my room reservation will be in order when I arrive at the hotel
X22	The hotel has modern looking equipment, e.g., dining facility, crockery, cutlery, air conditioner, furniture, elevator, communication devices, etc.
X27	The hotel has good seating arrangement in restaurants and/or bars
X35	The hotel has spacious bedrooms
X36	The hotel has neat and tidy bedrooms
X37	The hotel has clean and hygienic bedrooms
X38	The hotel has clean and comfortable bathrooms
X40	The hotel room provides utmost privacy to guests
<i>High importance – low satisfaction (areas to improve) quadrant (I)</i>	
X4	The hotel has sufficient resources to maintain error-free services
X9	In the hotel, complaints and problems are handled graciously
X15	The hotel served adequate food and beverages
X26	The hotel has easy to access facilities (transportation, loading and unloading area, car parking area, etc.)
X29	Employees communicate with the attitude that my needs are important to them
X30	The hotel has neat-looking staff e.g., uniform, grooming, etc. who communicate in a friendly and personal manner
X31	The hotel has staff who are ever willing to help
X33	The hotel respects environmental norms (e.g., monitor water and energy consumption, improve waste management, limit noise pollution, improve air quality inside buildings, etc.)
<i>Low importance – low satisfaction (low priority) quadrant (III)</i>	
X5	Employees of the hotel tell me exactly when services will be performed
X8	The hotel has knowledgeable staff who can provide information and assistance to guests in areas they would require (shopping, museums, places of interest, etc.)
X10	If I make a request at the hotel, no matter how large or small, it is handled appropriately
X18	The hotel has employees who give me personal attention

Table 12 Classification of items based on IPA map (continued)

<i>Low importance – low satisfaction (low priority) quadrant (III)</i>	
X19	The hotel has guests' best interest at heart
X20	Employees of the hotel understand my specific needs
X21	The hotel has employees who are competent
X23	The service units of the hotel have adequate capacity e.g., dining room, meeting room, swimming pools, business centre facilities, etc.
X24	The hotel has visually appealing facilities, e.g., buildings, signs, dining room, decoration and furnishing, lighting, carpet, etc.,
X25	The hotel has adequate and sufficient materials associated with the service, e.g., pamphlets, statements, serviettes, etc.
X28	Employees of the hotel are never too busy to respond to my requests
X32	The hotel has promotional strategies to project the image of the hotel
X34	The hotel ensures regular maintenance of hotel lawn and green space
X39	The hotel has tea/coffee making facilities in the rooms
X41	The furnishing and decoration of hotel room are visually appealing

4.6 Paired-sample T-test

To validate the results of the gap analysis, a paired-sample t-test was performed to test the hypothesis whether there is a significant difference between mean importance score and mean satisfaction score of the SERVQUAL dimensions. The hypotheses are as follows:

H_0 $\mu_1 = \mu_2$ (There is no significant difference between mean importance and mean satisfaction scores).

H_1 $\mu_1 \neq \mu_2$ (There is a significant difference between mean importance and mean satisfaction scores).

Table 13 Paired-sampled t-test for the means of importance and satisfaction levels of SERVQUAL dimensions

<i>Variables</i>	<i>Mean importance</i>	<i>Mean satisfaction</i>	<i>Gap</i>	<i>T-value</i>	<i>Significance</i>
Reliability	4.1574	3.7041	1.08	10.187	0.000*
Assurance	4.2728	3.7551	1.06	12.157	0.000*
Empathy	4.1702	3.6791	1.10	11.428	0.000*
Tangible	4.0974	3.6470	1.11	8.900	0.000*
Staff response and additional amenities	4.0792	3.5922	1.15	10.742	0.000*
Room quality	4.2481	3.7143	1.09	10.787	0.000*

Note: *Significant at the 0.01 level.

As shown in Table 13, the largest service quality gap is in staff response and additional amenities dimension and the smallest gap is in assurance dimension. Overall, all the mean gaps between importance and satisfaction of those SERVQUAL dimensions are statistically significant ($p < 0.01$) and hence H_0 (null hypothesis) was rejected. Thus, the results of the t-test confirm that guests are significantly less satisfied with the services provided by the Bangladeshi hotels.

5 Conclusions

IPA is an effective approach to identify the gap between the importance of a particular service and the performance of that service to a customer. Using IPA, the present study has compared the importance and performance of service attributes perceived by the guests of Bangladeshi hotels. Here, data are plotted in four quadrants, namely concentrate here, keep up the good work, low priority and possible overkill. Management needs to place higher priority to those attributes which fall into the concentrate here quadrant. This is because customers perceive these attributes as very important; however, their organisational performance is not satisfactory.

This study shows that there is a significant gap between the importance and satisfaction ratings of hotel guests' service quality perceptions, especially regarding the commitment of hotel staff towards customers. The literature also revealed that unskilled hotel staff face many difficulties in handling guests (Barsky and Labagh, 1992; Gundersen et al., 1996; Hartline and Jones, 1996; Lockyer, 2002; Weaver and Oh, 1993; Hartline et al., 2003; Saleh and Ryan, 1991). This situation is worrying because there is not enough institutional support to improve the quality of hotel staff in Bangladesh. Only a government institution and a negligible number of private institutions deliver diplomas on hotel management in Bangladesh. Moreover, the people of Bangladesh are not interested to build their career in this sector. Therefore, the policymakers need to identify the main cause of the problem and try to initiate motivational efforts so that this sector can be enriched. Also, hotel management should arrange special training programs and provide equal opportunities to all staff so that their skills can be improved.

Although the findings of the study show that guests had a higher mean data of all importance attributes compared with performance levels, the IPA grid indicates that only eight attributes fell into the concentrate here quadrant compared to keep up the good work quadrant, where 18 services attributes were placed. In addition, no attribute fell into the fourth quadrant (possible overkill). Thus, the study can recommend that the service quality level of the Bangladeshi hotel industry is not that bad. If management can further investigate the issues, it is possible to take the industry into higher level. Hopefully, the findings of the study can help hoteliers continuously monitor changes in guests' demands. In this way, they can improve their services in accordance with current market requirements. The findings can also assist management to create a strong relationship with guests which eventually may result in realising excellent business performance.

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