How Product Quality Drives Profitability: The Experience at Holiday Inn

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Abstract
Quality-management gurus have always assumed that maintaining product quality would improve profitability. It turns out that they are correct.

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How Product Quality Drives Profitability

The Experience at Holiday Inn

Quality-management gurus have always assumed that maintaining product quality would improve profitability. It turns out that they are correct.

BY SHERYL E. KIMES

Quality has long been a mantra of the U.S. lodging industry. Countless hotel properties have spent time and money on quality assurance, benchmarking, assessing the cost of error, continuous improvement, and total quality management—among other quality-related programs and tactics. Most quality-assurance endeavors, however, seemed to assume that quality management is inherently worthwhile or presumed that quality would necessarily improve profitability. Few, however, offered direct evidence to support a relationship between improved quality and enhanced profitability. Indeed, with the arcane processes of quality circles and analyses of cost of quality and cost of error, one could argue that quality assurance as it developed in the late 1980s could become a process so tangled and expensive that one would be hard-pressed to show its financial benefits.

The idea that revenue is bolstered by product quality is inherently logical, however. This article seeks to establish a connection between quality management and financial success. The study on which this article is based analyzed three years of quality and operational-performance data from 1,135 franchised Holiday Inn hotels to determine the relationship between product quality and operational performance. After a review of relevant literature, this article describes the Holiday Inn study, provides an analysis of the relationship between quality and operational performance, and discusses managerial implications.

The Quality Premium

Although most quality-management articles did not seek to establish how quality improvement would enhance revenues, such research does exist. Research on the relationship between quality and financial performance began in the 1970s with studies on the Profit Impact of Marketing Strategies (PIMS). The PIMS researchers studied the effects of various marketing strategies on financial performance at over 500 corporations and found a strong link between perceived product or service quality and financial indicators.2 Financial performance is affected by higher quality in two ways: (1) firms can charge


a premium price and (2) firms can increase mar- 
ket share. Although quality does not always have 
direct impact on return on investment (ROI), the 
increase on market share may indirectly in-
fluence ROI.\(^5\)

Although researchers have found strong links among financial performance, product and 
service quality, and customer satisfaction at the cor-
porate level, no one has addressed the link be-
tween financial performance and quality at the 
property level. The research described here ad-
dressed this matter by examining the relation-
ship between product quality and operational 
performance at hotels franchised by Holiday Inn 
Worldwide.

Studying Performance

Holiday Inn Worldwide franchises or manages 
over 1,500 properties in the United States and 
Canada. Most, over 1,200 hotels, are franchised, 
and those properties form the basis of this study. 
Holiday Inn Worldwide maintained data on the 
operational and quality performance of all ho-

tels and provided three years of data (February 
1990–January 1993) for this study. To study the 
link between quality and performance, I devel-
oped definitions of product or service quality and 
operational performance.

Quality, defined. Hotels typically measure 
quality through inspections and with customer-
satisfaction data. Inspections are usually con-
ducted by the company itself, although some 
firms also use external inspection services. Holi-
day Inn Worldwide’s own inspectors conducted 
regular quality-assurance inspections of hotels in 
its system during the study period. The results 
from the quality-assurance inspections were used 
as the indicator of product quality.

The chain’s quality-assurance reports covered 
19 different areas in the following four catego-
ries: rules of operation (4 areas), commercial fa-
cilities (10 areas), guest rooms (2 areas), and ser-
vice (3 areas). Each area typically consists of 10 
to 12 individual items on which the property 
could be rated as passing or failing. The number 
of deficiencies in each area determined whether 
a hotel passed or failed its inspection.

Trained Holiday Inn quality auditors conduct 
semi-annual inspections. The company conducts 
regular training sessions for its inspectors to en-
sure consistency and moves inspectors to differ-
ent regions every few years to reduce the possi-
bility of bias. Inspections are not announced, and 
inspectors would typically spend a day perform-
ing the audit. Hotels receive reports detailing the 
results of the audit and are given an overall rat-
ing of acceptable, marginal, or unacceptable.

RevPAR rating. The study gauged operating 
performance using revenue per available room 
(RevPAR) because that statistic reflects perform-
cence in both occupancy and rate. The RevPAR 
figures were normalized, however, using a mar-
ket index. While RevPAR is a valuable perfor-
ance measure, it does not reflect differences in 
local conditions that affect hotel occupancy and 
drive ADR. For example, hotels in high-price 
areas tend to have a much higher RevPAR than 
hotels in low-price areas. To account for this 
weakness, a market index for each hotel was de-
veloped using competitive data obtained from 
Smith Travel Accommodations Reports (STAR 
Reports).

Holiday Inn hotels subscribed to the STAR 
Reports to obtain individual revenue reports for 
each of its United States and Canadian pro-

terties. The STAR Reports were used to calculate 
the RevPAR for the immediate mid-scale com-
petitors for each Holiday Inn property. This in-
formation was then used to develop a market 
index so that the RevPAR for various properties 
could be compared.

The first step in developing the market index 
was to find the national RevPAR average of all 
the competitive properties. Next, I developed a 
market index for each Holiday Inn hotel by di-
viding the RevPAR of the immediate mid-scale 
competition by the average national RevPAR. I 
used a market index of 1.0 as the dividing line 
between high-price areas and low-price areas. For 
example, hotels in the San Francisco Bay area had 
market indices over 1.4 while hotels in rural Ar-
kansas had market indices below 0.8. I then di-
vided each Holiday Inn hotel’s RevPAR by its 
market index to develop a market-adjusted 
RevPAR, which could be compared against the 
market-adjusted RevPARs of the other Holiday 
Inn properties.

The analysis comprised a total of 1,135 fran-
chised hotels that were in operation at the be-

ginning of 1990. The study excluded terminated 
hotels, company-owned and -managed hotels, 
and hotels with incomplete data. The analysis was 
conducted using six-month intervals from Fe-

bruary 1990 through January 1993. (That is, in-
trvals began in February 1990, August 1990, 
February 1991, August 1991, February 1992, and

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\(^5\) Phillips, et al.
August 1992.) The number of defects in each area for each subject hotel came from the most recent quality-assurance report for each test interval. The market-adjusted RevPAR for each of the subject properties was calculated from financial data for the six months prior to and the six months after each test date.

Analysis of the Quality-assurance Reports
The study chiefly analyzed each quality-assurance report’s rating of the hotels’ physical facilities. That included common facilities (i.e., lobby, public restrooms, dining facilities, lounge facilities, corridors, recreation area, meeting area, kitchen, exterior, back-of-house) and guest rooms (i.e., guest room and guest bath). The study did not look at rules of operation (because of their administrative nature) or at service issues (because service aspects were rarely cited as deficiencies).

To develop a quality gauge, I calculated both the total number of items a given property failed and the total number of items failed in each area (see Exhibit 1).

Defects by area. If a hotel failed at least one item in a particular area, I considered it to be defective in that area. I compared the average market-adjusted RevPAR for hotels that were not defective in each given area against the average market-adjusted RevPAR for hotels that were defective in that area. I repeated this analysis for each of the 12 areas studied. I then tested to see whether the market-adjusted RevPAR differences were statistically significant.

Costly defects. As shown in Exhibit 2, having even a single defect seemed to cost the hotels money. For example, in February 1990, hotels with at least one defect in the exterior had a RevPAR of $3.12 less than hotels with no defects in the exterior. Hotels with at least one defect in the guest room had a RevPAR of $2.01 less than hotels with no defects in the guest room. Hotels with at least one defect in the guest bath had a RevPAR of $1.32 less than hotels with no defects in the guest bath.

Three areas consistently showed a statistically significant effect on RevPAR. Hotels with at least one defect in the exterior, the guest room, and the guest bath within six months of February 1990 were defined as deficient hotels, while the properties that did not have defects in all three of those areas during the same period were termed not-deficient hotels. I used the quality-assurance report issued nearest to February 1990 because it gave a snapshot of the condition of the hotels at the beginning of the study.

Based on this definition, 607 hotels comprising nearly 105,000 rooms were classified as deficient, and 528 hotels were classified as not-deficient. I calculated and compared the average market-adjusted RevPARs for deficient hotels and not-deficient hotels to test for statistically significant differences. I then repeated the analysis with the same set of hotels for each of the six-month periods outlined above. To be clear, even if the deficient hotels were later found to have corrected their deficiencies, they remained in their original group.

Lost ground. The RevPAR for the deficient hotels was consistently lower than that of the not-deficient hotels for all six test periods. On average, the deficient hotels had a RevPAR nearly $3 less than not-deficient hotels. That average is cal-

### Exhibit 2

<table>
<thead>
<tr>
<th>Common areas</th>
<th>2/90</th>
<th>8/90</th>
<th>2/91</th>
<th>8/91</th>
<th>2/92</th>
<th>8/92</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lobby</td>
<td>$0.66</td>
<td>$0.46</td>
<td>$1.55*</td>
<td>$1.36*</td>
<td>$1.25*</td>
<td>$0.97</td>
</tr>
<tr>
<td>Public restroom</td>
<td>$0.49</td>
<td>$0.26</td>
<td>$1.62*</td>
<td>$1.00*</td>
<td>$0.45</td>
<td>$0.47</td>
</tr>
<tr>
<td>Dining</td>
<td>$0.54</td>
<td>$0.43</td>
<td>$1.23*</td>
<td>$0.80</td>
<td>$0.72</td>
<td>$0.79</td>
</tr>
<tr>
<td>Lounge</td>
<td>$0.33</td>
<td>$0.64</td>
<td>$0.13</td>
<td>$0.07</td>
<td>$0.15</td>
<td>$0.02</td>
</tr>
<tr>
<td>Corridors</td>
<td>$0.03</td>
<td>-$0.27</td>
<td>$0.23</td>
<td>$0.01</td>
<td>-$1.00*</td>
<td>-$1.05*</td>
</tr>
<tr>
<td>Recreation</td>
<td>$0.82</td>
<td>$0.15</td>
<td>$0.67</td>
<td>$0.62</td>
<td>$0.61</td>
<td>$0.37</td>
</tr>
<tr>
<td>Meeting</td>
<td>-$0.31</td>
<td>$0.20</td>
<td>$0.10</td>
<td>$0.01</td>
<td>$0.32</td>
<td>$0.02</td>
</tr>
<tr>
<td>Kitchen</td>
<td>$0.97*</td>
<td>$0.20</td>
<td>$1.63*</td>
<td>$0.98*</td>
<td>$0.19</td>
<td>-$0.23</td>
</tr>
<tr>
<td>Exterior</td>
<td>$3.12*</td>
<td>$2.11*</td>
<td>$3.13*</td>
<td>$2.87*</td>
<td>$2.59*</td>
<td>$2.21*</td>
</tr>
<tr>
<td>Back-of-house</td>
<td>$0.17</td>
<td>$0.50</td>
<td>$0.34</td>
<td>$0.39</td>
<td>$1.23*</td>
<td>$0.97</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guest room</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Guest room</td>
<td>$2.01*</td>
<td>$0.85</td>
<td>$2.04*</td>
<td>$1.53*</td>
<td>$1.35*</td>
<td>$1.27*</td>
</tr>
<tr>
<td>Guest bath</td>
<td>$1.32*</td>
<td>$1.00*</td>
<td>$1.51*</td>
<td>$2.16*</td>
<td>$1.65*</td>
<td>$1.23*</td>
</tr>
</tbody>
</table>

* Significant at p < .05 level.
MARKETING

PRODUCT QUALITY AND PROFITS

Actual RevPAR differences between deficient and not-deficient hotels

<table>
<thead>
<tr>
<th>Beginning date</th>
<th>Market-adjusted RevPAR difference</th>
<th>Market index</th>
<th>Actual RevPAR difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 1990</td>
<td>$2.78</td>
<td>0.967</td>
<td>$2.69</td>
</tr>
<tr>
<td>August 1990</td>
<td>$2.93</td>
<td>0.967</td>
<td>$2.83</td>
</tr>
<tr>
<td>February 1991</td>
<td>$3.12</td>
<td>0.968</td>
<td>$3.02</td>
</tr>
<tr>
<td>August 1991</td>
<td>$3.02</td>
<td>0.968</td>
<td>$2.92</td>
</tr>
<tr>
<td>February 1992</td>
<td>$3.06</td>
<td>0.966</td>
<td>$2.96</td>
</tr>
<tr>
<td>August 1992</td>
<td>$2.95</td>
<td>0.968</td>
<td>$2.86</td>
</tr>
</tbody>
</table>

Note: Figures are calculated for the six-month period following each date.

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More losses. The above calculation does not include lost revenues for the individual hotels. That figure is the product of the daily RevPAR differential (on average, $2.80 per day), the number of rooms (on average, 200 rooms), and the number of days in a year. Based on this, the revenue loss for the average deficient hotel would be about $560 per day, or about $204,400 per year.

Defects Cost Money

This study demonstrates a direct relationship between product quality and an operation’s financial performance, when product quality is gauged by the level of facility defects. Moreover, the study indicates that defects in the exterior, the guest room, and the guest bath are critical, while problems in other areas of the hotel, such as the lounge, the recreation facilities, and the meeting space did not have a significant effect on RevPAR. Even worse, the hotels recorded the greatest number of defects in the three critical areas. To repeat, the defective hotels in my sample recorded a RevPAR of approximately $2.80 less than hotels that did not have defects. This difference was consistent over time and represents an annual revenue shortfall of approximately $200,000 per deficient hotel. The study also indicates where hotels might best invest their capital-improvement and maintenance funds. What seems to count is the exterior, the guest rooms, and the guest bath.