

## **The Measurement of Service Quality in the Tour Operating Sector: A Methodological Comparison**

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### **ABSTRACT**

Service quality in the tourism industry receives increasing attention in the literature and yet confusion still exists as to which measure offers the greatest validity. The two main research instruments are Importance Performance Analysis (IPA) and SERVQUAL. However, both measures have been questioned and research has introduced measures that multiply SERVQUAL by Importance, as well a measure of just performance (SERVPERF). This paper assesses these four main methods of measuring customer service quality. The data were obtained in co-operation with a major UK tour operator. 220 respondents completed a questionnaire before departure on what elements were important to them and what their expectations were for these elements. Then towards the end of their holiday respondents were issued with a second questionnaire measuring performance on the same elements. The research found that although there was variety in the rankings of the 13 different elements, there was no statistical difference between the four methodologies. The final section of the paper considers the implications of this finding for tourism managers and future research in the area of service quality.

## INTRODUCTION

Service quality has been increasingly identified as a key factor in differentiating service products and building a competitive advantage in tourism. The process by which customers evaluate a purchase, thereby determining satisfaction and likelihood of repurchase, is important to all marketers, but especially to services marketers because, unlike their manufacturing counterparts, they have fewer objective measures of quality by which to judge their production (Zeithaml, Berry, and Parasuraman 1988; Brown and Swartz 1989). The issue of measuring service quality has received increasing attention in recent years in the tourism and recreation literature (Crompton and Mackay 1988; Crompton, MacKay, and Fesenmaier 1991; Hamilton, Crompton and More 1991; Crompton and Love 1995). However, to date only a few comprehensive attempts have made to assess service quality in the tourism industry specifically (Chadee and Mattsson 1996), and fewer still in tour operating (Hudson and Shephard 1998).

In the tour-operating sector, customer research is still naïve, with most tour operators relying upon traditional methods of customer feedback such as customer service questionnaires (CSQs) at the end of the holiday. Although such methods are important as they provide information about the customer's actual holiday experience, they are unable to provide a measure of their original expectations about their holiday. In fact managers have revealed skepticism with regard to the precise usefulness of CSQs while nevertheless persisting with their use (Bowen 2001). All major package holiday

companies have spoken about the need to exceed customer expectations in order to deliver exceptional service. To do this successfully, they need to understand what customers expect from their holiday, rather than assuming that they already know it.

## MEASURING SERVICE QUALITY

The two main research instruments that have been developed over the years to analyze the concepts of quality and consumer satisfaction in the service industry are Importance-Performance Analysis (IPA) and SERVQUAL. IPA is a procedure that shows the relative **importance** of various attributes, and the **performance** of the firm, product or destination under study in providing these attributes. Its use has important marketing and management implications for decision makers, and one of the major benefits of using IPA is the identification of areas for service quality improvements. Results are displayed graphically on a two dimensional grid, and by a simple visual analysis of this matrix, policy makers can identify areas where the resources and programs need to be concentrated. Introduced over 20 years ago (Martilla and James 1977), the use of IPA is well documented in the literature. Originally applied to the service department of an automobile dealer, the employment of this marketing technique has spread into various fields. It has been applied to the health care market (Cunningham and Gaeth 1989), dental practices (Nitse and Bush 1993), banking services (Ennew, Reed, and Binks 1993), the hotel industry (Bush and Ortinau 1986) and (Martin 1995), adult education (Alberty and Mihalik 1989), tourism policy (Evans and Chon 1990), and tourist destinations (Hudson and Shephard 1998).

Others have sought to modify or develop the technique. Easingwood and Arnott (1991) used a similar idea to present their survey-based study of generic priorities in services marketing. They employed two dimensions; current effect on performance (similar to importance), and scope for improvement (related to performance). They also suggested an additional matrix of ease of change and sensitivity to change, to reflect the practicalities and constraints to improvement. Slack (1994) built on this idea by examining how the matrix could be modified to reflect managers perceived relationships between importance, performance and priority for improvement. Finally, in a study of health care services, Dolinsky (1991) extended importance-performance analysis to include competitors' performance, concluding that inappropriate strategies may result if a competitive dimension is not included in the analysis.

The validity and reliability of IPA has been questioned (see Oh 2001). The main limitations lie in the survey instrument itself. The Likert scale does not have the ability to distinguish between subtle differences in levels of importance and performance. It also does not take into account any relationship that might exist between the levels of importance and performance and the cost of that service. There are also problems associated with aggregating across all customers to generate measures of expectations and performance associated with either a single attribute or the overall service offering. In particular, it is possible that consumers who think that an attribute is important also perceive it to be poorly supplied, while those who think the same attribute is unimportant may perceive it to be well supplied. The comparison of means could reveal a close match on aggregated scores and yet there may still be a quality mismatch.

**SERVQUAL** is an instrument developed by Parasuraman, Zeithaml and Berry (1985), which focuses on the notion of perceived quality. It is based on the difference between consumers' expectations and perceptions of service. Exploratory research conducted in 1985 showed that consumers judge service quality by using the same general criteria, regardless of the type of service. Parasuraman et al. capture these criteria using a scale composed of 22 items designed to load on five dimensions reflecting service quality. The dimensions are: assurance, empathy, reliability, responsiveness, and tangibles. Each item is used twice: first, to determine customer's expectations about firms in general, within the service category being investigated; second, to measure perceptions of performance of a particular firm. These evaluations are collected using a seven-point Likert scale. According to the authors, the service quality is then the difference between customer's perceptions and expectations.

SERVQUAL is a concise scale, easy to use by managers, and is now referred to as a standard by other service researchers (Llosa, Chandon, and Orsingher 1998). The scale has been replicated in many different service categories so as to examine its generalisability. However, some of them show that conceptual and methodological problems exist regarding the measurement of perceived service quality and its true dimensionality. Cronin and Taylor (1994) for example, have argued that the mere fact of asking a respondent to mark his perceptions of performance already lead him to compare mentally his perceptions and his expectations. In other words, the estimation of perceptions might already include a perception minus expectation mental process. They

suggest that just performance, or SERVPERF, is the measure that best explains total quality. Yuksel and Rimmington (1998) also suggest that performance only is the most reliable and valid measure of satisfaction. However, Parasuraman et al. (1993) answer these criticisms emphasizing that the critical indicator for a firm willing to improve its service quality is the amplitude and the direction of the gap between the expectation and perceptions scores, not the perception itself. Tribe and Snaith (1997) also suggest that performance alone cannot give a full picture of satisfaction.

In its original form, the SERVQUAL instrument measured ideal expectations and perceptions. In response to certain criticisms regarding the measurement of expectations, a refined and more sensitive measure of expectations covering minimum and desired levels of service has been proposed by Parasuraman et al. (1994). However, Caruana, Ewing and Ramaseshan (2000) investigated the usefulness of the revised SERVQUAL instrument and concluded that the addition of minimum expectations has added little that is of incremental value to the measurement of service quality.

Other criticisms of SERVQUAL focus on the nature and number of dimensions. SERVQUAL replications, carried out in different service activities, show that the number of dimensions in the scale is not unique. For instance, Finn and Lamb (1991) found out that the dimensions change when customers estimate 'product' services (department stores) instead of 'pure' services (banks). The number of dimensions found in the different replications varies from three (McDougall and Levesque 1992) to nine (Carman 1990). Babakus and Mangold (1989) and Cronin and Taylor (1992; 1994) considered

SERVQUAL as 'undimensionable' because they do not confirm the scale structure. Lloso et al. (1998) disagreed with the last criticism, but did find that the 22 items of the SERVQUAL scale do not clearly evoke, in respondents' minds, the five service quality dimensions. In fact, using a revised SERVQUAL scale, Parasuraman et al. (1994) moved away from their original five dimensions to three: reliability, tangibles, and a single factor for responsiveness, assurance and empathy. More recently, Brady and Cronin (2001) found that the service quality construct conforms to the structure of a third-order factor model that ties service quality to distinct and actionable dimensions; outcome, interaction and environmental quality. In turn each has three sub-dimensions that define the basis of service quality dimensions.

A third major criticism of SERVQUAL is that information about importance is not gathered and integrated in the calculation of the quality score. Importance is recognized by many authors as relevant for the measuring of perceived service quality (Carman 1990); (Koelemeijer 1991); (Fick and Ritchie 1991) and (McDougall and Levesque 1992). However, the relative importance of each of the dimensions in contributing to overall quality of service is rarely addressed in SERVQUAL studies. Carman (1990) suggests that the original SERVQUAL model should have been expressed as:

$$Q = \sum I_i(P_i - E_i) \text{ where } I \text{ is the importance of service attribute } i$$



The equation shows that all three variables, importance, perceptions and expectations, are material and play different roles in evaluating overall quality. Thus, a user of these scales should collect information on all three variables, not just perceptions and expectations. This provides a clear list of priorities, ensuring service providers focus on the most important aspects first. Following this procedure allows organizations to gain a comprehensive understanding of customer expectations, how the industry as a whole is performing against them, and what aspects of service are most important to the customers.

Attempts have been made to compare the relative predictive validity of these alternative measures for evaluating quality (Dorfman 1979; Crompton and Love 1995; Yuksel and Rimmington 1998). In all the studies, the various methods (SERVQUAL, IPA, SERVPERF) were correlated with an overall measure of quality to find that measures of performance alone have higher predictive validity than do measures that incorporate expectations or preferences. They also found that the inclusion of importance weights did not improve the predictive validity of the measures. But the studies had limitations. The dependent variable itself was a performance-based measure and, as such, was more similar to the performance than to the disconfirmation measures. It is therefore not surprising that measures of performance had higher predictive validity than measures that incorporated expectations or preferences. In addition, all the studies asked respondents to comment on both importance and performance at the same time, whereas many believe that one interview should be conducted before the service experience, and

another one after the experience to avoid 'hindsight bias' (Weber 1997; Llosa et al. 1998; Caruana et al. 2000).

Despite such attempts to find the 'right' measure for service quality, there still appears to be no consensus in either the leisure or the marketing literature on how evaluation of quality should be operationalized. Both Dorfman and Crompton and Love concluded that there is no single best way to measure recreational satisfaction acknowledging that the diagnostic potential of the SERVQUAL and IPA format has emerged as the primary rationale for preferring its use over the simple perceptions format.

### **OBJECTIVES OF STUDY**

This study was an attempt to compare and contrast the various methods used to measure service quality by building on the literature reviewed above. Service quality and customer satisfaction for holidaymakers was measured using IPA and SERVQUAL. In addition, service quality was measured according to the formula recommended by previous service quality researchers (Carman 1990); (McDougall and Levesque 1992); (Martin 1995) and (Heung, Wong and Qu 2000), whereby the SERVQUAL gap between customers' expectations and perceptions is multiplied by how important customers rate each element of service. Finally, Cronin and Taylor (1994) suggest that just performance, or SERVPERF, is the measure that best explains total quality, so the results of performance only were analyzed in order to compare with the other three formulas.

Based on the service quality models reviewed, a research program was carried out in winter 1999/2000 for a medium-sized U.K. tour operator. To the authors' knowledge, this was the first study of its kind within a tour operator. The idea was to use the results to form an action plan of improvements for customers and allow the company to identify the key drivers of customer satisfaction. The aims were as follows:

- Understand what consumers expect from each individual aspect of their holidays
- Understand what aspects are important to them
- To examine each aspect of service delivery and identify the service quality gaps
- To compare the different methodologies for calculating service quality

## METHOD

Although most replications of SERVQUAL and IPA ask respondents to complete the survey in one interview, many authors recommend that one should conduct two interviews with a given respondent, one before the service experience, and the other one after the experience (Weber 1997; Carman 1990; Llosa et al. 1998; and Caruana et al. 2000). So one month before they went on holiday, customers were asked to complete a first questionnaire asking them:

1. **What is important to you?** This asked respondents to rate on a five point Likert scale (ranging from extremely important to not at all important) 146 elements of their holiday. These elements represented the complete service delivery chain and included the usefulness of the brochure, getting to the airport, flights, representative, resort,

accommodation and contacts with the tour operator at home. Literature suggests that Likert-type scales can be employed for the purpose of evaluating tourist experiences, because they are effective in measuring consumer attitudes and are easy to construct and manage (Yuksel 2001).

**2. What are your expectations?** Respondents were then asked to rate on a five point Likert scale (ranging from definitely expected to definitely not expected) the same 146 elements of their holiday.

In a second questionnaire *towards the end* of their holiday, respondents were asked:

**3. How did you find it?** This questionnaire asked respondents to rate on a five point Likert scale (ranging from strongly agree to strongly disagree), the same elements of their holiday as measured in points 1 and 2 above.

The sample was drawn from the population of bookings taken for the upcoming winter season. A representative sample was chosen in terms of accommodation types and resorts in order to increase both the reliability and validity of the research program. Customers from all over the U.K. were asked in writing if they would like to participate in the panel and offered a GBP£100 travelers check for participating. A total of 250 people were asked to participate in the study and the response rate was 88 percent. The sample of 220 was comparable in size with similar service quality studies undertaken in the past (Saleh and Ryan 1991; Hudson and Shephard 1998; Kaynama and Black 2000; Fick and Ritchie 1991; Carman 1990). Because the scale dimensionality of SERVQUAL appears to have a weak standing, and the five dimensions are not as distinct and independent as one would wish (Llosa et al. 1998), this study did not attempt to force the attributes into the five

original SERVQUAL dimensions. Instead, the 146 elements were divided into 13 different dimensions reflecting various aspects of the holiday experience (see Table 1).

When the respondents had completed the questionnaires, a service quality score was calculated for each question, using the following four formulas:

*1. Performance (P) minus Importance (I)*

*2. Performance (P) minus Expectations (E)*

*3. (Performance (P) minus Expectations (E)) Multiplied by Importance (I)*

*4. Performance (P) only*

## RESULTS

Data were analyzed using SPSS for Windows, and a service quality score was calculated for each dimension of the holiday experience. Table 1 compares the mean scores for expectations and performance (SERVQUAL), and the results clearly show a negative service gap in all dimensions. In fact, mean scores were significantly lower ( $p < 0.05$ ) on performance for all dimensions except for the quality of the skiing and snowboarding.

### INSERT TABLE 1

According to the Importance-Performance Analysis (see Table 2), the mean scores for performance were all significantly lower ( $p < 0.01$ ) than importance on all dimensions except for the company magazine. A two-dimensional action grid was plotted

(see Figure 1), where importance values form the vertical axis, while performance values form the horizontal axis. The literature on the use of IPA indicates that the selection of the crosshairs should consider management's goals for the study in question, and if possible, should force at least one attribute into each of the four quadrants (Martilla and James 1977). However, few of the studies using IPA referred to earlier actually relate to this consideration, despite its importance. For this study, no attributes were forced into a quadrant, and the company was consulted on the position of the intersect on the action grid. Because managers were most interested in attributes that customers felt were important or extremely important, the value of 4 was chosen as the crosshair for the vertical axis. Also, placement of the crosshairs of performance at 4 reflected a desire to maintain or increase performance standards for the company. Company managers felt that any attributes perceived by customers to be performing below good or excellent should be identified. Martilla and James (1977) note that the placement of the crosshairs is a matter of judgment and value of IPA lies in identifying relative measures, rather than absolute measures. Thus, the movement of the crosshairs may provide additional analysis and more powerful interpretation.

#### INSERT TABLE 2

Figure 1 identifies where each of the 13 dimensions fall in terms of the four quadrants. According to the grid, only one of the dimensions – the quality of skiing and snowboarding - fell into the 'Keep Up The Good Work' area (quadrant B). Four dimensions fell within the 'Low Priority' (quadrant C) area. Holidaymakers rated these items low in performance but attached less importance to them. Significantly, the largest

number of dimensions (eight) fell into the 'Concentrate Here' (quadrant A) area of the action grid. Respondents rated these attributes high in importance but low in performance. These dimensions were the brochure; waiting to go; meeting the rep; transfer to accommodation; accommodation; resort activities; departure; and transfer to the airport.

#### INSERT FIGURE 1

A Pair-wise t-test was conducted to measure the differences between SERVQUAL and IPA scores (see Table 3). There was a significant difference between 11 of the 13 dimensions ( $p < 0.05$ ), and the IPA score was higher than the SERVQUAL gap for nine of the service quality dimensions. This was explained by the fact that importance scores were higher than expectation scores for these nine dimensions. This could be attributed to the fact that when respondents are directed to consider one attribute at a time, they are likely to inflate importance ratings of most attributes (Oh 2001). Service Quality scores were then calculated using the formula suggested by Carman (1990) and others whereby the SERVQUAL gap is multiplied by importance. Finally the results of performance only (SERVPERF) were analyzed in order to compare with the other three formulas. Table 4 indicates how each service quality dimension ranks according to the four models. It is interesting to note that factoring in importance actually makes little difference to the SERVQUAL rankings (the ranking of only four dimensions change), thereby adding little credence to Carman's formula referred to earlier. The results of calculating performance only (SERVPERF) appear to produce very different

rankings to the IPA for the dimensions, most noticeably for the company magazine, which is ranked highest using IPA, but lowest using SERVPERF. Similarly, SERVPERF and SERVQUAL formulas produce differing ranks for the dimensions, although respondents show a reasonably high level of satisfaction with the overall level of performance ( $M = 3.65$ ). Pearce (1991) and Hughes (1991) have argued that tourists may be satisfied even though their experiences did not fulfill their expectations. Yet, despite the many differences in rankings, the dimension skiing/snowboarding is ranked in the top two by all four tests, while the journey is ranked in the bottom three by all the tests.

#### INSERT TABLES 3 & 4

As would be expected, SERVQUAL and IPA produced different rankings for the holiday dimensions. According to SERVQUAL, the largest gaps can be found in the brochure, waiting to go and the journey. Customers ranked the skiing, the departure arrangements and the arrival at accommodation, as the top three in service quality. IPA on the other hand, suggested that the biggest service quality gaps were to be found in the journey, transfer to accommodation and resort activities, with the smallest gaps being for the magazine, the skiing and the welcome.

Expressing the data as four non-categorical, non-parametric, related groups allows Friedman's two way ANOVA test to be used to determine if there is any statistically significant difference between the four approaches to measuring satisfaction. Further, the data were tested for internal reliability using Cronbach's alpha. The results report an



alpha value of 0.8219, indicating a strong internal reliability, while the Friedman two way ANOVA test did not establish a significant difference between any of the four methodologies employed. In order to substantiate these findings, each methodology was individually compared with the other three, using the Wilcoxon Matched-pairs Signed-Ranks Test. Once again, there was no significant statistical difference between any of the methodologies used for calculating service quality.

### **IMPLICATIONS**

The findings of this study have contributed to the continuing enhancement of the measurement of service quality in the travel industry. Tourism managers are supposed to be responsible for guest satisfaction, but they often find little guidance on how to determine whether they have delivered a satisfactory service experience (Yuksel and Rimmington 1998). The findings here suggest that the service quality measurements of IPA, SERVQUAL and SERPERF do not produce statistically different results, and that Carmen's formula for measuring service quality by factoring in importance, requires more extensive field trials – an observation supported by others (Dorfman 1979; Crompton and Love 1995; Williams 1998). Using SERPERF alone does produce relatively high levels of satisfaction, but many researchers argue that performance ratings alone may not lead to the same practical applications as difference scores. For example, looking at the SERVPERF scores in Table 4, the company magazine ranked last in terms of service quality, and would therefore warrant a commitment of resources to rectify the situation if SERPERF was used in isolation. However, the IPA scores indicate that the company magazine was the least important variable as far as consumers were concerned,

and it was clearly positioned in the 'Low Priority' quadrant in Figure 1. This example highlights the diagnostic potential of using alternative measures to performance only.

Furthermore, despite the lack of a statistically significant difference between the methodologies, if the company used SERVQUAL only, they may commit resources to closing other gaps identified by IPA as 'Low Priority'. For example, the 'welcome' given in the resort produced a significant negative service gap according to SERVQUAL ( $p < 0.001$ ), whereas IPA suggests this factor is relatively unimportant to customers. Spending time and money on improving this factor may prove worthless.

But the results do not support the contention that practitioners should consider administering a range of instruments to measure service quality, rather than just one (Williams 1998). Instead, one could argue that with no statistical difference between the tests, any can be used to measure satisfaction. Such a finding would enable managers to employ the most straightforward test of satisfaction, so there would be justification in measuring performance only. Performance bears a preeminent role in the formation of customer satisfaction because it is the main feature of the consumption experience. SERVPERF, therefore, would be a straightforward and convenient measurement to use in when time and cost are constrained. But as others have stated, "although the perceptions format offers the most predictive power – a finding that has consistently emerged in the literature – it offers little diagnostic potential and, indeed, may result in inappropriate priorities being established" (Childress and Crompton 1997 p. 52).

From a managerial perspective, it would seem important to track trends of the extent to which expectations are met over time as well as trends in performance. The use of difference scores gives managers a better understanding of whether increasing expectations or diminishing performance might be responsible for declining service quality and customer satisfaction. An examination of minimum expectations may also be fruitful. Similarly, disregarding importance may mean losing useful insights. Without considering attribute importance, one has no indication of the relative importance that respondents attach to particular aspects of service performance. In addition, the fact that IPA is be easily interpreted by managers, could be of critical value for managers who do not use sophisticated software packages.

Despite the methodological implications, managers should be concerned that there were negative service quality gaps produced by the SERVQUAL or IPA instruments on all the dimensions measured. Several studies have examined the association between service quality and more specific behavioral intentions, and there is a positive and significant relationship between customers' perceptions of service quality and their willingness to recommend the company or destination (Zeithaml et al. 1996). Likewise, research on service quality and retaining customers, suggests that willingness to purchase again, falls considerably once services are rated below good (Gale 1992).

The findings should therefore be used by the company to develop potential management and marketing strategies. Each method has great potential as a periodic monitoring device for detecting any shifts in tourist satisfaction, and can be effectively

used to point out the company's strengths and weaknesses. However, it should be acknowledged that this study is not intended to provide detailed and highly specific information. Should the company's research procedure reveal certain problem areas in terms of satisfaction, more research may be necessary to delineate exactly what the problems and concerns are and what the best possible solutions should be. It is conceivable that with a performance only measure of satisfaction, problems may occur relating to expectations, such as falling levels of sales, which would need to be investigated through research into expectations, or promoting word of mouth from satisfied customers. Specific to some of the dimensions, it may be obvious what needs to be done or changed; with others it may not be so apparent. When this is so, the results of the survey should be viewed as bringing to attention certain problem areas for a more in-depth study. A qualitative approach may be used as a follow up to this kind of research as it may be more useful in identifying tourist satisfaction (Bowen 2001) and (Ryan 1995).

In fact, following the research, the company used the results to make significant changes. For example, in response to some of the more specific perceived problems with the brochure, the redesigned brochure for the following year offered greater clarity and ease of understanding with a new section in the introduction called the 'ABC for absolute beginners' that explained a variety of ski terminology. New price panels enabled customers to calculate the cost of their holiday with ease, an element that scored poorly in the study. The company also dropped from the brochure those accommodation units that performed poorly in the study. Continuous service quality improvements resulted in the

company being voted the 'Best Winter Ski Tour Operator' by U.K Travel Agents in 2002.

A limitation of the study was that a measure of variance was not included to increase the validity of IPA to distinguish attributes that truly fall within a single quadrant. Some researchers have argued that the traditional IPA framework does not distinguish attributes falling within the same quadrant, and therefore a measure of standard error should be included (Evans and Chon 1990; Tarrant and Smith 2002). Researchers using IPA in the future should consider including such a measure. Future studies could also incorporate identifiable intervening variables, such as the number of previous skiers visits, skiing ability or management styles in the resort; and further research could differentiate between the responses of males and females, different age groups, or skiers and snowboarders. Finally, further research could measure which competing tour operators are perceived to offer better service, and what their relative strengths and weaknesses are. According to Fick and Ritchie (1991) the power of the SERVQUAL tool is perhaps greatest in situations involving comparisons of one firm with another within a common service segment.

As mentioned previously, all of the techniques used to measure service quality have limitations. Each methodology has its strengths and weaknesses, and, as Silverman (1993) has suggested, methodologies 'cannot be true or false, only more or less useful' (p. 2). But the results of the research are likely to support the contention that research can be made to provide evidence for either side of a debate. Thus a marketing manager

could use SERVQUAL, IPA or SERPERF to justify decisions according to his/her own preferences. Perhaps the flexibility of interpretation of these techniques is a strength that will encourage their further usage in the tourism industry amongst operators. The results of this research indicate that managers should have confidence in using any of the methodologies for measuring satisfaction. Yet, what is needed is further research to validate this finding, and the development of a clear body of research that identifies if any measure of customer satisfaction provides greater validity.

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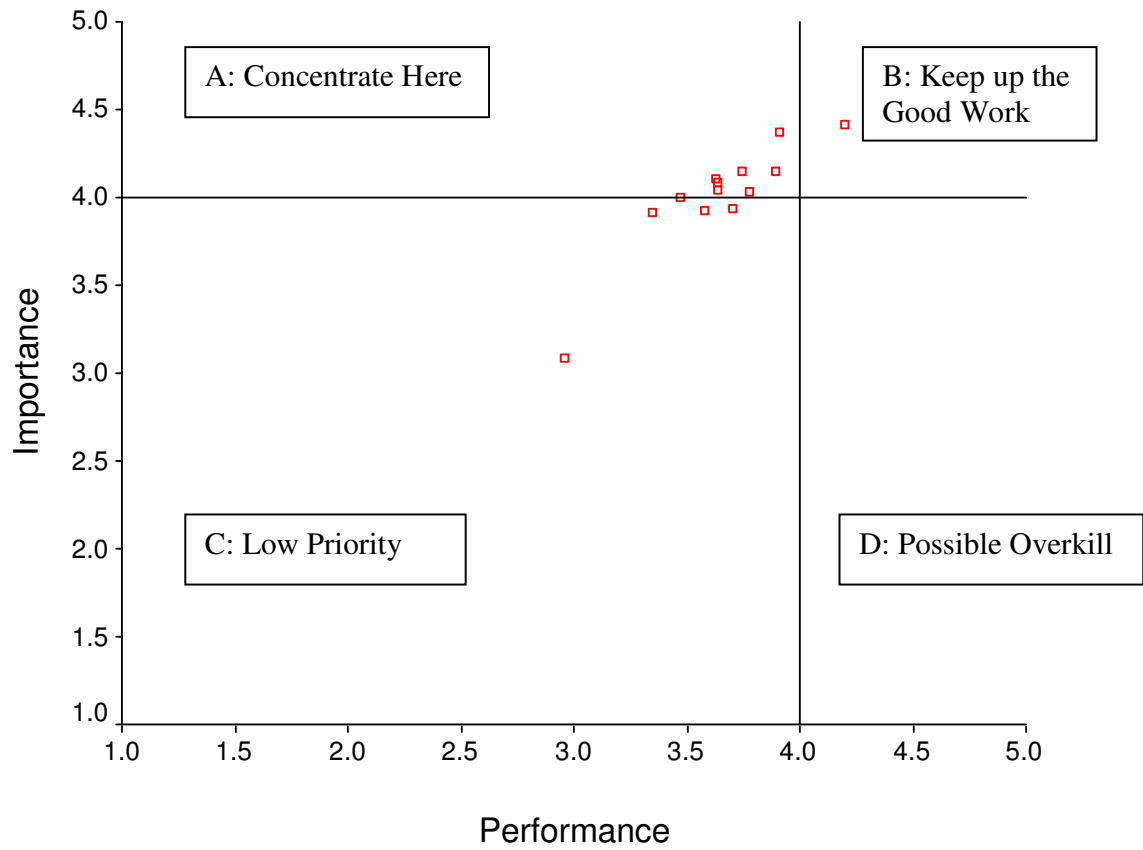


Figure 1: Importance-Performance Grid with Ratings for Holiday Dimensions



Dimensions of the Holiday Experience	EXPECTATIONS		PERFORMANCE		PAIR-WISE t-test	
	Mean	Std Dev	Mean	Std Dev	t-value	p-value
1. Brochure	4.254	.438	3.742	.575	-10.88	.000
2. Waiting to go	4.144	.427	3.640	.715	-9.35	.000
3. Journey	3.849	.428	3.358	.464	-12.20	.000
4. Meeting the Rep	4.082	.515	3.894	.811	-2.80	.006
5. Transfer to Accommodation	3.811	.563	3.471	.759	-4.93	.000
6. Arrival at Accommodation	3.767	.521	3.582	.871	-2.46	.015
7. Accommodation	3.994	.416	3.645	.719	-5.86	.000
8. Welcome	4.053	.442	3.700	.882	-4.95	.000
9. Resort Activities	4.009	.472	3.634	.600	-7.11	.000
10. Skiing/Snowboarding	4.230	.493	4.208	.538	-.43	.666
11. Company Magazine	3.250	.938	2.963	1.443	-2.38	.018
12. Departure	3.954	.484	3.784	.830	-2.41	.017
13. Transfer to Airport	4.120	.584	3.912	.919	-2.59	.011

Table 1: Comparisons Between Expectation and Performance in Holiday Dimensions (SERVQUAL)

Dimensions of the Holiday Experience	IMPORTANCE		PERFORMANCE		PAIR-WISE t-test	
	Mean	Std Dev	Mean	Std Dev	t-value	p-value
1. Brochure	4.152	.500	3.747	.575	-8.63	.000
2. Waiting to go	4.083	.513	3.640	.715	-7.49	.000
3. Journey	3.919	.477	3.358	.464	-12.57	.000
4. Meeting the Rep	4.149	.568	3.894	.811	-3.53	.001
5. Transfer to Accommodation	4.004	.534	3.471	.759	-7.82	.000
6. Arrival at Accommodation	3.934	.534	3.582	.871	-4.88	.000
7. Accommodation	4.038	.437	3.645	.719	-6.66	.000
8. Welcome	3.941	.541	3.700	.882	-3.53	.001
9. Resort Activities	4.113	.447	3.634	.600	-9.69	.000
10. Skiing/Snowboarding	4.414	.469	4.208	.538	-4.77	.000
11. Company Magazine	3.083	1.069	2.963	1.443	-1.07	.285
12. Departure	4.034	.461	3.784	.830	-3.82	.000
13. Transfer to Airport	4.371	.479	3.912	.919	-5.56	.000

Table 2: Comparisons Between Importance and Performance in Holiday Dimensions

Dimensions of the Holiday Experience	IPA Gap		SERVQUAL Gap		PAIR-WISE t-test	
	Mean	Std Dev	Mean	Std Dev	t-value	p-value
1. Brochure	-.413	.634	-.507	.617	2.64	.009
2. Waiting to go	-.442	.788	-.504	.716	1.66	.099
3. Journey	-.561	.586	-.491	.528	-1.83	.069
4. Meeting the Rep	-.256	.949	-.188	.883	-1.46	.147
5. Transfer to Accommodation	-.533	.879	-.340	.890	-3.64	.000
6. Arrival at Accommodation	-.354	.979	-.185	1.001	-3.29	.001
7. Accommodation	-.393	.802	-.349	.791	-1.27	.207
8. Welcome	-.245	.953	-.352	.938	2.64	.009
9. Resort Activities	-.485	.675	-.375	.701	-2.96	.003
10. Skiing/Snowboarding	-.214	.587	-.021	.663	-4.89	.000
11. Company Magazine	-.124	1.771	-.286	1.585	2.13	.035
12. Departure	-.256	.905	-.170	.930	-2.23	.027
13. Transfer to Airport	-.455	.982	-.206	1.002	-5.12	.000

Table 3: Comparisons Between IPA and SERVQUAL

<b>Ranking</b>	<b>SERVQUAL (P-E)</b>	<b>IPA (P-I)</b>	<b>SERVQUAL X IMPORTANCE (P-E)(I)</b>	<b>SERVPERF P ONLY</b>
<b>1</b>	Skiing/Snowboarding	Company Magazine	Skiing/Snowboarding	Skiing/Snowboarding
<b>2</b>	Departure	Skiing/Snowboarding	Departure	Transfer to Airport
<b>3</b>	Arrival at Accommodation	Welcome	Arrival at Accommodation	Meeting the Rep
<b>4</b>	Meeting the Rep	Meeting the Rep	Transfer to Airport	Departure
<b>5</b>	Transfer to Airport	Departure	Meeting the Rep	Brochure
<b>6</b>	Company Magazine	Arrival at Accommodation	Company Magazine	Welcome
<b>7</b>	Transfer to Accommodation	Accommodation	Transfer to Accommodation	Waiting to go
<b>8</b>	Accommodation	Brochure	Welcome	Accommodation
<b>9</b>	Welcome	Transfer to Airport	Accommodation	Resort Activities
<b>10</b>	Resort Activities	Waiting to go	Resort Activities	Arrival at Accommodation
<b>11</b>	Journey	Resort Activities	Journey	Transfer to Accommodation
<b>12</b>	Waiting to go	Transfer to Accommodation	Waiting to go	Journey
<b>13</b>	Brochure	Journey	Brochure	Company Magazine

Table 4: Ranking Service Quality Dimensions According to the Four Models (1 = top service quality score; 13 = lowest service quality score)