CUSTOMER SATISFACTION

Take Action On Customer Satisfaction

by **Gwen Fontenot, Lucy Henke and Kerry Carson**

S ince the mid-1980s, when quality management became a widely practiced way to improve product quality, reduce costs and improve customer service, the issue of customer

In 50 Words Or Less

• Measuring customer satisfaction is important in improving business operations.

• Four common measurement techniques include satisfaction-only, gap analysis, the importance-satisfaction model and the multiplicative approach.

• When establishing priorities for action, management should use multiple techniques.

satisfaction measurement has brought about a great deal of ongoing debate.[1,2] The creation of the Malcolm Baldrige National Quality Award and the significance of customer satisfaction measurement to the quality management process further solidified the need for measuring company performance from the customers' perspective.[3]
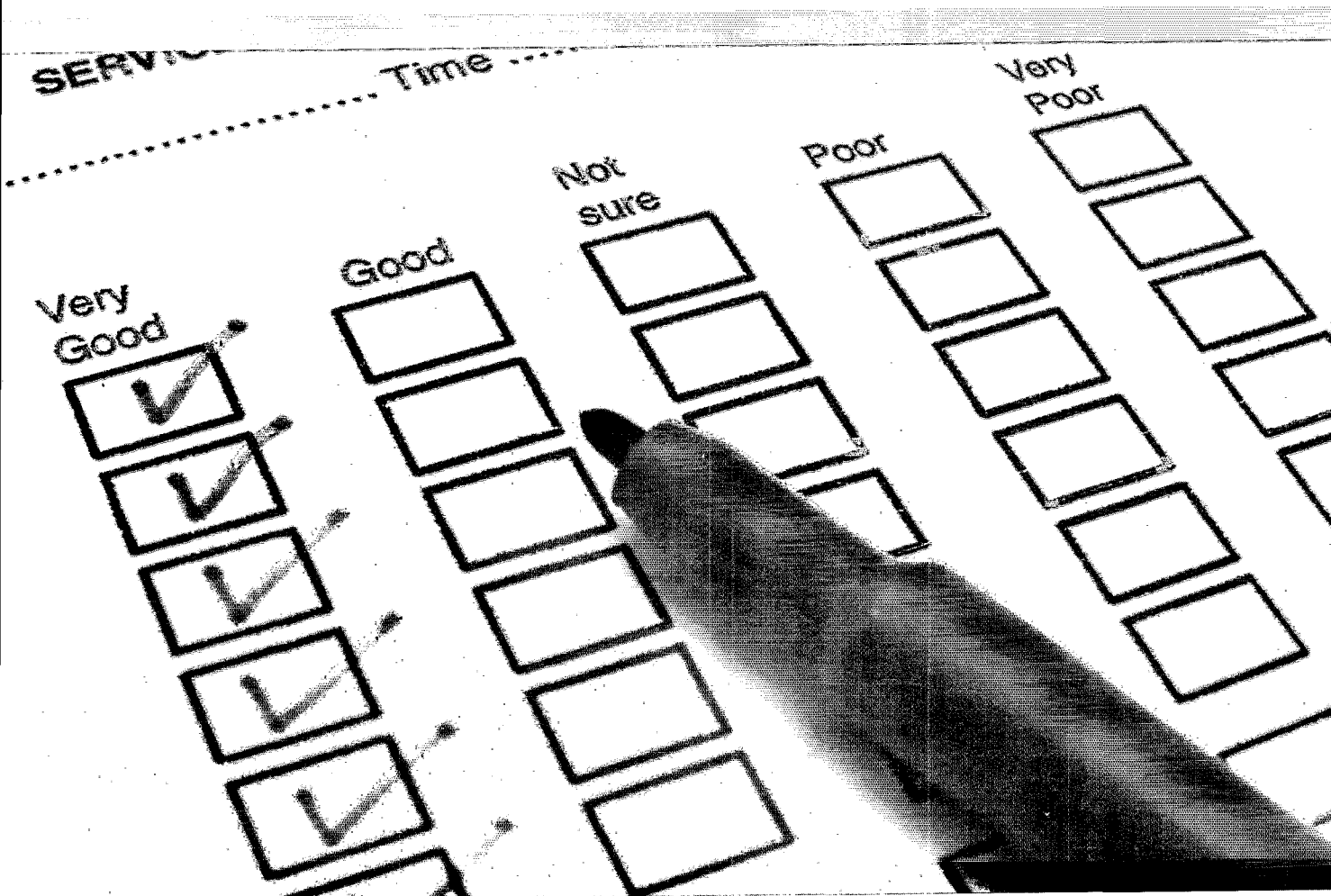
Not only have managers sought to determine their company's level of performance as perceived by their customers, but they have also used customer satisfaction research to guide their decisions as to where to make improvements within their company. Using the analytical results of customer satisfaction evaluation, businesses strive to meet or exceed customers' requirements, which they expect will result in higher customer satisfaction.[4,5]

Four Techniques

Which data gathering and analysis techniques are most effective? Researchers and practitioners have developed and studied various methods to determine which would provide management

with the best information from which to make such decisions.

While the American and European customer satisfaction indexes are commonly used metrics,[6,7] they serve as report cards or benchmarks rather than tools to identify areas for improvement. At the completion of a customer satisfaction study, management wants to know more than how the company scored. It wants to know what it needs to do to improve the company's score or satisfaction index and, ultimately, the company's bottom line. The models discussed here include those commonly used not only to obtain a measure of customer satisfaction but also to help management identify the actions it needs to take to improve business.

Satisfaction-only: Most customer satisfaction surveys ask respondents to indicate how well the organization performs on a series of attributes using a seven-point Likert scale, in which one equals totally dissatisfied and seven equals totally delighted. (A five-point scale is also common.) The mean scores on each attribute are computed, and those items that have the lowest satisfaction rating are deemed the ones that need to be improved. Because this method does not take into account the importance of the attributes to the customer, management does not have any data that can help it prioritize actions or break ties in satisfaction scores.

Gap analysis: Gap analyses take the investigation one step further by computing the discrepancy between each respondent's importance score and satisfaction score.[8] The importance score is also measured on a Likert scale, except this time one equals not important at all and seven equals very important. This method of analysis alleges importance is a surrogate measure for the customer's expectation of what the company's performance should be on each attribute. Attributes with the greatest gaps are then tagged for improvement.

To be most effective, however, the attributes should also be ranked by importance rather than simply using the gap as a method of prioritizing. For example, an attribute with an importance rating of 6.2, a satisfaction rating of 5.0 and a gap of

1.2 should receive higher priority for action than an attribute with the same gap but an importance rating of 4.5 and a satisfaction rating of 3.3.

Attributes with the same or similar gap are not necessarily of equal importance to customers and would not have the same impact on customer satisfaction. Attributes with higher importance should be given priority for action when gap levels on various attributes are the same or close.

Importance-satisfaction (I-S) model: Similar to the gap analysis, the I-S model uses a quadrant map to identify areas for improvement by comparing the satisfaction level and importance of the various attributes measured. It emphasizes the value of knowing which attributes customers consider most important in addition to those in which the business is performing poorly.[9, 10, 11]

Unlike the gap analysis, which examines the discrepancy between importance and satisfaction, the I-S model examines the relationship between the two. Priorities for action are determined using a graphic depiction rather than a computed numeric value, and items with high importance and low satisfaction receive the highest priority for action.

The goal is to find the attributes located in quadrant two—improve (see Figure 1). If several attributes are located in this quadrant, and the company does not have the resources to improve them all, it should prioritize the attributes by focusing on those with the higher degree of importance and the lower satisfaction level.
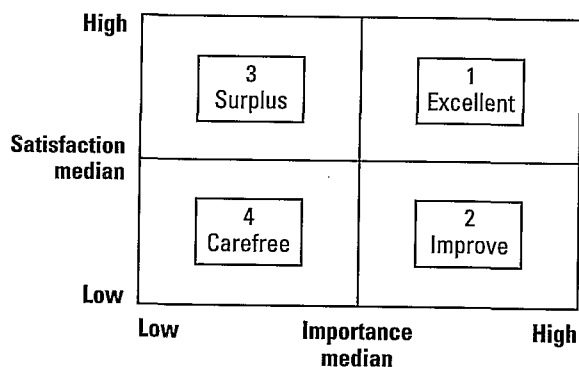
FIGURE 1 Importance/Satisfaction Model

TABLE 1 Importance And Satisfaction Ratings

Attribute	Importance	Satisfaction
Has knowledgeable customer service personnel.	6.44	5.87
Makes it easy to place initial order.	6.30	6.13
Has acceptable order to delivery lead time.	6.28	5.88
Has competitive prices for products offered.	6.17	5.39
Provides checks with clean perforations.	6.17	5.46
Has competitive prices for services offered.	6.01	5.48
Provides sufficient number of checks per book.	5.92	5.94
Has a toll-free order/reorder telephone number.	5.39	5.15
Provides regularly updated products.	4.92	5.34
Offers variety of designs.	3.92	4.87

Note: Attributes are listed in descending order of importance.

TABLE 2 Areas of Improvement Based On Satisfaction Ratings

Attribute	Satisfaction	Importance
Offers variety of designs.	4.87	3.92
Has a toll-free order/reorder telephone number.	5.15	5.39
Provides regularly updated products.	5.34	4.92
Has competitive prices for products offered.	5.39	6.17
Provides checks with clean perforations.	5.46	6.17
Has competitive prices for services offered.	5.48	6.01
Has knowledgeable customer service personnel.	5.87	6.44
Has acceptable order to delivery lead time.	5.88	6.28
Provides sufficent number of checks per book.	5.94	5.92
Makes it easy to place initial order.	6.13	6.30

Note: Attributes are listed in order of priority for action.

Multiplicative approach: The multiplicative approach uses importance as a weighting variable and eliminates the assertion that importance is a surrogate for the customer's expectation of the company's performance.[12] The difference between the highest possible satisfaction rating (totally delighted) and the customer's perception of the company's performance (satisfaction rating) is computed to obtain a dissatisfaction score. The dissatisfaction score is then weighted according to the importance score.

The weighted dissatisfaction score is used to prioritize areas for improvement. Attributes are ranked in descending order by the weighted dissatisfaction score. Again, in the event of a tie in the computed value, the attributes should be ranked by importance to determine which should have priority for action.

Put to the Test

To determine which technique gives management the best information with which to make improvement decisions, we conducted a national mail survey of individuals with personal checking accounts. We purchased a random list of 1,000 individuals in the United States more than 18 years of age from a mailing list company. An additional list of 1,000 individuals who purchased their checks from a leading U.S. check printer was randomly drawn from a check printer's customer database.

All 2,000 individuals received a professionally printed survey booklet, a cover letter, a postage paid return envelope and the assurance their responses would be kept confidential. In the end, 216 of the completed surveys were usable, accounting for a 10.8% response rate.

The respondents were first asked to indicate how important each attribute was in their decision to purchase checks from one check printer over another. They were then asked to indicate how satisfied they were with their current check printer. A seven-point rating scale was used to measure both the importance and satisfaction responses. An importance rating of one represented "not important at all" and seven represented "very important." A satisfaction rating of one represented "totally dissatisfied" and seven represented "totally delighted."

Importance and satisfaction responses were elicited for 41 attributes relative to product quality, service quality, pricing, customer service personnel

TABLE 3 — Areas of Improvement Based on Gap Analysis

Attribute	Gap	Importance
Has competitive prices for products offered.	0.78	6.17
Provides checks with clean perforations.	0.71	6.17
Has knowledgeable customer service personnel.	0.57	6.44
Has competitive prices for services offered.	0.53	6.01
Has acceptable order to delivery lead time.	0.40	6.28
Has a toll-free order/reorder telephone number.	0.24	5.39
Makes it easy to place initial order.	0.17	6.30
Provides sufficient number of checks per book.	-0.02	5.92
Provides regularly updated products.	-0.42	4.92
Offers variety of designs.	-0.95	3.92

Note: Attributes are listed in order of priority for action.

and assortment of products and services offered. Ten of these attributes were selected at random to illustrate the prioritization of areas of improvement using the four main analysis techniques.

Results

The mean importance and satisfaction ratings of the 10 attributes shown in Table 1 reveal the customers' satisfaction levels are fairly similar, but some attributes are significantly more important than others.

Satisfaction-only: When reviewing the satisfaction ratings, it's obvious customers are the least satisfied with the variety of check designs offered by their check printers and the most satisfied with the ease with which they can place initial orders. Table 2 reveals the order in which attributes should be addressed when using only the satisfaction ratings to prioritize actions for improvement. Using this method, management clearly should increase the variety of designs offered to consumers.

FIGURE 2 Areas of Improvement Based on the Importance-Satisfaction Model
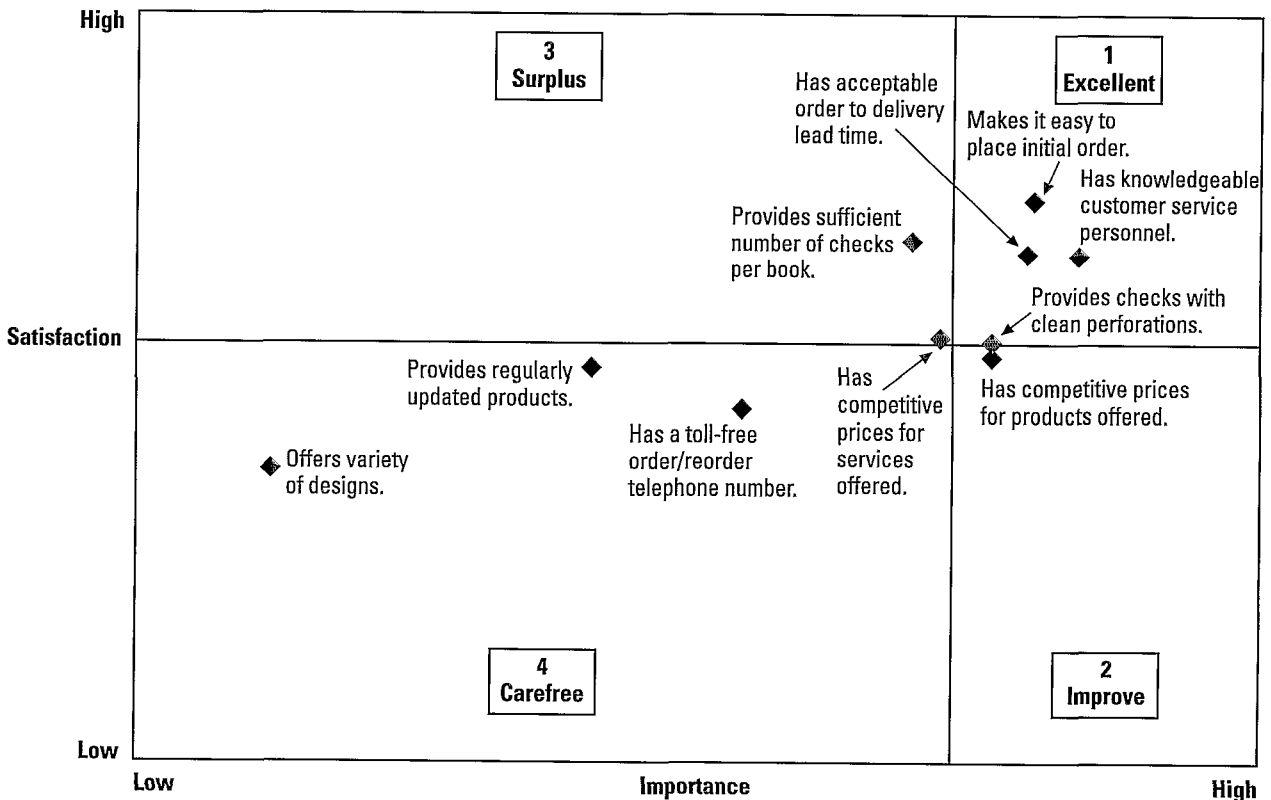
The other attributes that should be addressed include providing a toll-free order/reorder telephone number, being proactive in introducing updated products and ensuring the product prices are competitive. However, all satisfaction ratings were very close, with the lowest rating being 4.87 and the highest 6.13. The eight attributes between the highest and lowest varied by only a difference of 0.79 points on a seven-point scale.

Gap analysis: The gap analysis, which takes importance into account, reveals the attribute with the highest priority using the satisfaction ratings should be the last of the 10 areas to improve. As shown in Table 3 (p. 43), some of the gaps between the various attributes are very close, making it difficult to determine which should be addressed first. However, in this case, the importance scores can be used to further assist management in prioritizing attributes.

Based on the gap analysis, management should concentrate on product pricing, perforations and customer service personnel training. This analysis also shows the gaps for "provides regularly updated products" and "offers variety of designs" are negative, indicating the average satisfaction rating is higher than the average importance score. This suggests management could possibly cut back in these areas rather than work to improve them, as was indicated by the satisfaction-only method.

I-S model: The I-S model in Figure 2 reveals check printers should first focus on providing competitive product prices and then on providing checks with clean perforations. The axes in the chart indicate the median importance and satisfaction ratings for all attributes. Attributes falling to the right of the importance mean rating and below the performance or satisfaction mean rating—those in the

"improve" quadrant—should·be addressed first.

Management should also focus on maintaining the level of performance for those attributes in the "excellent" quadrant. This means, in addition to offering competitive product pricing, management should provide checks with clean perforations, customer service personnel training, quick delivery from the time the order is placed and systems to make it easy to place initial orders.

Multiplicative approach: According to the multiplicative approach (see Table 4), management should focus on providing a toll-free order/reorder telephone number, offering competitive product prices, providing clean perforations on checks and offering competitive service prices.

The results of this approach show a clear delineation between the sixth (provides regularly updated products) and seventh (customer service personnel are knowledgeable) attributes. The sixth attribute has a multiplicative score of 8.17, a satisfaction rating of 5.34, a dissatisfaction rating of 1.66 and an importance score of 4.92. The sev-

(TABLE 4) **Areas of Improvement Based On the Multiplicative Model**

Attribute	Multiplicative	Importance
Has a toll-free order/reorder telephone number.	9.97	5.39
Has competitive prices for products offered.	9.93	6.17
Provides checks with clean perforations.	9.50	6.17
Has competitive prices for services offered.	9.14	6.01
Offers variety of designs.	8.35	3.92
Provides regularly updated products.	8.17	4.92
Has knowledgeable customer service personnel.	7.28	6.44
Has acceptable order to delivery lead time.	7.03	6.28
Provides sufficient number of of checks per book.	6.28	5.92
Makes it easy to place initial order.	5.48	6.30

Note: Attributes are listed in order of priority for action.

(TABLE 5) **Comparison of Priorities for Action Based on Technique Used**

Attribute	Order of priority for action to improve customer satisfaction			
	Satisfaction	Gap	I-S	Multiplicative
Has competitive prices for products offered.	4	1	1	2
Provides checks with clean perforations.	5	2	2	3
Has knowledgeable customer service personnel.	7	3	3	7
Has competitive prices for services offered.	6	4	6	4
Has acceptable order to delivery lead time.	8	5	4	8
Has a toll-free order/reorder telephone number.	2	6	8	1
Makes it easy to place initial order.	10	7	5	10
Provides sufficient number of checks per book.	9	8	7	9
Provides regularly updated products.	3	9	9	6
Offers variety of designs.	1	10	10	5

I-S = importance-satisfaction.

enth ranked attribute has a multiplicative score of 7.28, a satisfaction rating of 5.87, a dissatisfaction rating of 1.13 and an importance rating of 6.44. Using these two attributes as examples, it is easy to see this method provides a more comprehensive approach.

Comparison of Techniques

A comparison of the ranked priorities for action for each of the four approaches discussed (see Table 5) reveals varying results are obtained from each of the techniques. For example, the attribute ranked sixth using the multiplicative approach—provides regularly updated products—ranked third in priority for action when using the satisfaction-only technique and ninth when using gap analysis.

However, some consistencies among the techniques exist. Offering competitive prices on products is the first item of priority when using both the gap analysis and the I-S model and is the second

item of priority when using the multiplicative approach. Providing a toll-free order/reorder telephone number is the first and second item of priority when using the multiplicative approach and satisfaction ratings, respectively, but it is lower in priority when using gap analysis and the I-S model than is providing clean perforations, which is ranked second with both the gap analysis and the multiplicative approach. Regardless of the order or the technique used, these attributes appear to be the three that require the most attention.

Customer satisfaction measurement can help management decide which direction to take to improve its company's performance.

Similarly, of these 10 attributes, the three that require the least amount of attention are fairly consistent regardless of technique. Again, the rank order varies with the different approaches, but it appears management needs not place as much emphasis on updating products, making it easy for consumers to place initial orders or providing a sufficient number of checks per book. However, the importance of each of these attributes should not be ignored.

The rank order is the relative position of these attributes when compared to the other attributes studied. These attributes may appear to need less attention because they are not as important as others or because the company is perceived to be performing well in those areas. If the latter is the case, a lack of attention to these areas could result in poor performance in the future and have a significant impact on the consumers' satisfaction and, ultimately, the company's market share or profitability.

Customer satisfaction measurement can help management decide which direction to take to

improve its company's performance. However, the data must be carefully analyzed so critical mistakes aren't made.

This comparison of techniques emphasizes the significance of measuring importance when evaluating customer satisfaction and, consequently, the potential problems that may arise when using only satisfaction ratings to determine areas for improvement. Because notable differences emerge when using the various techniques, management should use a combination of techniques when prioritizing actions to be taken based on customer satisfaction data.

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