January 2002

Customer Satisfaction, Quality in Cruise Industry

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Recommended Citation

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Abstract

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Customer satisfaction, quality in cruise industry

by Mark R. Testa
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Record numbers of passengers are sailing on board cruise ships, with the industry claiming high levels of customer satisfaction. Conversely, little is known about the specific factors which make up customer satisfaction with the cruise experience. The authors examine customer satisfaction data from nearly 15,000 guests of a large U.S. cruise line to determine which aspects of the cruise experience have the greatest impact on overall satisfaction and perceptions of quality.

The cruise industry is experiencing record growth and consumer demand.[1] At the same time, customers have more choices then ever before as well as access to more information about the cruise product as well. The result is a more enlightened consumer with many products and brands from which to choose.

It's clear that customer satisfaction is a vital concern for cruise lines if positive word of mouth advertising and repeat business are going to result. Despite dramatic growth in the cruise industry, little is known about the specific customer satisfaction factors on a cruise vacation, or how they might contribute to overall perception of service quality.

Industry grows fast

The cruise industry is one of the fastest growing segments of the tourism industry experiencing a steady 8.4 percent increase per year since 1984.[2] Much of this growth is relatively recent, taking place after a construction boom in the 1990s. Some 84 million passengers have taken a cruise since 1970, with 50.4 million of those sailing in the past 10 years and 27.2 over the past five years. Forecasts suggest that the cumulative market for the cruise industry will reach $85 billion by 2006, with an average of 7.4 million passengers sailing per year. Conversely, only 12.3 percent of Americans have taken a cruise.[4]

This growth and market potential is the result of a number of factors and trends in the cruise

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industry. First, the cruise vacation is considered an excellent value, given the breadth and variety of activities available. A modern-day cruise ship is a microcosm of the hospitality and tourism industries with services for a wide range of demographic groups. Following the all-inclusive model, cruise ships provide everything from meals and lodging to gaming and entertainment. These floating resorts not only entertain on board, but provide itineraries from the Mediterranean to Alaska with themes catering to seniors as well as children. For instance, passengers can select from cruise themes such as psychic healing, sports, singles, and even all nude.[5]

Choices abound

Coincidentally, this wide range of services takes place at the same time as cruise prices are decreasing. A combination of high competition and slow economic growth has forced prices down, in some cases to 1985 levels.[6] The result is a wide range of offerings and choices for consumers. At the same time, technology has played a major role in providing discount cruise vacations for consumers. The internet not only provides a means for directly booking cruise vacations, but provides a full-range of information, reviews, and tips on getting the best value on a cruise. This has helped to create a more educated consumer who knows the intricacies of cruising. The end result is a potential consumer who is more knowledgeable about the options and

services of a product that is slowly becoming a commodity.

It's clear that as these trends continue, customer satisfaction and service quality will play significant roles in the success of cruise organizations. The cruise industry has prided itself on its ability to satisfy customers. In fact, according to the Cruise Line International Association (CLIA) 71 percent of first-time cruisers report that their vacation "exceeded their expectations." Further, they report that the majority of cruisers over the past five years rated a cruise vacation superior to other vacations on almost all dimensions, including being "pampered," "hassle free," "a good value for the money," and "fun."

Indeed, the cruise industry is so confident of its ability to satisfy passengers that a number of cruise organizations guarantee satisfaction, allowing passengers to disembark within 24 hours of sailing and refunding a prorated portion of the cost.[7] In spite of this tremendous growth and market potential, little is known about the specific factors which contribute most to overall customer satisfaction and service quality in the cruise industry. Given the large number of variables in the cruise experience, identifying these factors and determining their overall value is warranted.

Before attempting to investigate customer satisfaction, a clarification should be made between customer satisfaction and service quality. The similarities and differences between the two are points of great debate in marketing litera-

ture.[8] Much of this confusion stems from similar use of the disconfirmation model.[9] Smith and Houston suggested that satisfaction with service was the result of comparing expected service quality with perceived service quality received.[10] Conversely, Gronroos suggested that service quality was based on the expected and received quality.[11] Zeithaml, et al. helped to clarify the confusion by suggesting that service quality is the result of comparing desired service with perceived service, whereas satisfaction is the result of comparing predicted service and perceived service.[12]

Service encounters vary

Another debate is the relative importance and/or value of various components of the service encounter. Not every part of the service transaction is equally important. For example, Gronroos discussed service in terms of "technical" versus "function" quality. Technical quality relates to the actual service being purchased (i.e., being checked in at the front desk), while functional service relates to the manner in which the service is provided (i.e., friendly, courteous, etc.).

Parasuraman, Zeithml, and Berry developed the SERVQUAL using a five-dimensional model of the service experience, including reliability, responsiveness, empathy, assurances, and tangibles.[13] While the SERVQUAL is a mainstay instrument used for assessing service quality, some controversy exists regarding its factor structure

and appropriateness for various environments. Rust and Oliver suggested that service quality perceptions are made up of three separate dimensions including the service product (technical quality), the service delivery (functional quality), and the service environment.[14] A recent study combined Rust and Oliver's conceptualization and the dimensions of the SERVQUAL, determining that service quality is a multi-dimensional, hierarchical construct made up of both primary (high order) and secondary facets.[15] Such varying conceptualizations provide researchers with several alternatives in testing hypotheses but also make difficult the task of clearly distinguishing quality and satisfaction.

Past research, which argued that satisfaction judgments are the result of evaluating individual service transactions, whereas service quality is an individual's general attitude toward a service organization, was used to clarify the issue.[16] Given the nature and diversity of services provided in the cruise experience, "customer satisfaction" is defined as the result of comparing expectations of quality with the perception of the delivery of the various points of service on a cruise vacation. Conversely, "customer's perception of quality" is operationalized as the global evaluation of the customer's cruise vacation. The purpose of this exploratory study is to identify the major factors of satisfaction through exploratory factor analysis, and then determine which of

Table 1

Conceptualizations of service quality and satisfaction

Author(s)	Dimension	Formula
Smith & Houston	Service quality =	Perceived service - expected service
Groonroos	Service quality =	Received quality - expected quality
Zeithaml, et al.	Service quality =	Perceived service - desired service
Zeithaml, et al.	Satisfaction =	Perceived service - predicted service

these factors contributes most to customers' overall perception of quality.

Multiple cruises sampled

The sample used in the current study was randomly selected over a three-month period as part of a larger study. The host company is a large U.S. cruise line with ships sailing throughout the Caribbean, Alaska, and western Mexico. All the ships available at the time of data collection were included in the study. A total of nine ships were surveyed two times, for a total of 18 cruises. Six of these cruises were three to four-day sailings and the remaining 12 were seven-day cruises. As part of the data collection procedures, a company representative who sailed during each of the cruises was asked to record any extraneous events that might interfere with customer satisfaction, such as poor weather, mechanical difficulties, or rough seas. As none of these cruises faced such difficulties, all were included in the study.

A total of 14,997 customers filled out a 34-item customer satisfaction measure on the final day of their cruise. Once completed, the

survey was returned in a drop box at designated areas on board the ship. Responses to the survey were anonymous and participation was voluntary. The sample consisted of a wide range of age groups from children to senior citizens. Table 2 provides a breakdown of the sample age groups; 55 percent of the customers were first time cruisers, and 31 percent of the repeat customers had sailed with the host company previously.

The 34-item customer satisfaction measure used in the study is a proprietary survey used by the host company. The survey measures three major areas of satisfaction, including hospitality, performance, and food service. Respondents were asked to indicate the extent to which various dimensions of the cruise met their expectations. The survey used a four-point scale including (1) "Exceeded my expectations," (2) "Met my expectations," (3) "Opportunity for improvement," and (4) "N/A." Sample items under hospitality included the courtesy and friendliness of the embarkation staff and the overall hospitality of the staff; under performance, the service and quality of the purser's

Table 2
Age breakdown of customer sample

Age	Frequency	Percent	Valid %	Cumulative%
under 18	1624	10.8	11.1	11.1
18-24	1761	11.7	12.0	23.0
25-34	2913	19.4	19.8	42.9
35-44	3401	22.7	23.2	66.0
45-54	2997	20.0	20.4	86.4
55-64	1173	7.8	8.0	94.4
65-74	631	4.2	4.3	98.7
75+	188	1.3	1.3	100.0
Total	14688	97.9	100.0	
Missing	309	2.0		
Total	**14997**	**100.0**		

desk and the daily servicing of the cabin; and under food service, the quality and presentation of the dining room food and the quality of bar service.

The hospitality section consisted of eight items such as the embarkation staff, purser and information desk, and overall staff hospitality. The performance section consisted of 14 items such as the entertainers, the gift shop staff and selection, and cabin services. The final section, food service, consisted of 12 items such as food variety, restaurant service, and room service quality. In addition to the specific satisfaction items, two other items were included relating to overall perception of quality. Customers were asked to compare the value of their cruise vacation with other vacations, and the overall enjoyment of their cruise.

Questions are tested

As this is not an empirically verified assessment of customer satis-faction or service quality, threats to validity and reliability exist. For example, past research suggests that many satisfaction measures are prone to response bias, thereby reducing validity and reliability.[17] To minimize these threats several steps were taken. First, a review of current service quality and customer satisfaction instruments was conducted. Previously tested measures such as SERVQUAL and SERVPREF were examined to iden-tify the style and wording of the questions.[18] Similarities between these established measures and the proprietary instrument would help to establish face validity. Although the dimensions and the scale types differ between the measures, much similarity exists in the format of the questions.

To further establish face validity, 48 MBA students were asked to compare the proprietary measure with SERVQUAL to deter-mine the intent of each question-naire. The students indicated that

each measure was designed to determine the extent to which service expectations were met, but on differing dimensions. Where SERVQUAL asks about expectations and perceptions, the proprietary measure focused on perceptions only.

Next, the psychometric properties of the measure used in this study were tested through exploratory and confirmatory factor analyses. By assessing the factor structure of the instrument, adequate construct validity should 0be provided. Further, the internal consistency of the factors identified was assessed to complement the factor analyses.

The data analysis process was broken down into two stages. First, the data were randomly split with the first half used to conduct an exploratory factor analysis. Once the major factors of customer satisfaction were identified, the remaining half of the data was used to create a structural equation model (SEM) to determine which customer satisfaction factors had the greatest impact on customers' overall perception of quality.

Given the dearth of empirical research on customer satisfaction in the cruise industry, an exploratory process was selected. The first half of the data (n= 7499) was subject to an exploratory factor analysis using oblique rotation, which is preferred when a high correlation between the factors is expected (i.e., non-orthogonal).[19] Four factors emerged with eigenvalues greater than one accounting

for 70.4 percent of the variance. A Scree test was also conducted which supported the four-factor solution. In the initial analysis, six items loaded on more than one factor and were subsequently removed from the analysis.

The largest factor consisted of 15 items ($\alpha = .96$) and was termed "on board services." The next factor consisting of six items ($\alpha = .81$) was labeled "food and beverage," while the final two factors consisted of three items ($\alpha = .73$) and four items ($\alpha = .83$), respectively, and were labeled "lodging services" and "onboard entertainment."

Perceptions of quality tested

The second step in the analysis was to determine which of the established factors contributed most to customer's overall perception of quality.[20] Structural equation modeling (SEM)[21] with LISREL 8 was used to test the measurement properties of the factor structure identified in the exploratory analysis, and determine the impact on perceptions of quality. Anderson and Gerbing suggest a two-step approach toward SEM. The first step is to test validity of the indicators used in the measurement model. The next step is to identify the relationship between the latent variables and test the structural model. The measurement model was tested with the four previously identified factors as indicators of the latent construct labeled "customer satisfaction." Another latent construct was created with the two overall quality items from

the customer satisfaction questionnaire (value and enjoyment) and labeled "customer's perception of quality." The correlation matrix used in the analysis is illustrated in Table 3.

The measurement model fit well as demonstrated by fit statistics such as Comparative Fit Index (CFI) = .99, Normed Fit Index (NFI) = .99, Goodness of Fit Index (GFI) = .99, and Adjusted Goodness of Fit Index (AGFI) = .98. The chi-square of 155.20 with eight degrees of freedom was not statistically significant (p≤.01). Generally, a statistically significant chi-square is desired as a measure of model fit, however this statistic is greatly affected by large sample sizes.[22] Subsequently, other goodness-of-fit indices are useful in determining model fit when using large samples.[23] Based on the above, the four-factors structure identified in the exploratory analysis is supported, as is the "customer's perception of quality" construct.

Satisfaction is tested

Next, a path was added to the measurement model with "customer satisfaction" as the independent variable and "customer's perception of quality" as the dependent variable as shown in Diagram 1.

The model fit well as shown by CFI= .99, NFI= .99, GFI= .99, and AGFI= .98. Again the chi-square was high relative to the degrees of freedom (155.18, df. 8, p≤.01); however, the overall fit determined by the goodness-of-fit-indices suggests the model fits the data

adequately. The path model illustrates standardized path coefficients ranging from .61-.82 (p≤.05) for each of the indicators of "customer satisfaction" with "on board services" maintaining the strongest relationship. The path from "customer satisfaction," to "customer's perception of quality" was statistically significant, accounting for 42 percent of the variance. Given the fit of the model and significant factor loadings, "on-board services" has the greatest impact on overall customer satisfaction and, subsequently, customer's perceptions of quality within the studied sample.

Among the four factors identified by the analysis, the largest was labeled "on-board services." The 15 items within this factor included the following: purser services, casino services, photography, children's activities, embarkation services, heath spa, tours, the gift shop, food and beverage overall, food and beverage bar service, and overall hospitality of the cruise staff. Therefore, the overall experience of the guest outside of his/her berth had the greatest impact on the guest's perception of a "quality" cruise.

In addition to the variety of on-board services identified, another factor was formed from six items and labeled "food and beverage." This factor consisted of items related to dining room services such as quality of food, performance of food server, busing performance within dining areas, and food variety.

The final two factors consisted of three items each and were iden-

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Table 3
Means, standard deviations, and correlations
of variables used in the structural analysis.

	Mean	Std	1	2	3	4	5	6
1. Value	2.50	.60	1.000					
2. Enjoyment	2.35	.14	.270	1.000				
3. On-board	2.33	.42	.379	.174	1.000			
4. F&B	2.58	.43	.400	.193	.624	1.000		
5. Lodging	2.76	.39	.293	.147	.478	.505	1.000	
6. Entertain	2.52	.51	.369	.186	.624	.538	.428	1.000

Note: All correlations significant (p ≤ .01). Value - Overall value of vacation, Enjoyment - Overall enjoyment of cruise, On-board - On-board services, F&B - Food and beverage, Lodging - Lodging services, Entertain - On-board entertainment.

Diagram 1
Path model of customer satisfaction
and service quality in the cruise industry.

Note: All path coefficients significant (p≤.01).
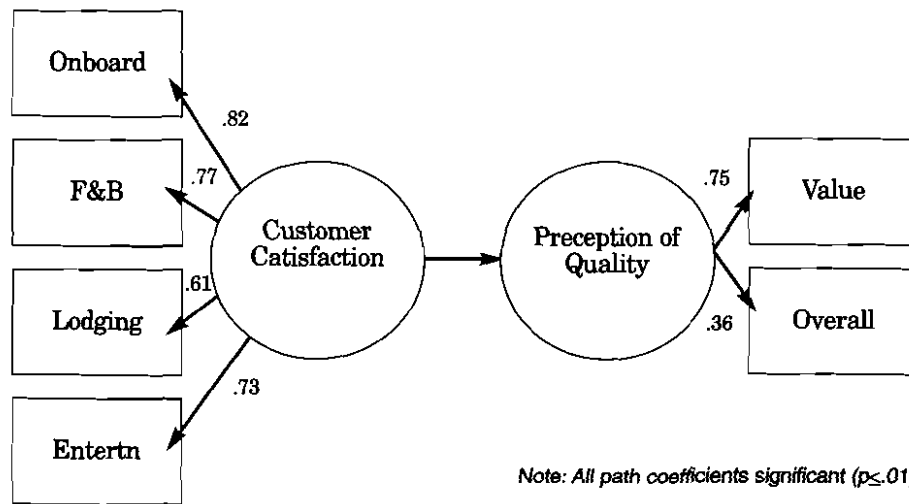
tified as "lodging services" and "entertainment." Cabin steward performance and the hospitable interaction between the guest and the steward accounted for this factor. "Entertainment" was the final factor and was categorized as such because it included such items as the entertainers, the quality of shows, the performance of the cruise director, and the variety offered.

Marketing is affected

The implications of identifying on-board services as having the most impact on the customer's overall perception of quality are important for the future of marketing cruises to the consumer and inviting repeat business. Knowing the attributes of an experience or benefits sought by the guest can help cruise line marketers promote those segments among identifiable potential customers. On-board services are significant to the customer and can be used in advertising for positioning. One of the problems within cruise line marketing is image differentiation. Data analyzed in this study can allow marketers to focus on the physical atmosphere of the ship in order to develop a strong and distinctive image from competitors.

Another implication of the impact on-board services have on overall satisfaction is the relative unimportance of the itinerary. It may be that once the itinerary is selected, the positive or negative aspects of the experience (be it real or perceived) may be less important

than the comfort and security of returning to the ship. Where the experience of a port of call varies due to numerous variables, passengers know what to expect when returning to the ship. This may provide another opportunity for cruise line marketers to impact consumer purchase decisions.

Service quality of the staff is also critical. Cruise personnel must be carefully hired and trained in order to impact the perception of a quality experience by the customer. No matter the area of the ship, the interaction between the crew member and passenger will play a significant role in how the cruise is perceived. While customer satisfaction is a mainstay focus for cruise marketers, service quality is less so. Focused efforts on this dimension may reap significant benefits in revenue.

Food is also important

Quality of food and beverages was also determined to be important to the guest. Cruise lines have long been touted for quantity of food on board, but the implications from this study suggest that food quality, variety, and presentation may be most important. Advertising with visual representations of the food variety and quality may be useful. In addition, providing background and nutritional information regarding food preparation and service may draw further attention. Cruise line websites are an ideal vehicle for this type of promotion.

Passenger perceptions were also greatly impacted by in-cabin

lodging experiences. The cabin steward plays a critical role in overall quality perception, perhaps due to the personal nature of the service. Cruise line organizations need to critically examine the service differentiation within the berths. A cabin steward's attentiveness should be distinctive and hospitable to positively benefit the customer's perception of quality.

Finally, formal entertainment on-board was also found to be an important factor in the overall cruise experience. Although not as critical as some of the other factors, entertainment may serve to provide a value-added competitive advantage to cruise operators. The entertainers and performance of the cruise directors can enhance the overall quality of the show and, subsequently, the overall impression of the cruise. In addition, the shows must contain ample variety in order to have far-reaching implications of quality, particularly when comparisons are made with competing vacation destinations.

While the results of this study provide some direction for cruise line marketers, several limitations exist. For instance, although the sample size is very large, the data came from a single cruise line, albeit nine ships in total were included from this singular line. Moreover, participation was voluntary and all responses were self-reported, which could potentially bias the results. Another limitation is the varying length of the cruises, which skewed the time involved in the experience and could have

influenced the respondents. Conversely, those who did not participate by completing a survey may also hold perceptions relevant to the overall outcome of this study. Finally, the customer satisfaction measure was a proprietary one, as opposed to a standard and more rigorously designed customer satisfaction measure.

Replication can assist

To counter the limitations of this study and further investigate the factors found here, several steps may be taken. First, this study could be replicated among several cruise lines of varying lengths of itineraries and ports of call. This would allow comparisons and similarities to be analyzed. Such an investigation would allow cruise line operators to identify areas of differentiation. Further, future studies could examine the specific items within the on-board services factor to see how the various facets interrelate. It may be that this factor is only most important within the studied sample rather than across the industry as a whole.

To counter the limitations of the proprietary measure used here, replication could take place using a more mainstream, valid, and reliable survey measurement. This would enhance the generalizability of the findings and allow more detailed investigation of the factors.

The tremendous growth of the cruise industry has forced marketers to refine the cruise vacation experience. To the extent that marketing professionals desire to

satisfy passengers, this type of investigation is necessary. Further examination of the factors that impact satisfaction and quality help to differentiate cruise firms and create an opportunity to seize competitive advantage. With forecasts for increased growth over the next decade, such examination may be required to counter the pressures of increased competition.

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