EXECUTIVE SUMMARY

Amenities specified by hotel companies’ brand standards can become a point of contention between hotel owners and brand managers. At issue for the owner is whether offering a particular amenity justifies the expense, while brand managers are typically more concerned with maintaining consistent brand standards systemwide. This report provides another perspective, by analyzing the short-term return on investment for six upscale and luxury brands offering three popular complimentary amenities—bottled water, internet access, and fitness center use—both in terms of their effects on first-time visits and on repeat business. While internet access held the greatest attraction for first-time guests, complimentary bottled water offered the highest ROI for returning guests. Analyzed over a twelve-month period, the fitness center had a negative ROI for both groups. Of particular interest, the study also found that guests greatly overestimated the likelihood that they would use the hotels’ amenities.
ABOUT THE AUTHORS

Chekitan S. Dev, Ph.D., is an associate professor of strategic marketing and brand management at the Cornell University School of Hotel Administration in the Cornell SC Johnson College of Business. A leading authority on hospitality marketing and branding, Dev has published over 100 research papers in the Journal of Marketing, Journal of Marketing Research, Harvard Business Review, and Cornell Hospitality Quarterly, among many others. His book Hospitality Branding was published by Cornell University Press in 2012. Dev’s awards include a 2016 Academic Excellence Award, a 2016 Industry Relevance Award, and the 2002 John Wiley & Sons award for lifetime contribution to hospitality and tourism research. A former corporate executive with Oberoi Hotels & Resorts, he has served clients in over 40 countries on six continents as an expert witness, consultant, keynote speaker, and workshop leader. Dev was selected as one of the “Top 25 Most Extraordinary Minds in Sales and Marketing” for 2009 by the Hospitality Sales and Marketing Association International (HSMAI).

Rebecca Hamilton, Ph.D., is the Michael G. and Robin Psaros Chair in Business Administration and professor of marketing at the McDonough School of Business at Georgetown University. She received her doctorate from the MIT Sloan School of Management and was previously on the faculty at the University of Maryland’s Robert H. Smith School of Business. Her research examines the effects of contextual factors—such as the social environment, stage of decision making, and presentation format—on consumer decision making. Her research has been published in Journal of Consumer Research, Journal of Marketing, Journal of Marketing Research, and Harvard Business Review. She received the Erin Anderson Award for an Emerging Female Scholar and Mentor in 2011 and was recognized by the Marketing Science Institute as a Young Scholar in 2007. She is co-editor of the Journal of Marketing Research and associate editor for the Journal of the Academy of Marketing Science.

Roland Rust, Ph.D., is Distinguished University Professor, David Bruce Smith Chair in Marketing, and executive director and founder of the Center for Excellence in Service and the Center for Complexity in Business at the Robert H. Smith School of Business at the University of Maryland. He is also visiting chair in marketing research at Erasmus University (Netherlands) and international research fellow of Oxford University’s Center for Corporate Reputation (UK). His lifetime achievement honors include awards from the AMA, the European Marketing Academy, the Academy of Marketing Science, the American Academy of Advertising, the University of North Carolina at Chapel Hill, and the University of Neuchatel (Switzerland). The founding editor of the Journal of Service Research, he is editor of the International Journal of Research in Marketing (IJRM). A national class distance runner in his collegiate days, he has been inducted into the DePauw University Athletic Hall of Fame.

This report is based on two papers: “Return on Service Amenities,” by Rebecca W. Hamilton, Roland T. Rust, Michel Wedel, and Chekitan S. Dev, forthcoming in the Journal of Marketing Research in 2017; and “Which Features Retain Customers,” by Rebecca W. Hamilton, Roland T. Rust, and Chekitan S. Dev, forthcoming in the MIT Sloan Management Review in 2017. The research was supported by grants from the Center for Excellence in Service at the University of Maryland. The authors thank seminar participants at the Wharton School, the 2011 Cornell Hospitality Brand Management Roundtable, the 2014 Frontiers in Service Conference, and the 2014 Society for Consumer Psychology Conference for their helpful comments. Thanks also to Rick Adie, general manager of the Statler Hotel at Cornell University, for benchmarking data, and to Jess Pettit and James Kim for their help with data analysis.
Hotel Brand Standards:

How to Pick the Right Amenities for Your Property

by Chekitan S. Dev, Rebecca Hamilton, and Roland Rust

Amenities have been a key element in the hotel industry’s continuous effort to attract and retain customers. Hotel brands engage in vigorous competition to include an ever-expanding list of amenities as part of their brand standards. But even if they do bring in more guests and revenues, those amenities cost money—and hotel owners and brand managers alike could benefit from a mechanism for determining which of the brand standard amenities are justified financially. The study described here explains how we calculated return on the investment (ROI) for three popular amenities, both in terms of attracting first-time guests and in encouraging repeat patronage.²


The key insight of our model is that the offer of amenities has distinct and measurable effects for a guest’s initial decision regarding whether to stay at a particular hotel, and (separately) for the decision on whether to become a repeat customer. In this report, we describe the return on investment model we developed for the three complimentary amenities, namely, bottled water, wi-fi, and access to a fitness center. Further, we conducted a natural experiment that compared revenues and profits at properties that began to offer bottled water with revenues at properties that did not do so. Additionally, we outline our finding that guests often overestimate their likelihood of using various amenities.

The Research Design

With the support of a global company that operates midscale, upscale, and luxury brands, we were able to analyze the ROI on many amenities over a twelve-month period, and we were also able to compare the revenue effect for the brand’s properties that updated the brand standards to offer bottled water and those that did not. Although the study involved a lengthy list of fifty amenities, our agreement with the data provider allows us to discuss the three amenities we mentioned above, bottled water, wi-fi, and a fitness center.

The Study

Initial and Repeat Sales

We approached the task of estimating the effect of offering an amenity on initial sales by considering a customer’s brand choice as a function of a bundle of attributes, weighted by the importance that consumers assign to those attributes. We further assumed that expected and actual use of amenities would affect future visits, so our model estimates the effects of both expected and actual use. We then computed the difference in expected future revenue with and without offering a given amenity.

Financial Return

To estimate the ROI of offering a particular amenity we compared the effect on revenue and cost of providing that amenity, with regard to both new customers and repeat guests. Company data allow us to develop the revenue portion of this calculation. This company’s hotel brands collect data regarding the number of customers that patronize them and average repeat purchases per customer, which makes it possible to calculate revenue from repeat visits. The brands also keep records indicating the proportion of revenues they realize from initial sales, so we could estimate total revenue without the given amenity.

For the cost side, we modeled the cost of an amenity as the sum of the cost of installing the amenity, the cost of maintaining it, and the cost for every customer use. This allowed us to estimate the profit margin in terms of a percentage of total revenue due to the amenity, and further to estimate the amenity’s annual ROI, as well as its net present value.

---

**EXHIBIT 1**

Partial list of amenities included in guest surveys

**Hotel amenities**

Auto check-in, Bellhop, Boarding pass printing, Business center, Concierge, Early check-in, Electronic checkout, Fitness center, Folio under door, Gift shop, Hotel bar, In-room dining for breakfast, lunch, dinner, or late night, Late checkout, Laundry service, Lobby food, Lobby internet access, Pool, Restaurant breakfast, lunch, or dinner, Seating in lobby, Spa, Valet parking, Wakeup call

**Room amenities**

Alarm, Bottled water, Closet, Coffee maker in room, Desk, Fitness equipment in room, In-room internet access, Iron, Minibar, Movies on demand, MP3 dock, Phone for inside calls, Phone for outside calls, Radio, Refrigerator in room, Robe, Safe, Task lighting, TV, Video games on demand

**Bathroom amenities**

Dispenser for soap or shampoo, Hair dryer, Packaged soap, shampoo, conditioner, or lotion

**Amenity Selection**

We studied many of the hotel firm’s amenities, as listed in Exhibit 1, and we were authorized to publish our analysis of the three presented here. We selected these three amenities because they have different cost structures. The chief cost for bottled water is purchasing the water (that is, cost per use), since housekeepers can carry the bottles on their carts to install and remove them at minor incremental cost. Offering free in-room internet access also involves relatively low installation costs, and its cost per use is negligible. By far the highest cost involved in offering free internet service comes from service and maintenance fees, which typically involve third-party vendors. In contrast, fitness centers are relatively expensive to install and can incur somewhat higher maintenance costs (for replacing broken equipment), along with modest per-use costs (for keeping the equipment clean and providing towels and drinking water).

**Data Collection and Analysis**

The hotel corporation in this study is a global operation with several brands. The firm supplied data from 33 properties representing the six brands it operates in the United States. In addition to installation, maintenance, and per-use cost data for the amenities, we obtained financial information and the proportions of new and returning guests and profit margins, as well as market share data and yearly guest and revenue data, for six
of the hotel company’s brands. The company also shared data from STR indicating market performance data for each brand.

To estimate the effects of the amenities on initial choice, we asked both customers and non-customers of the hotel company’s brands to choose from hotel profiles that varied on six attributes that have been shown in marketing research to play critical roles in hotel brand choice. In addition to the three amenities, we included location, price, and loyalty program membership. To test the effects of amenities on repeat purchase, or return visits, we surveyed guests who had visited one of the company’s 33 properties over a span of eight weeks. Our sample included guests who responded to a pre-stay survey reporting their expected amenity use about one week prior to their stay as well as to a post-stay survey reporting their actual amenity use about one week after their stay.

Factors driving an initial hotel visit. Among the six factors we tested, we found that the strongest effect on initial choice was free in-room internet access. This result was nearly equal for both business and leisure travelers. Room price was the next strongest factor (when comparing the lowest price in the brand set with the average), followed by location (whether an event would be held in an adjoining building or at some distance) and loyalty program membership.

Factors for a repeat visit. Of the three amenities we tested, use of bottled water had the strongest effect on both return visits and revenue. We should note, though, that the water followed gender, loyalty program membership, and prior visits as significant predictors of return visits to these hotels. Regarding the individual brands, offering bottled water had a significant effect on return visits for one upper upscale brand and a

---

### Exhibit 2

Comparison of expected and actual use of amenities by brand

<table>
<thead>
<tr>
<th>Amenity</th>
<th>Brand</th>
<th>Proportion of Expected Use</th>
<th>Proportion of Actual Use</th>
<th>Difference Between Expected and Actual Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitness Center</td>
<td>Upscale 1</td>
<td>.29</td>
<td>.24</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>Upper Upscale 1</td>
<td>.44</td>
<td>.14</td>
<td>.30</td>
</tr>
<tr>
<td></td>
<td>Upper Upscale 2</td>
<td>.43</td>
<td>.18</td>
<td>.25</td>
</tr>
<tr>
<td></td>
<td>Luxury 1</td>
<td>.51</td>
<td>.22</td>
<td>.29</td>
</tr>
<tr>
<td></td>
<td>Luxury 2</td>
<td>.55</td>
<td>.31</td>
<td>.24</td>
</tr>
<tr>
<td></td>
<td>Luxury 3</td>
<td>.51</td>
<td>.20</td>
<td>.31</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>.46</td>
<td>.22</td>
<td>.24</td>
</tr>
<tr>
<td>In-room Internet Access</td>
<td>Upscale 1</td>
<td>.65</td>
<td>.53</td>
<td>.12</td>
</tr>
<tr>
<td></td>
<td>Upper Upscale 1</td>
<td>.69</td>
<td>.42</td>
<td>.27</td>
</tr>
<tr>
<td></td>
<td>Upper Upscale 2</td>
<td>.69</td>
<td>.32</td>
<td>.37</td>
</tr>
<tr>
<td></td>
<td>Luxury 1</td>
<td>.59</td>
<td>.40</td>
<td>.19</td>
</tr>
<tr>
<td></td>
<td>Luxury 2</td>
<td>.71</td>
<td>.48</td>
<td>.23</td>
</tr>
<tr>
<td></td>
<td>Luxury 3</td>
<td>.62</td>
<td>.36</td>
<td>.26</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>.66</td>
<td>.42</td>
<td>.24</td>
</tr>
<tr>
<td>Bottled Water</td>
<td>Upscale 1</td>
<td>.59</td>
<td>.65</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>Upper Upscale 1</td>
<td>.46</td>
<td>.27</td>
<td>.19</td>
</tr>
<tr>
<td></td>
<td>Upper Upscale 2</td>
<td>.46</td>
<td>.34</td>
<td>.12</td>
</tr>
<tr>
<td></td>
<td>Luxury 1</td>
<td>.58</td>
<td>.56</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Luxury 2</td>
<td>.71</td>
<td>.84</td>
<td>.13</td>
</tr>
<tr>
<td></td>
<td>Luxury 3</td>
<td>.54</td>
<td>.28</td>
<td>.26</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>.56</td>
<td>.49</td>
<td>.07</td>
</tr>
</tbody>
</table>

3 We benchmarked these data using industry sources to ensure that the hotel company’s costs were consistent with industry standards.

marginal effect for one luxury brand. Neither in-room internet access nor use of a fitness center had significant effects on return visits for any of the brands.

**Expected vs. Actual Amenity Use**

Our study also allowed us to compare guests’ expectations for amenity use to the extent to which they actually use various amenities (see Exhibit 2). In short, we found that guests systematically overestimated their use of most of the fifty amenities we measured. This pattern is consistent for business guests and leisure guests across all price tiers, and for both frequent and infrequent guests.

Looking at wi-fi, for instance, a study posted in March 2015 reported that business travelers worldwide overwhelmingly expected to use in-room wi-fi.\(^5\) Our study painted a different picture. When we compared guests’ expectations to their actual amenity use, we found that 66 percent of guests expected to use wi-fi in their room, but only 42 percent actually logged on. Similarly, 46 percent of guests expected to work out in the fitness center during their stay, but only 22 percent actually did so. Even bottled water fell short, as 56 percent of guests expected to enjoy some bottled water, but only 49 percent actually indulged. We also found interesting differences across price tiers. As we go up the price tier from upscale to luxury, for instance, a greater proportion of guests say they will use the fitness center, but the difference between expected and actual use also goes up. Although we cannot discuss the other 50 amenities on this list, we can report that guests generally predicted that they would use more amenities (18) than they actually reported using (13).

**Return on Investment**

To develop ROI estimates, we first computed the loss in initial revenue if a given amenity was not offered, and then we computed the estimated effect each amenity would have on revenue from repeat purchases. Finally, we could calculate financial returns from each amenity using internal data provided by the hotel company indicating average annual per-guest revenue, the annual number of guests, the relative proportions of new and returning guests, the overall costs of the amenities (installation, maintenance, and per-use), the proportion of guests that use each of the amenities, and the profit margins and discount rates.

**In-room bottled water.** As we stated above, bottled water had only a weak effect on initial choice, but a significant effect on return visits. For five of the six brands, offering in-room bottled water generated a positive ROI (above the discount rate).

**In-room internet access.** The strong effect of free in-room internet service on initial purchase meant that this amenity also had a positive ROI (again above the company’s discount rate) for five of the six brands in the study. This generally positive ROI is notable given we found only a weak effect for offering this amenity on return visits. The returns on free in-room internet access did vary considerably across brands, including a negative ROI for one upscale brand.

**Fitness center.** The fitness center figured neither in guests’ initial choice nor their repeat purchase decision (for four of the brands). Thus, this amenity appears to offer a low ROI. We caution, however, that these one-year results might not be indicative of the long-term financial return on fitness centers. Instead, it might be more realistic to apply longer time horizons when computing ROI for fitness centers. For example, with an infinite time horizon we find that the internal rate of return for a fitness center was greater than 20 percent for three of the brands.\(^5\)

**The Power of Water**

Given that two of the company’s brands had recently introduced free in-room bottled water, we could use them as the basis of a natural experiment to test the effects of offering this amenity, by comparing revenue changes for properties that began offering the water with other, comparable hotels that did not introduce in-room bottled water, which acted as controls. We compared monthly revenue from the one-year period that predated the introduction of the bottled water amenity with monthly revenue from the one-year period following its introduction for properties that offered water and for properties that did not do so. The properties that offered the free bottled water enjoyed a significantly higher increase in revenue for the year following the introduction when compared with the control properties.

**Practical Implications**

Based on our analysis of this company’s revenues and costs for offering these amenities, we see that the ROI varies by amenity and by brand. We note the value of distinguishing between the effects of bottled water on returning guests and the attraction of free internet for first time guests. This finding about free wi-fi would be of particular interest, for instance, to a company that derives a large proportion of revenues from first-time visitors.

Our survey did not examine why bottled water has such an effect on returning guests (while in-room internet doesn’t), but one possible explanation is that some amenities are easier for prospective customers to envision prior to actually using them. Guests might be better able to predict whether they will want to use internet service, for example, while the bottled water might be a pleasant and memorable surprise.

Cost is a key factor in the ROI equation. One reason that offering bottled water yielded a higher ROI than a fitness center during the year of our study is the wide difference in installation costs.

---


\(^6\) Please refer to our *Journal of Marketing Research* paper for complete equations and technical results. See: Hamilton *et al.*, *op. cit.*
costs. While both bottled water and fitness center amenities have small positive effects on return visits, the cost of the fitness center drags down its ROI, at least in the short-term. In-room internet access generates a high ROI across these brands primarily due to its positive effects on initial choice, but it also involves relatively low costs. Given its effect of attracting new guests, we expect free internet service in hotel rooms—which most readers will observe is scarcer as you move up the segment scale—to become standard at upper upscale and luxury properties.7

Additionally, we found that the effects of a particular amenity can vary widely across hotel brands, even within the same segment. The best explanation for this difference lies in the brands’ relative revenues from new customers as compared with existing customers and differences in the annual revenue per guest, which can be 20 percent higher at some brands than others.

Our natural experiment examining the introduction of bottled water suggests that a hotel that adds free in-room bottled water as an amenity can expect to realize gains in revenues and profits for at least the first year. This field test validates our model’s capacity to generate predictions that are consistent with guests’ response to adding this amenity.

Overestimating use. Finally, we highlight a finding of considerable interest. Our data show that guests overestimated their projected use of most of the fifty amenities we measured. This is an important finding, given the cost of providing many of these amenities. The high expense and low use of fitness centers, for instance, may be motivating the trend for hotels to develop access agreements with fitness centers located near the hotel, outsourcing their fitness centers, or offering in-room fitness equipment on demand, rather than installing in-house fitness centers.8 From a practical perspective, this finding underscores the importance of observing guests’ actual use of amenities before deciding to make them standard rather than relying only on surveys of guests’ desire for and intent to use the amenities.

In conclusion, we believe this study provides a useful framework for analyzing the value of offering specific amenities. Clearly, some amenities strike a chord with either potential or returning guests. By subjecting amenities to a return-on-investment analysis, brand managers and hotel owners alike can make effective determinations of which amenities offer the greatest return both in terms of attracting first-time guests and driving repeat business. ■

7 Our study suggests that it is more profitable to provide free in-room internet access than to provide none at all, but we did not consider whether charging a fee—which has been common at upper-scale hotels—might drive profits even higher.

2017 Reports
Vol. 17 No. 1 The Future of Hotel Revenue Management, by Sheryl E. Kimes, Ph.D.

Vol. 17 No. 2 When Rules Are Made to Be Broken: The Case of Sexual Harassment Law, by David Sherwyn, J.D., Nicholas F. Menillo, J.D., and Zev J. Eigen, J.D.

2017 CREF Cornell Hotel Indices

2016 Reports
Vol. 16 No. 28 The Role of REIT Preferred and Common Stock in Diversified Portfolios, by Walter I. Boudry, Ph.D., Jan A. de Roos, Ph.D., and Andrey D. Ukhov, Ph.D.

Vol. 16 No. 27 Do You Look Like Me? How Bias Affects Affirmative Action in Hiring, by Ozias Moore, Ph.D., Alex M. Susskind, Ph.D., and Beth Livingston, Ph.D.

Vol. 16 No. 26 The Effect of Rise in Interest Rates on Hotel Capitalization Rates, by John B. Corgel, Ph.D.

Vol. 16 No. 25 High-Tech, High Touch: Highlights from the 2016 Entrepreneurship Roundtable, by Mona Anita K. Olsen, Ph.D.

Vol. 16 No. 24 Differential Evolution: A Tool for Global Optimization, by Andrey D. Ukhov, Ph.D.

Vol. 16 No. 23 Short-term Trading in Long-term Funds: Implications for Hospitality Financial Managers, by Pamela C. Moulton, Ph.D.

Vol. 16 No. 22 The Influence of Table Top Technology in Full-service Restaurants, by Alex M. Susskind, Ph.D., and Benjamin Curry, Ph.D.

Vol. 16 No. 21 FRESH: A Food-service Sustainability Rating for Hospitality Sector Events, by Sanaa I. Pirani, Ph.D., Hassan A. Arafat, Ph.D., and Gary M. Thompson, Ph.D.

Vol. 16 No. 20 Instructions for the Early Bird & Night Owl Evaluation Tool (EBNOET) v2015, by Gary M. Thompson, Ph.D.

Vol. 16 No. 19 Experimental Evidence that Retaliation Claims Are Unlike Other Employment Discrimination Claims, by David Sherwyn, J.D., and Zev J. Eigen, J.D.

Vol. 16 No. 18 CIHLER Roundtable: Dealing with Shifting Labor Employment Sands, by David Sherwyn, J.D.

Vol. 16 No. 17 Highlights from the 2016 Sustainable and Social Entrepreneurship Enterprises Roundtable, by Jeanne Varney

Vol. 16 No. 16 Hotel Sustainability Benchmarking Index 2016: Energy, Water, and Carbon, by Eric Ricaurte

Vol. 16 No. 15 Hotel Profit Implications from Rising Wages and Inflation in the U.S., by Jack Corgel, Ph.D.

Vol. 16 No. 14 The Business Case for (and Against) Restaurant Tipping, by Michael Lynn, Ph.D.

Vol. 16 No. 13 The Changing Relationship between Supervisors and Subordinates: How Managing This Relationship Evolves over Time, by Michael Sturman, Ph.D. and Sanghee Park, Ph.D.

Vol. 16 No. 12 Environmental Implications of Hotel Growth in China: Integrating Sustainability with Hotel Development, by Gert Noordzy, Eric Ricaurte, Georgette James, and Meng Wu

Vol. 16 No. 11 The International Hotel Management Agreement: Origins, Evolution, and Status, by Michael Evanoff

Vol. 16 No. 10 Performance Impact of Socially Engaging with Consumers, by Chris Anderson, Ph.D., and Saram Han

Vol. 16 No. 9 Fitting Restaurant Service Style to Brand Image for Greater Customer Satisfaction, by Michael Giebelhausen, Ph.D., Evelyn Chan, and Nancy J. Sirianni, Ph.D.

Vol. 16 No. 8 Revenue Management in Restaurants: Unbundling Pricing for Reservations from the Core Service, by Sheryl Kimes, Ph.D., and Jochen Wirtz, Ph.D.

Vol. 16 No. 7 Instructions for the Food Preparation Scheduling Tool v2015, by Gary Thompson, Ph.D.

Vol. 16 No. 6 Compendium 2016

Vol. 16 No. 5 Executive Insights on Leader Integrity: The Credibility Challenge, by Tony Simons, Ph.D., with Kurt Schnaubelt, John Longstreet, Michele Sarkisian, Heather Allen, and Charles Feltman

Vol. 16 No. 4 Authenticity in Scaling the Vision: Defining Boundaries in the Food and Beverage Entrepreneurship Development Cycle, by Mona Anita K. Olsen, Ph.D., and Cheryl Stanley

Vol. 16 No. 3 Communication Planning: A Template for Organizational Change, by Amy Newman