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# **PUTTING THE DOLLAR SIGNS ON QUALITY: THE BENEFITS OF SERVICE RECOVERY IN THE HOTEL INDUSTRY**

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## **ABSTRACT**

There has been a multitude of research on service recovery and various facets of recovery. Some of this work relates the facets to outcome variables such as satisfaction and intent to return but no research has been found that quantifies what that impact on satisfaction or intent to return converts to in financial terms. This work presents two formulas for calculating the dollar cost/benefit of service recovery efforts. The ability to utilize these formulas can help organizations better assess service recovery initiatives.

**Key words:** hotels, service quality, service recovery, revenue recovery, intent to return.

## **LITERATURE REVIEW**

Service failures are inevitable even in the best run service organizations. When service failures occur, the organization enters the service recovery mode. While scant research has been done studying the effects of initial service failures on outcome variables such as satisfaction and intent to return, the literature is abundant on research addressing service recovery. Service recovery lends itself well to such efforts because quality research can be done using surveys, secondary data and experimental design methods.

Service recovery research has found that effective recovery is essential to maintaining a steady customer base (Rinberg, Odekerken, & Christensen, 2007; Smith, Bolton & Wagner, 1999; Tax & Brown, 1998). Service recovery has been linked to post-failure satisfaction, purchase intent and positive word-of-mouth (e.g., Boshoff, 2005; Maxham, 2001; Tax, Brown, & Chandrashekar, 1998). There has even been some research suggesting that satisfaction rates can be even higher with a successfully solved problem than if the customer had not experienced a problem (Hocutt, Bowers & Donovan, 2006). A significant amount of recovery research has focused on the theoretical framework of justice theory (e.g., Goodwin & Ross, 1992; Tax & Brown, 2000). While much of the research has focused on the identification of relationships of recovery to outcome variables, there has been little effort to quantify that relationship, to provide a numerical measure to the effects of recovery on intent to return for example. This research will use a secondary dataset to provide a dollar amount to revenue recovered through recovery efforts. This is important information for companies so that they can better assess both the recovery efforts and the cost of programs to support recovery efforts.

The service recovery process takes on an added importance considering that recovery is the second step in a failure scenario. The organization has already failed, to some degree, in creating the initial problem experience that has led to the recovery efforts. Service recovery processes may have a relatively large impact regardless of whether the recovery process has negative or positive results. Bitner, Booms and Tetrault (1990) describe this as a "double deviation" from expectations. It is possible that a negative result in recovery is magnified by virtue of it being the second time that the firm has failed (i.e. once in the original failure and now in the recovery attempt). Bitner, Booms and Mohr (1994) concluded that in many cases it is not the initial failure to deliver the expected service that causes dissatisfaction, but rather employees' lack of an appropriate response to that failure. Positive results in

recovery may diminish the effect of the original failure for several reasons: 1) Through effective recovery communications, the consumer is led to believe the service provider is fair (e.g. admits its mistakes, makes restitution, etc.); 2) The recovery effort "takes away" all the negative consequences of the service failure and; 3) The service provider influences the consumer to make attributions which cause the consumer to place blame elsewhere. Thus, in both positive and negative recovery outcomes, the recovery can take on greater importance than the original service failure.

The relationship between recovery efforts and various outcome variables has provided for some interesting and spirited discussion. Research suggests that post-recovery satisfaction can be higher than if the customer had encountered no problems at all. Hocutt, et al. (2006) state that the recovery must be properly managed and while it does not have to be "knock your socks off service," should be prompt and courteous to gain this post-recovery edge. This post-recovery jump in satisfaction is referred to the "service paradox" (should we then encourage problem experience so that we can resolve positively to gain even greater satisfaction?). This paradox has been supported by McCollough, et al. (2000), and Smith and Bolton (1998). However, evidence for the paradox is sparse and usually include that respondents must be very satisfied with the recovery efforts (Smith & Bolton, 1998). Recent research has called into question the existence of the so-called "recovery paradox" (Maxham, 2001; Maxham & Netemeyer, 2002). Michel and Meuter (2008) and de Matos, Henrique and Rossi (2007) consider the service paradox to be a rare phenomenon while others have not found support (Bolton & Drew, 1991).

While the ability of an organization to achieve a pre-failure satisfaction rate is debated, the fact that some type of positive recovery is possible is not questioned. The interest becomes in trying to determine the extent of positive recovery and what that recovery means in financial terms. While organizations would perhaps expect a stronger recovery performance, the research to-date indicates a more mediocre result. For example, an early study revealed that only 30-53% of customers who experienced problems with one of seven services they purchased were satisfied with the resolution (Andreasen & Best, 1977). Hart, Sasser and Heskett (1990) found that, "More than half of all efforts to respond to customer complaints actually reinforce negative reactions to service" (p. 150). In more recent research, only 50-67% of customers who experienced difficulties with one of five service companies were satisfied with the outcome (Berry & Parasuraman, 1991). Susskind (2005) found that 64.1% of restaurant customers reported a "low degree of correction" regarding their complaint. 41% indicated that the complaint redress negatively influenced their desire to return to the restaurant. For the "double deviation" of initial failure followed by recovery failure, Susskind found that only 28% of restaurant customers were likely to return after a dissatisfying complaint remedy. Of the cited examples, all except Susskind (2005) reported effects of recovery on satisfaction. Only Susskind (2005) reported an effect of recovery on intent to return behaviors, reporting that, "(51.7%) of respondents who reported a satisfactory complaint remedy indicated that the service failure and remedy they experienced did not negatively influence their desire to return to the restaurant."

It is interesting to note, that even with the relationship noted above, there has been limited work on converting the intent to return relationships to financial terms. This movement in intent to return can be converted to financial terms with appropriate data. The research question for this study is, "What does the improvement in intent to return through service recovery efforts represent in dollars to the organization."

## METHODOLOGY

Many companies have added problem experience and problem resolution questions to guest satisfaction surveys/questionnaires to track their performance on these key issues. Three hotel companies with multiple brands supplied the data for this research by providing access to their guest satisfaction databases. The companies have asked that they not be identified in this work so brand specific information cannot be provided. The purpose of this research is to identify the effect of problem resolution on intent to return and then apply a methodology to calculate the financial effect of service recovery efforts, so one brand from one company was used to avoid any cross-brand or

cross-company confounding effects. The brand used for this study is an upscale full-service brand with a large number of hotels nationwide that generated over 300,000 responses on their guest survey for the 2008 period..

For the brand used in this study, the guest contact information is provided to an independent research company each evening. The information is “cleaned and filtered” to verify that emails addresses are valid (cleaned) and that surveys do not go to predetermined groups such as corporate employee rates and distressed airline passengers (filtered). The research company then generates random surveys in amounts sufficient to meet predetermined quotas based on a historical response rate.

The hotel brand asks a series of problem experience questions. The first is whether the guest experienced a problem in a yes-no format. The second is whether the guest reported the problem, also in a yes-no format. The resolution question is asked on a ten-point scale with ten representing “excellent” and one representing “poor. The intent to return question was asked on a ten-point Likert type scale with 10 representing “definitely will” and 1 representing “definitely will not.” To translate the intent to return rating to lost guests, it was assumed that guests who marked a “10 – definitely will” had a 100% return rate, and any score less than that had an appropriate return percentage. For the aggregate date, an intent to return measure of 8.21 translates to a return rate of 82.1%. Certain scale measures have been modified to maintain confidentiality of the participating company; these modifications do not impact the statistical results of this study.

There are two different formulas presented based on a conceptual perspective of revenue recovery efforts. Calculations for both formulas will be presented to illustrate the difference between the two formulas. The first formula will be referred to as the “mean” perspective. This bases the revenue recovered on the intent to return mean for guests who did not report their problem. It acknowledges that a problem was experienced and the guest has now presented the hotel with an opportunity to recover the revenue “at risk.” The alternative to reporting the problems is leaving without reporting, thus the use of the non-report intent to return as a base for the revenue recovery. The second formula will be referred as the “minimum” perspective. This bases the revenue recovered on the intent to return for the minimum rated recovery category intent to return. For example, in this study, the response of “one” or “poor” was the lowest rated recovery category and the intent to return for that category is the base for revenue recovered. This perspective acknowledges that a problem was experienced and reported and that the worst the hotel can do, is to do nothing or perform at a level that earns a “poor” response. All of the recovery response categories and intents to return are shown in Table 1.

**Table 1.**  
**Intent to Return and Category Response Percentages for Recovery**

Response category	N	%	Intent to return (%)
1 = Poor	12306	19.1	53.8
2	2925	4.5	54.4
3	3875	6.0	58.8
4	3314	5.1	61.0
5	6244	9.7	66.6
6	4628	7.2	69.4
7	5744	8.9	72.8
8	7422	11.5	76.8
9	7770	12.0	81.6
10 = Excellent	10291	16.0	86.8
Total	64,519	100.0%	

It is necessary in each of the following formulas to include a multiplier to convert the sample results to the population. The multiplier is determined by calculating the percentage of the population that the sample represents and then dividing 1 by that percentage. The multiplier formula is:

$$m = 1/[s/(a*365*o/l)]$$

where:

$m$  = the multiplier factor

$s$  = total surveys received in the sample

$a$  = available rooms

$o$  = occupancy

$l$  = average length of stay

The total surveys received ( $s$ ) = 336,832, average length of stay calculated from information in the dataset ( $l$ ) = 2.15. Available rooms for the brand and occupancy percentage were provided by the company, ( $a$ ) = 140,331 and ( $o$ ) = .68, so:

$$m = 1/[336,832/(140,331*365*.68)/2.15]$$

$$m = 1/(336,832/16,200,072)$$

$$m = 1/.02079$$

$$m = 48.1$$

The formula for the mean calculation is:

$trr$  = sum of all  $rr$  where:

$$rr_{i,j} = pn_{i,j} * (pri_{i,j} - pri_{mean}) * l * r * m$$

where:

$trr$  = total revenue recovered

$rr_{i,j}$  = revenue recovered for each response category, i-j

$pn_{i,j}$  = number of respondents in each category, i-j

$pri_{i,j}$  = intent to return for each category, i-j

$pri_{mean}$  = intent to return for non-report category (.742)

$l$  = average length of stay

$r$  = average daily rate

$m$  = 48.1 as shown previously

Because there are 10 categories, the formula must be calculated 10 times with the revenue recovered ( $rr$ ) for each category totaled to determine total revenue recovered ( $trr$ ). The first calculation, for response category “10” (excellent) will be illustrated:

$$rr_{10} = pn_{10} * (pri_{10} - pri_{mean}) * l * r * m$$

$$rr_{10} = 10,291 * (.868 - .742) * 2.15 * 158.22 * 48.1$$

$$rr_{10} = \$21,216,465$$

The revenue recovered for each response category is shown below:

$$rr_{10} = \$21,216,465$$

$$rr_9 = \$9,408,008$$

$$rr_8 = \$3,157,470$$

$$rr_7 = (\$1,315,792)$$

$$rr_6 = (\$3,634,792)$$

$$rr_5 = (\$7,764,641)$$

$$rr_4 = (\$7,157,665)$$

$$rr_3 = (\$9,764,215)$$

$$rr_2 = (\$9,476,238)$$

$$rr_1 = (\$41,076,364)$$

$$trr = (\$50,042,556)$$

From the mean perspective, the figures indicate that the brand is losing more revenue by poor service recovery efforts. Once the intent to return of a response category falls below the non-report intent to return of .742, the results become negative; that happens in this case between recovery responses 7 and 8 as can be seen in Table 1. While this may seem surprising, it is not inconsistent with previously cited work that suggested that over half of the respondents indicated that service recovery efforts actually reinforced the negative reactions to service (Hart, et al., 1990). For data collected for this study, none of the companies or individual brands had a positive total revenue recovery using the mean approach.

As discussed, the “minimum” perspective views revenue recovery as any improvement beyond the minimum response category. The formula for the minimum approach is exactly the same as the mean approach except that the intent to return for the minimum response category, in this case “1” or “poor” is substituted for the mean of the non-report category. In the formula,  $pri_{min}$  replaces  $pri_{mean}$ . The formula for the mean calculation is:

$trr = \text{sum of all } rr \text{ where:}$

$$rr_{i j} = pn_{i j} * (pri_{i j} - pri_{min}) * l * r * m$$

The first calculation, for response category “10” (excellent) will be illustrated:

$$rr_{10} = pn_{10} * (pri_{10} - pri_{min}) * l * r * m$$

$$rr_{10} = 10,291 * (.868 - .538) * 2.15 * 158.22 * 48.1$$

$$rr_{10} = \$55,566,934$$

The revenue recovered for each response category is shown below, by definition, the  $rr_1 = 0$  since that is the minimum response category:

$$rr_{10} = \$55,566,934$$

$$rr_9 = \$35,343,596$$

$$rr_8 = \$27,931,464$$

$$rr_7 = \$17,857,153$$

$$rr_6 = \$11,813,072$$

$$rr_5 = \$13,077,291$$

$$rr_4 = \$3,904,181$$

$$rr_3 = \$3,170,200$$

$$rr_2 = \$287,159$$

$$rr_1 = \$0$$

$$trr = \$158,951,080$$

This minimum approach shows that the brand recovers \$158,951,080 by employing recovery efforts that range from poor, the lower rated response categories, to excellent, the higher-rated response categories.

## DISCUSSION

The purpose of this work is to introduce a method to quantify the impact of service recovery efforts on intent to return in financial terms. To that end, the work introduced two different methods, the mean approach and

the minimum approach, to quantify the results. Either can be used, depending on the perspective of the user. It is the author's opinion that the minimum approach presents a more workable analysis, both in conceptual and in pragmatic terms. As Zeithaml, Parasuraman and Berry (1990) state, "When a service problem does crop up, however, all is not lost, unless the company ignores it. In other words, by resolving the problem to the customer's satisfaction – by performing the service very right the second time – the company can significantly improve customer-retention rates" (p. 31). This statement seems to support the minimum approach. "Unless the company ignores it....," is the basis for the minimum approach. While improvement is gained as the response rating improves, significant improvement is gained at the point where resolving the problem to the guest's satisfaction is attained.

Using the mean approach, the total revenue recovered is negative. As stated, this has been the case in every large group of brands or companies studied. Conceptually, this suggests that hotels should not encourage guests to report their problems because the net effect is negative. There would be a greater likelihood that the hotel would drive the intent to return lower through their service recovery efforts. This is not intuitive in practice, every manager wants the guest to report their problems because there is an opportunity for improvement and recovery can happen.

The minimum approach reports the recovery in more understandable terms. The intent to return increases for every response category so even an effort that only marginally affects the recovery rating does still translate to increased intent to return and recovered revenue. Using the same dataset, it was found that the financial impact of problems experienced was \$231,452,697 and that \$56,243,500 of that revenue "walked out the door" without reporting the problem, leaving the remaining \$175,209,197 "in play." The total revenue recovered using the minimum approach, \$158,951,080 can be expressed as a percentage of the revenue 'in play,' in this case, 90.7%. The figure seems to be workable this way, companies, brands and hotels can use this as a performance measure, a benchmark, etc. Units with higher recovery levels can be studied to determine what actions are being taken to result in a higher revenue recovery percentage.

The formulas also provide a financial basis for service recovery efforts and initiatives. There is an increased emphasis on recovery through both interpersonal (e.g., problem recognition awareness, determination of appropriate recompense strategies) and technological (e.g., customer relations management software, other applications that track guest history and experience) efforts. The financial terms presented in either of the two formulas can allow for an added input into a cost/benefit analysis of any service recovery strategy.

It should be emphasized again that while the author feels the minimum approach is more workable, either approach provides a sound basis for the calculations. Use of either approach lay simply with the preferences of the user.

These calculations are global measures that provide insight into the dollar impact of service recovery experienced by hotel guests. Even greater insight can be gained by stratified calculations of various underlying variables. The most important of these is problem type. It would of great interest to hotel companies to see the revenue recovery for specific problems regarding HVAC systems (assumed to be relatively high) versus problems regarding TV remotes (assumed to be relatively low). Asking the guest to respond to a severity of problem issue sometimes confounds the response as the guest perception tends to exaggerate the severity of the problem while the actual intent to return many provide a more accurate behavioral response. Additional studies could also include revenue recovery by various demographic variables such as gender, market segment type, loyalty club membership, etc.

It is important to note that these calculations consider the gain or loss of business as indicated by the behavioral response to an intent to return question. It is difficult to determine the actual behavior demonstrated by individuals who respond to this question.

The most critical assumption made in the calculation is that the percentage of lost business is directly related to the corresponding intent to return average. While the actual future behavior of responding guests is not measured in this study, the assumption was reasonable based on the response scale used in the survey.

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