A CASE STUDY OF ORGANIZATION-LEVEL CUSTOMER SATISFACTION

Robert A. Westbrook, Rice University

ABSTRACT

Despite ample study of the satisfaction of individual customers, little is yet known about organizational practices with respect to customer satisfaction. To encourage the development of further knowledge, this paper reports a case study of the development and evolution of a customer satisfaction program at a large U.S. solid waste services corporation. The program was based on a sophisticated measurement system, and the implementation of the system is considered in some detail. The results obtained are traced over time to correspond to actions being taken to improve customer satisfaction. The institutional context presented in the case is helpful for identifying a number of interesting issues for future study.

The vast majority of studies in the customer satisfaction/dissatisfaction and complaining behavior (CS/D&CB) literature have focused on understanding customer satisfaction at the level of individual buyers or consumers. In contrast, there has been only very limited study of organizational practices with respect to customer satisfaction, and the evidence available has been limited to customer satisfaction measurement and analysis procedures (Mentzer et al 1995; Sharma et al 1999). There is very little evidence of what organizations actually do to improve customer satisfaction or reduce dissatisfaction (for exceptions, see Menezes 1991; Keiningham et al 1999). Nor is there evidence of the interrelationships between customer satisfaction practices and organizational processes and outcomes. Such inquiry is termed here organization-level customer satisfaction, and it is deserving of study, since it concerns the very application of our knowledge of CS/D&CB.

Given that little is yet known about organization-level customer satisfaction, basic description and discovery are particularly appropriate as objectives for research. Particularly attractive for achieving these objectives is the case study method, defined as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between the phenomenon and context are not clearly evident, and in which multiple sources of evidence are used" (Yin 1994). Case studies are well suited because they integrate such varied sources of evidence as archival records, in-depth personal interviews and participant observation, all over an extended period of time. They have found more use in the organizational behavior and strategic management literatures (e.g. Child et al 2001; Collins and Porras 1994; Haspelagh and Jemison 1991; Marks and Mirvis 1998) than in marketing (for other marketing examples, see Workman 1993; Woodside 1995).

To add to knowledge of organization-level customer satisfaction, this paper reports a case study of the development and evolution of a customer satisfaction measurement program at Browning-Ferris, Inc. (BFI), a leading provider in the North American solid waste industry, over the period 1991-1999. The principal source of evidence for the study was extended participant observation by the author, who served as a technical consultant to the company. The author had wide access throughout the organization on issues relating to customer satisfaction, and relied on a variety of information sources, including meetings, interviews, special events, annual reports, sales literature, internal documents, memoranda and correspondence. The author interviewed corporate officers and staff, managers and employees across all business functions and at all levels of the corporate and field organizations. The following broad questions guided the study:

1. How and where does focus on customer satisfaction begin in an organization?
2. What role does measurement play in a customer satisfaction program?
3. What is needed to implement customer satisfaction in an organization?

4. How does a customer satisfaction program evolve within a company?
5. How do customer satisfaction data come to be effectively used?

Company Background

In 1991, BFI was one of the largest providers of service to the North American solid waste industry, with corporate revenues of $3.1 billion. The solid waste industry is defined as including both privately-owned firms and public organizations that provide four basic services: (1) waste collection at its points of generation, (2) transportation of collected wastes to the disposal sites, (3) processing of wastes to remove recyclables or potential contaminants, and (4) permanent disposal of wastes. The customers served by the industry were commercial and industrial businesses, residential households and municipalities on behalf of their business and residential constituents. Waste disposal is usually accomplished in North American by burying it in specially constructed landfills engineered for groundwater protection, reduction of air emissions, sanitation and aesthetic appearance.

BFI grew spectacularly rapidly by consolidating a highly fragmented industry comprised of thousands of small local trash haulers, as well as the landfills accepting municipal solid waste, into a modern, technologically-able multi-city company. Their consolidation of the industry was fostered by the growing environmental regulation of the 1960's and 1970's that was costly and difficult for small local operators as well as municipalities to meet. Today BFI participates in all segments of the industry; in 1991 it operated 274 solid waste collection districts, 76 landfills, 54 recycleries and various related processing facilities (e.g. tire shredding plants). The collection and transportation segment was the source of 2/3 of BFI's revenue.

The total solid waste market served by BFI was valued at $20.3 billion in 1990, of which collection and transportation was approximately $12 billion, or 60%. The market was expected to grow by 50% by 2010. The disposal segment was expanding more quickly than collection and transportation, however, as large industrial concerns, which had previously buried their own process wastes on site were increasingly relying on vendors to dispose of it in permitted landfills.

The players in the North American waste services industry in 1990 consisted of large national firms such as BFI and Waste Management, smaller national or regional firms, very small local independent haulers, and local municipalities providing their own public waste collection service. Despite the consolidation that had already taken place, most of the providers were still small independent haulers, though they handled less than a third of the total waste volume. Each of the large national firms had market shares in excess of 20%.

BFI, like industry co-leader Waste Management, was a highly decentralized company with an operations-driven, entrepreneurial culture. Its regionally-based field organization performed not only all the business functions, but was also responsible for business development (i.e. acquisitions). Regions were led by BFI vice presidents, who were allowed great discretion in how they operated. The corporate office set goals for revenue and profitability as well as requirements for environmental compliance. District managers who also had considerable management discretion led local collection operations.

Initial Efforts at Customer Satisfaction

BFI had a relatively new CEO in 1991, who came from outside the industry in order to help restore investor and regulator confidence the company following an unsuccessful attempt to enter the hazardous waste business. CEO William Ruckelshaus was known for his integrity and environmental commitment, having previously served as head of the Environmental Protection Agency as well as Deputy Attorney General. His first initiative at BFI was securing full compliance with environmental regulations for the company's operations. In 1991 Ruckelshaus had turned his attention to building customer focus within the organization, which he saw as lacking, yet

necessary for achieving quality service and premium pricing.

As commercial and industrial collection defection rates were rising in 1991, the Customer Satisfaction Council was created to identify means of reducing customer losses. Among its key recommendations was developing a more accurate and comprehensive customer satisfaction measurement system. This was a priority because the existing customer feedback mechanism was crude. The Focus Card program sent a postcard to all customers annually, as well as to all new customers within the first 90 days, asking for ratings of several service attributes. Response rates averaged from 15% to 20%, but it was not known whether the cards reached or were completed by the correct individuals within customer organizations. After data processing, returned cards were forwarded to districts so that appropriate action could be taken with respect to individual customers who had replied. Few districts made use of the tabulated results, but many attempted to follow up with customers giving BFI low ratings or registering complaints.

The Customer Satisfaction Council saw an opportunity to develop an improved customer satisfaction measurement system when they attended a talk by the author in late 1991. The author's presentation critiqued current industry measurement practices and suggested a new approach known as latent variable causal modeling, which would improve the measurement accuracy as well as actionability. Senior management subsequently engaged the author to develop and test such a measurement system for BFI's commercial and industrial solid waste collection customers.

CSI Development

Over 1992-93, a new measurement system for customer satisfaction was developed in conjunction with Market Sciences, a Houston-based market research firm. The focus of the measurements was to be BFI's commercial and industrial customers of its solid waste collection service, who would be randomly sampled within districts and surveyed by telephone using a comprehensive measurement instrument. The survey questionnaire contained some 45 items dealing with overall customer satisfaction, loyalty intentions, and evaluations of BFI service performance on such specifics as reliability of service, courtesy of drivers, condition of containers, etc. Most items involved ratings using an anchored 0 to 10 scale. Telephone interviews averaged 15 minutes in length.

A latent variable causal model was developed to examine the relationships between global expectations, BFI service performance and overall satisfaction and loyalty. Each latent construct had multiple indicators in the form of customer ratings of attributes. Partial Least Squares, or PLS (Wold 1975) was used for estimation, and it indicated satisfactory levels of measure reliability and discrimination, as well as high coefficients of determination for the endogenous latent constructs (79% for satisfaction, 30% for loyalty intentions). The overall satisfaction metric was termed the Customer Satisfaction Index, or CSI, and was calculated from the estimated parameters for the satisfaction latent construct. CSI was stated on a scale from 0 (not at all satisfied) to 100 (completely satisfied).

The results were presented to senior management at a high level using only simple charts and graphs. In addition to measures of central tendency, the report also included an importance-performance table, which focused attention on the service performance improvements most likely to impact customer satisfaction and thereby retention. Management approved moving forward with implementation of the new measurement system, which was based on the research design tested successfully. Results were to be reported by district on an annual basis, each based on a random sample of 240 key decision makers.

CSI Launch

In conjunction with survey data collection and modeling, which began in fall 1992, considerable attention was given to organizational and implementation issues necessary for successfully establishing the CSI program. Responsibility for

CSI was placed under the VP of Sales and Marketing. Training sessions for district managers were done in several stages, the first of which took place at the time of kickoff. Reference manuals and instructional videos were prepared and distributed to the field. A recognition program for high CSI performance was established for district and regional managers, but not implemented until the second year of the program, so that district managers could gain some experience with the measurement system first. Similarly, goal-setting for CSI performance was to be instituted, but not until the third year.

The first company-wide CSI report indicated an index score of 80.1 (out of a possible score of 100), with individual districts receiving scores from the low 70's to the upper 80's. A cross-sectional analysis of district scores found that district CSI was inversely related to customer defection rate, and in turn that customer defection was inversely related to district profitability. Though no action was required on the part of districts or regions during the following year, and while no corporate actions were taken specifically to improve customer satisfaction, the company-wide CSI for 1994 saw an increase to 81.2 ($p<.0001$).

Despite a number of improvements to the CSI program in its third year (1995) and continued strong support from the CEO and President, CSI began to slide. At the end of 1995 it stood at 80.3. Districts with reduced CSI scores outnumbered those with increased scores by a 1.3:1 ratio, which meant that by year-end more managers were penalized under the incentive plan than were rewarded. During this period opposition to the CSI program began to emerge. CSI continued to drop in seven of the next eight quarters, reaching an all-time low of 79.7 by the end of 1996. As CSI fell, the customer defection rate correspondingly increased.

Corporate management took a number of actions to halt the CSI erosion:

1. A new incentive compensation plan for district managers and regional VPs was installed and took effect for 1995. It provided for up to 20% of the bonus for district and regional managers to be based on CSI results. In the past, these individuals had received bonuses often in the six-digit range, primarily based on profits earned.
2. A list of the best and worst practices in selected high- and low-CSI districts was compiled to assist district managers seeking corporate assistance with customer satisfaction.
3. The new position of Director of Customer Satisfaction was created, reporting to the Chief Operating Officer and participating in the weekly meeting of senior operating management.
4. A permanent training program on customer satisfaction was established for district managers, managed by a highly customer-focused and successful district manager.
5. An electronic CSI reporting system via the company's intranet was developed for faster dissemination of results to the field. Previously, the quarterly customer satisfaction reports had been mailed via the internal company mail distribution service.
6. A special analysis by the author revealed that district employee satisfaction evaluations were found to be significantly correlated with district CSI scores. The finding gave impetus to efforts to boost employee satisfaction.

None of these measures appeared to have any effect on the downward CSI trend.

Resistance to CSI

Not surprisingly, during the CSI freefall resistance to the new measurement program began to emerge. During the kickoff training, some district managers expressed opposition to the CSI program. Increasingly, however, they voiced their opposition or disagreement with the CSI results or methodology. At the corporate level, a consultant-led study team of BFI managers, assigned to identify opportunities for profit improvement in the collection business, recommended the CSI program for elimination. However, the CEO and President acting jointly rejected this proposal.

Political resistance threatened the CSI program once again, this time during the program's fourth year of operation, when several senior executives in the corporate office attempted to kill it by hiring an academic consultant ostensibly to provide an independent review of the validity of the results. However, the consultant pronounced the program "state of the art" and the corporate opposition quickly dissipated.

The Turnaround

In mid-1997 the CEO and board of directors concluded that BFI could no longer continue to rely on growth by means of acquisition, owing to the rapid run-up in the price at which small haulers were selling. The only feasible growth strategy for BFI was by means of improved customer acquisition and retention, rather than acquiring competing haulers. An analysis by the author showed that if customer defection could be increased by just one point, the resulting lengthened customer lifespan would translate into a gain in pre-tax earnings that would total $41 million, ceteris paribus.

To pursue the new growth strategy, the North American operating organization was significantly re-structured, becoming more centralized to achieve coordination across core business functions as well as across districts. Five functional groups were created at the corporate level to take a stronger hand in bringing about internal growth, each led by a Senior Vice President reporting to the Chief Operating Officer. Regional management positions were eliminated, and 13 North American market areas took their places. Area VPs for each corporate function were appointed to manage activity in the market areas and oversee that function across districts. Market Area VPs were to coordinate the five new functional Area VPs in each market area.

The new Senior VP of Collection assumed responsibility for the CSI program from Sales and Marketing. At his request, the author examined the correlation between CSI and defection, and observed that an increase one point in CSI could be expected to bring about a 1% reduction in customer defection, and hence the added $41 million in earnings. Rather than relying on the importance-performance analysis, however, the Senior VP decided to focus on the most powerful driver of CSI, which the modeling had revealed was customers' perceptions of the dependability of waste pickup service. This analysis revealed that a 1.8 point change in the service dependability score would produce a one point improvement in overall CSI.

Accordingly, the Area VPs of Collection were directed to focus district management on making operational changes to increase the service dependability scores in CSI, and to hold them accountable for specific improvements in this driver of CSI. A detailed root cause analysis of service failure was performed, identifying root causes such as excessive driver turnover, inadequate driver check-in procedures, lack of driver accountability for missed pickups, poor communication with central dispatch and inconsistent service standards. The most leverageable root causes were identified, and the Area VPs of Collection directed all district managers to implement them. Thus, a centralized strategy of satisfaction improvement was sought, rather than the decentralized one implicit in the design of the original CSI program.

The Senior VP of Collection also took several other noteworthy actions to focus the organization on customer satisfaction. A significant internal promotion campaign was launched to rally employee support for customer satisfaction, featuring stories in the weekly company newsletter, posters, banners and progress charts. To facilitate employee understanding, a letter grading system was introduced for CSI numeric scores. The CEO and Executive VP took an extended tour of districts in North America to observe customer satisfaction efforts at work. CSI performance was included as a required element in all field and corporate review meetings. A major systems project was initiated to provide field management with real-time information on the occurrence of customer problems and the status of their resolution efforts.

Within six months the company-wide CSI began to increase (Fall 1996), and continued to grow over the succeeding quarters. To reinforce

the progress, a new incentive program incorporating customer satisfaction performance was adopted for 1997. The new "Share the Success" plan provided rewards for all employees, including the CEO and all members of senior management, for company-wide improvement in CSI. Company-wide goals of 1-point improvement in CSI for 1997 and 1998 were set, along with specific district goals that differed depending on district characteristics and market circumstances. The upward trend in CSI continued for seven straight quarters over 1997-98, and the customer defection rate correspondingly declined.

Closing Chapter

Despite improved CSI and earnings per share, BFI's stock continued to be undervalued in 1998. A year earlier, when industry leader Waste Management's stock fell in the wake of serious accounting improprieties, it was acquired by USA Waste, a much smaller concern looking for growth. Senior management worried about a similar fate for BFI, and made extensive layoffs along with adopting severe cost-cutting measures at the end of 1998 in an effort to boost earnings. The belt-tightening was devastating to morale within the company, and in late summer 1998 company-wide CSI leveled off for a quarter, and began to drop again.

In the spring of 1999, Allied Waste made a tender offer of $45 per share of BFI, far higher than the prevailing share price. With the end in sight, top management then cancelled the CSI Program. In June 1999, BFI's board of directors accepted the offer as in the best interests of its shareholders, and the transaction was completed a month later. Almost immediately, the BFI corporate office in Houston was closed and virtually all employees terminated.

Lessons Learned

The case study suggests a number of interesting issues concerning organization-level customer satisfaction that are deserving of study:

- What is the scope of organization-level CS/D? Measurement, reporting, communication and training, rewards and recognition systems, goal-setting, organizational change and choice of improvement strategies would appear to be but a few of the topics that are included, and there are no doubt others as well.
- What is the relationship between customer satisfaction as measured, and customer defection rates actually achieved? At the individual customer level, loyalty is the consequence of high satisfaction, but how if at all is this relationship changed when considered across all customers, for an entire organization? This study observed a 1:1 relationship, but it would appear to be highly dependent on context, e.g. on the measurement procedures employed, extent of competitive rivalry, previous gains in satisfaction and reduction of defection, etc.
- One particularly interesting issue is the role of measurement per se in organization-level customer satisfaction. Assuming improvement in customer satisfaction desired, is a measurement system sufficient condition for realizing the goal, or simply one of several necessary conditions? What other elements of a customer satisfaction program are required for success? Related to this is the question of the return on measurement sophistication, i.e. to what extent must a company invest in sophisticated measurement technology if it seeks to boost satisfaction?
- Another intriguing issue is that concerning the financial accountability of CS/D. It concerns both how an organization justifies its expenditures on customer satisfaction efforts to begin with, as well as how an ongoing customer satisfaction program meets the expectations of management. In the current business environment, such economic or cost-benefit assessments are critical to the adoption and retention of programs.
- What are the obstacles that customer satisfaction initiatives face in organizations? Are they systematic or idiosyncratic to the

organization in question? When are they stronger or weaker, and why? This study saw a major obstacle in the resistance of a key group of field managers who were expected to take action to realized desired improvements. Had they not resisted, would the initiative have succeeded earlier and prevented the acquisition of the company that began the industry consolidation?

- Finally, the case study points to a disciplined thinking process potentially useful to any area of management decision-making. It is illustrated by how BFI management elaborated both the effects and causes of customer satisfaction. Once the profit impact of increased satisfaction was ascertained, analysis of its likely causes, and the causes of causes, etc. ultimately led management to identify the most promising strategy and tactics for increasing customer satisfaction. Epstein and Westbrook (2001) refer to the generalization of this process as the development of "action-profit linkage models."

REFERENCES

Child, John, David Faulkner and Robert Pitkethly (2001), *The Management of International Acquisitions*. Oxford, U.K.: Oxford University Press.

Collins, James C. and Jerry I. Porras (1994), *Built to Last: Successful Habits of Visionary Companies*. New York: Harper Business.

Epstein, Marc J. and Robert A. Westbrook (2001), "Linking Actions to Profits in Strategic Decision," *Sloan Management Review*, 42, (Spring 3), 39-49.

Haspeslagh, Philippe C. and David B. Jemison (1991), *Managing Acquisitions: Creating Value Through Corporate Renewal*. New York: The Free Press.

Keiningham, Timothy L., Melinda K. M. Goddard, Terry G. Vavra and Andrew J. Iaci (1999), *Marketing Management*, 1 (1) 57-63.

Marks, Mitchell Lee and Philip H. Mirvis (1998), *Joining Forces*. San Francisco: Jossey-Bass Publishers.

Menezes, Melvyn A. J. (1991), "Xerox Corporation: The Customer Satisfaction Program," Harvard Business School Publishing Division, 9-591-055.

Mentzer, John T., Carol C. Bienstock and Kenneth B. Kahn (1995), "Benchmarking Satisfaction," *Marketing Management* 4(1), 41-46.

Sharma, Subhash, Ronald W. Niedrich and Greg Dobbins (1999), "A Framework for Monitoring Customer Satisfaction: An Empirical Investigation," *Industrial Marketing Management*, 28, 231-243.

Wold, H. (1973), "Nonlinear Iterative Partial Least Squares (NIPALS) Modeling: Some Current Developments," in *Multivariate Analysis*, P.R. Krishnaiah, ed. New York: Academic Press, Inc., 383-407.

Workman, John P. Jr. (1993), "Marketing's Limited Role in New Product Development in One Computer Systems Firm," *Journal of Marketing Research*, 30 (November), 405-421.

Woodside, Arch G. (1995), "Pricing an Industrial Technological Innovation: A Case Study," *Industrial Marketing Management*, 24, 145-150.

Yin, Robert K. (1994), *Case Study Research: Design and Methods*, 2nd edition, Newbury Park, CA: Sage Publications.

ACKNOWLEDGMENTS

The author thanks the contributions of Bruce E. Ranck, President and CEO, Browning-Ferris Industries, Inc., who also authorized publication of these materials. The study would not have been possible, however, without the invaluable contributions of Charles Kaylor, Director of Customer Satisfaction, Browning-Ferris Industries, Inc.

Send correspondence regarding this article to:
Robert A. Westbrook
Jones Graduate School of Business
Rice University
P.O. Box 1892
Houston, TX 77251 U.S.A.
fax: 713-932-9666
email: westbro@ruf.rice.edu