

Linking Employees, Customers, and Financial Performance in Organizations

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Linking Employees, Customers, and Financial Performance in Organizations

Abstract

The effects of budgetary actions on aspects of business performance such as quality levels, employee commitment, customer perceptions, future revenues, and costs are often unknown and invisible. Despite a surge of academic studies examining such linkages in general, little is known about what companies themselves are *actively* doing to establish how these links actually work in their *own* enterprises. This article presents specific approaches and lessons from four organizations that are members of a larger academic-practitioner consortium assembled to illuminate this issue. It aims to make the relationships among various types of non-financial and financial data more visible and, hence, more knowable and actionable.

The results support the notion that the people-service-profit chain is alive and well. They show how leadership behavior and organization factors mirroring high-involvement work systems are strongly associated not only with employee and customer satisfaction, but also with important business outcomes, such as service quality, cost, and financial performance. While none of the individual models encompasses all of the types of data cited above, they together suggest the existence of a chain of relationships – not tradeoffs – among various types of results. This chain of relationships, in turn, suggests a better way of focusing resources to achieve superior results.

**Employees, Customers, and Financial Performance: How Some Companies are Examining
Linkages in Their Own Organizations**

Executive Summary

- A chain of relationships – not a set of trade-offs – exists among various types of results.
- Customers and employees see things in similar ways.
- Organizational environments drive both employee and customer satisfaction.
- Customers' value perceptions drive market share and top-line revenue.
- Employee satisfaction-enhancing work climates drive the speed and cost of service.

Employees, Customers, and Financial Performance: How Some Companies are Examining Linkages in Their Own Organizations

Companies make trade-offs – and implement cost-cutting initiatives – via budgetary processes. Despite the increasingly widespread implementation of Balanced Scorecards, the effects of budgetary actions on employee commitment, quality levels, and customer perceptions are often unknown and are largely invisible. More importantly, the impacts of employee commitment, quality levels and customer perceptions on future revenues and costs are equally obscure.

The aim of this article is to make the relationships among various types of non-financial and financial data more visible, and hence, more knowable and actionable. This article presents and synthesizes the results of models built for four different organizations: AT&T, Lucent Technologies, PSEG, and the United States Department of Veterans Affairs. While none of the individual models encompasses all of the types of data cited above, they together suggest the existence of a chain of relationships – *not tradeoffs* – among various types of results. (The authors credit to Daniel Twomey of Fairleigh Dickinson University the notion that the Balanced Scorecard might imply the existence trade-offs among results.) This chain of relationships, in turn, suggests a better way of focusing resources to achieve superior results.

Modern strategic human resource management theory argues that human resources can be key to building competitive advantage because they represent firm-specific resources that are distinctive (important, rare, and hard to duplicate). Consistent with this assertion, Heskett, Sasser and Hart, in their 1990 book *Service Breakthroughs* (The Free Press), offered a model of the “people-service-profit chain” that specified how internal service quality leads both to employee and customer satisfaction, and to profitability. Recent rigorous empirical studies have provided further evidence that internal HR practices, such as high-involvement work systems, indeed improve employee/customer satisfaction and financial performance. However, much of this work represents studies by academicians using secondary databases

to look across a variety of companies. A notable exception is an in-depth study on the employee-customer profit chain at Sears, reported by Rucci, Kirn and Quinn in *Harvard Business Review*, 1998.

What are companies themselves actively doing to establish, as a basis for firm-specific decision-making, how these links actually work in their own enterprises –specific to their unique work contexts, employees, and customers? Fairleigh Dickinson University’s Center for Human Resource Management Studies (CHRMS) – a partnership among education, industry and the community committed to the development of knowledge and leadership in the management of human resources – brought together a diverse consortium of organizations to inquire into how this might be done and to share with each other their own approaches. CHRMS membership includes academics and representatives of various organizations from the public and private sectors in northern New Jersey. Some of the members were aware of work linking customers’ perceptions of value with financial performance. Could similar linkages be found among employee satisfaction, customer satisfaction, and financial results? To explore this question, the Center established the Strategic Survey Research Roundtable. This group included representatives from AT&T, Lucent Technologies, Merck, Roche Pharmaceuticals, Merrill-Lynch, Public Service Enterprise Group, and the US Department of Veterans Affairs. This article shares these organizations’ approaches – and the lessons learned from them – more broadly to contribute to the efforts of others relative to linking employee satisfaction, customer satisfaction and financial results.

What is the Link Between Employee and Customer Satisfaction?

Customers and Employees See Things in Similar Ways. In their *HBR* study cited above, Rucci and his associates found that the satisfaction of Sears’ employees predicted the satisfaction of its retail customers. However, connecting employee perceptions/satisfaction to that of customers is considerably trickier in non-retail industrial sectors. To accomplish this, Lucent Technologies used two different surveys, its customer-satisfaction survey and its employee-satisfaction survey to: 1) examine whether there is a relationship between the way customers view the firm and the way employees see it, and 2) examine whether there is a relationship between customer satisfaction and employee satisfaction. [It should be noted that the two surveys were designed independently of each other.]

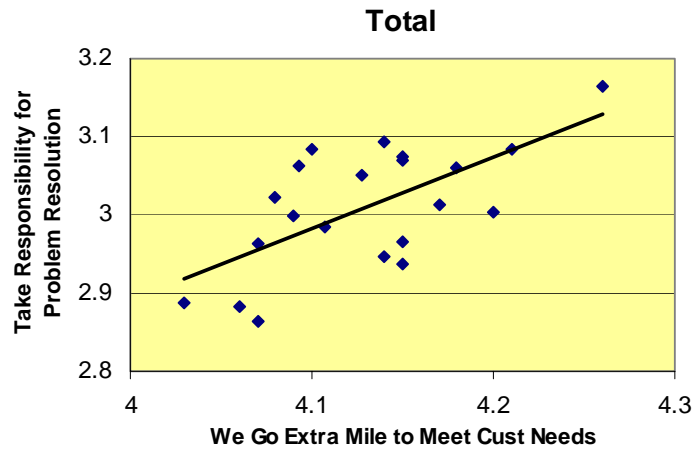
Lucent's customer satisfaction survey asked customers to rate various aspects of its performance. The company developed a Responsiveness Index using several items in this customer survey. It developed a Quality Index and a Customer Responsiveness Index using appropriate items in its employee survey. All other items in both surveys were single-item rating scales.

Lucent aggregated the results of customer surveys and employee surveys within the company's 21 geographically based zones, each of which had small-business and large-business divisions, as well as employees specifically dedicated to Maintenance operations. Specifically, the company computed means for the various survey indices/items for each zone. It aligned related items in each survey, prepared scatter diagrams, and examined the correlations between the aligned items. For example, the company aligned the average zone rating for the customer-satisfaction item on how willing the company was to take responsibility for resolving problems with the zone average rating for the item in the employee survey that asked whether the company goes the extra mile to meet customer needs. The company first analyzed consolidated results for the across its 21 zones. It next examined the results for the small- and large-business divisions separately. It then examined a subset of only those employees responsible for maintenance operations in both divisions. Lastly, Lucent looked at how two employee survey items related to each other as a step toward understanding possible indirect effects of employee satisfaction on customer satisfaction. Exhibit 1 illustrates how Lucent aligned items at each level. The scatter diagram shown in Exhibit 2 typifies the company's findings. The diagonal line (i.e., regression line) that runs from the lower left of the scatter diagram to the upper right section visually portrays the relationship between aligned items from customer and employee surveys for the 21 zones.

Exhibit 1 – Alignment of Items at Lucent

<u>Customer Survey</u>	<u>Employee Survey</u>
<i>All Zones</i>	<i>All Employees</i>
1 Take Responsibility for Problem Resolution	We Go the Extra Mile to Meet Customer Needs
2 Responsiveness	We Go the Extra Mile to Meet Customer Needs
3 They Go the Extra Mile to Meet Customer Needs	We Go the Extra Mile to Meet Customer Needs
4 They Demonstrate that They Value the Customer	We Go the Extra Mile to Meet Customer Needs
5 Overall Quality	We Go the Extra Mile to Meet Customer Needs
<i>All Zones</i>	<i>Services Personnel Only</i>
6 Overall Maintenance Quality	Organization Does What It Takes to Exceed Customer Expectations
7 Overall Maintenance Quality	My Work Group Cares as if Owners
8 Overall Maintenance Quality	Overall Quality
9 Overall Maintenance Quality	Lucent Provides Better Customer Service
10 Overall Maintenance Quality	Responsiveness to Customers
11 Overall Maintenance Quality	My Business Unit is Responsive to Customer Needs
12 Overall Maintenance Quality	I Feel Like a Valued Member of My Organization
13 Overall Maintenance Quality	Satisfaction with Employment
<i>Small Business Division</i>	<i>Small Business Division</i>
14 Overall Quality	Customer Responsiveness
15 They Go the Extra Mile to Meet Customer Needs	Customer Responsiveness
16 Responsiveness	Customer Responsiveness
17 Take Responsibility for Problem Resolution	Customer Responsiveness
18 Overall Sales Quality	Customer Responsiveness
19 They Demonstrate that They Value the Customer	Customer Responsiveness
20 Overall Sales Quality	Overall Satisfaction with Lucent
<i>Large Business Division</i>	<i>Large Business Division</i>
21 Overall Quality	We Go the Extra Mile to Meet Customer Needs
22 Likelihood to Repurchase	We Go the Extra Mile to Meet Customer Needs
23 Overall Sales Quality	Overall Satisfaction with Lucent
<u>Employee Survey</u>	<u>Employee Survey</u>
24 We Go the Extra Mile to Meet Customer Needs (DV)	Overall Satisfaction with Lucent (IV)

Exhibit 2 – Customer and Employee Perceptions at Lucent



While the relationships between customers' ratings and employees' ratings were not always strong, they always displayed positive associations. The data conveyed the message that customers and employees tended to view Lucent in similar ways. Customer perceptions and attitudes were differentiated

across zones similar to the ways that employee perceptions and attitudes were. Zones that saw themselves less favorably on particular issues tended to be the zones that were less favorably evaluated by customers on these issues. This is particularly true in the Maintenance area. We can conclude with confidence that customers and employees view various aspects of company performance similarly.

The data also suggest that employee attitudes have both direct and indirect effects on customer attitudes. Employee perceptions of “Going the Extra Mile” were found to be strongly associated with customer perceptions of both Overall Quality and Likelihood of Repurchasing. If satisfied employees were indeed more willing to “Go the Extra Mile,” then employee satisfaction would have an indirect effect on customer satisfaction. Specifically, employee satisfaction would impact customer satisfaction through its impact on employee perceptions (of going the extra mile). We could diagram that relationship as:

Employee Satisfaction → Employee Commitment to Customer Service → Customer Satisfaction

Although these findings illustrate an association between employee satisfaction and customer satisfaction, confirm other published findings, and support Heskett’s model, several cautions apply. First, the employee satisfaction data do not pertain solely to employees who interface with customers but are for all employees who report to a given General Manager. Moreover, the employee survey data came only from those employees choosing to respond, and the customer data came from interviewing a sample of customers, which is relatively small in the case of the Large Business Division. This raises questions about how representative and reliable the data are. Such limitations tend to reduce the likelihood of finding relationships between customer ratings and employee ratings. Nonetheless, Lucent found significant relationships. The next sections shed light on the drivers of employee/customer satisfaction, and on the financial implications of both.

What are the organizational conditions that produce employee and customer satisfaction?

As noted above, recent studies have strongly linked human resource practices to internal service quality and financial performance in both the manufacturing and services sectors. Among the core workplace qualities identified in many of these studies are involvement, empowerment, development,

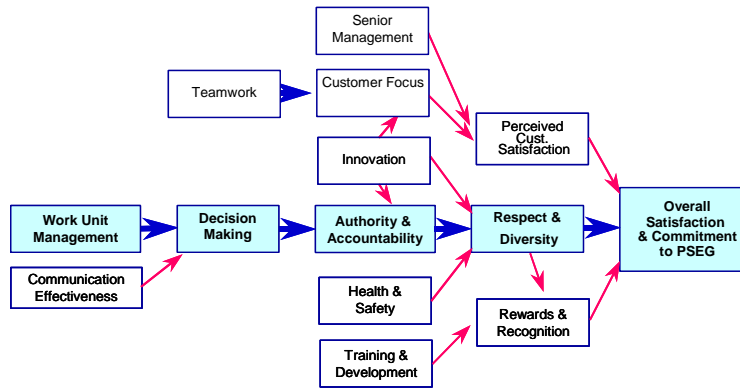
trust, openness, teamwork, performance enablers, and performance-based rewards. However, as noted by Becker and Gerhart, in a 1996 *Academy of Management Journal* review article “The impact of human resource management on organizational performance: progress and prospects,” “Given the importance and complexities of this strategic research area, this body of work is relatively small, and most of the key questions are sorely in need of further attention” (p. 779).

To aid in understanding and addressing its challenges, and in communicating to its employees, Public Service Enterprise Group (PSEG), a large energy production and distribution firm, strove toward developing its own “theory of the business,” guided by Heskett, et al.’s people-service-profit chain model cited above. Through analysis of their employee survey and customer survey data, they built a model to explain the path from employee to customer results and produced the following two driver analyses.

Drivers of Overall Employee Satisfaction and Commitment: Overall employee satisfaction and commitment to PSEG was defined as: “employees are committed to the company’s growth and success and recommend it as a good place work.” The driver analysis shown in Exhibit 3, based on individual survey responses from 8,256 employees, supports the key finding that the local work unit manager is absolutely critical in creating a respectful and empowering work unit environment, which drives employee satisfaction/commitment at PSEG. The key elements along the path of the driver analysis are:

- ***Respect and Diversity:*** Employees believe they are treated with respect and dignity; that policies and procedures are fair; the company values diverse viewpoints, a diverse workforce, and work/family balance.
- ***Authority and Accountability:*** Employees have authority to carry out responsibilities, are willing to take reasonable risks, feel safe to express opinions/ideas, have a high regard for employees’ judgment.
- ***Decision Making:*** Decisions are timely; employees are involved, asked for their ideas, and have the necessary knowledge and information.
- ***Work Unit Management:*** Managers understand issues, show concern for employees’ well being, lead by example, and set clear priorities.

Exhibit 3 – Drivers of Employee Satisfaction at PSEG



Furthermore, the analyses revealed the following specific quantified results about interrelated factors (based on regression models created for employer and customer data). For every 10-point increase in:

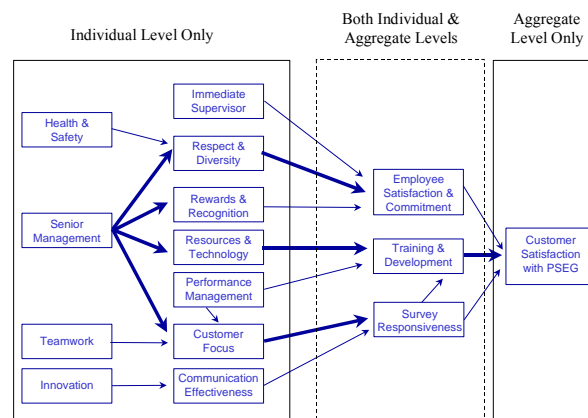
- Respect and diversity, there is a five-point increase in overall employee satisfaction.
- Authority and accountability, there is a six-point increase in respect and diversity.
- Decision making, there is a six-point increase in authority and accountability.
- Work unit management, there is a seven-point increase in decision-making.

Customer Driver Analysis: Customer satisfaction was calculated as the percentage of customers in each of its 30 service zones who gave PSEG a “very favorable” rating. As shown in Exhibit 4, key factors along the critical path were training and development, which were driven by resources and technology, both of which are influenced by Senior Management. More specifically, these are defined by the following elements:

- *Training and Development:* Employees identify training opportunities; they receive training and other chances to improve their skills, and use their new skills to achieve their career objectives.

- *Resources and technology*: Employees are given the necessary technology, tools, and equipment. A well-trained and adequate staff uses its skills and abilities.
- *Senior Management*: They have a clear sense of direction, show concern for employees’ well being, lead by example, and set appropriate and achievable strategic objectives.

Exhibit 4 – Drivers of Overall Customer Satisfaction at PSEG



With regard to the customer driver analysis, the following specific quantifiable relationships were found. For every 10-point increase in:

- Training and development, there is a three-point increase in overall customer satisfaction.
- Resources and technology, there is a seven-point increase in training and development.
- Senior management, there is a five-point increase in resources and technology.

To develop the full model shown in Figure 4, PSEG’s research firm integrated an analysis at the aggregated level with one at the individual level. First, to link the employee survey results to those of the customer survey, it used an approach similar to Lucent’s (described above). Specifically, it used aggregated measures of employee-satisfaction items and customer satisfaction for each of its 30 zones. They calculated Employee Satisfaction/Commitment, Training/Development and Survey Responsiveness

as the percentages of employees who gave PSEG “favorable” ratings in each zone. Second, to analyze the key drivers of Employee Satisfaction/Commitment, Training/Development and Survey Responsiveness, they simply used the individual responses from 1,350 employees across all zones. The model shown in Figure 4 depicts results from combining the analyses at the zone and employee levels.

The bold lines in Figure 4, denote paths of stronger influence: Perceptions of senior management, which makes “the big decisions,” influence employee perceptions of Respect and Diversity, Reward and Recognition, Resources and Technology, and Customer Focus. These perceptions, in turn, drive Employee Satisfaction and Commitment, Training and Development, and employees’ perceptions that management will act upon the findings of the employee survey (i.e., Survey Responsiveness), and ultimately are linked to Customer Satisfaction with PSEG.

These findings reinforce earlier ones linking employee and customer satisfaction, and further demonstrate that both may be associated with common core organization practices, as posited by Heskett and others. Further, they helped PSEG to identify firm-specific internal leverage points for action. However, the PSEG model did not include measures of business process performance. The next section sheds light on the impact of customer perceptions on financial performance.

How Do Customer Perceptions/Satisfaction Affect Financial Performance?

Customers’ Value Perceptions Drive Market Share and Top-Line Revenue. While it has become typical (possibly because it’s easy) to link customer perceptions to other psychological constructs, notably loyalty, Richard Oliver has observed in his 1997 book *Satisfaction* (Irwin McGraw-Hill) that not much has been published concerning the linkage of customer satisfaction to financial results. “Unfortunately, loyalty and profit cross the conceptual plane,” he remarked. In their 1987 book *The PIMS Principles – Linking Strategy to Performance* (The Free Press), Robert Buzzell and Bradley Gale noted the relationship of relative perceived quality to market share, and the relationship of market share to profitability among firms in the Profit Impact of Marketing Strategy (PIMS) database. In his 1994 book *Managing Customer Value* (The Free Press), Gale described AT&T’s work that linked relative perceived value to market share.

During the late 1980s and early 1990s, AT&T pioneered what has come to be known as Customer Value Analysis. Simply stated, the company shifted its focus from customers' "overall satisfaction" to their perceptions of value, and expanded its focus from surveying its own customers to surveying "the market," which includes competitors' customers. Its researchers found that the ratio of AT&T's mean value rating to that of the competition was a leading indicator of market share change. It called this ratio Customer Value Added (CVA).

AT&T used econometric time series analysis to establish the relationship. The model itself was a system of several equations, with some solved simultaneously and others solved sequentially. Due to autocorrelation, the two basic equations, which are best solved simultaneously, are as follows:

$$(1) MS_t = f(MS_{t-j}, CVA_{t-j})$$

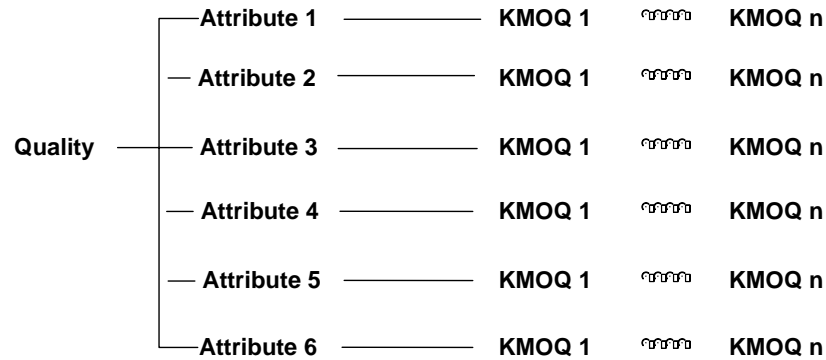
$$(2) CVA_{t-j} = g(RPQ_{t-j}, RPP_{t-j})$$

MS denotes Market Share. RPQ denotes Relative Perceived Quality, the ratio of the firm's average Overall Quality rating to that of its competition. RPP denotes relative perceived price, the ratio of the firm's perceived price competitiveness to that of its competition. The subscript j denotes the appropriate number of time periods in the lagged relationship.

Translating market share into revenue is fairly straightforward. If market share is expressed in real terms, then multiplication of the units sold by their average price provides an estimate of top-line revenue. An additional equation might be needed to accommodate a change in market size (e.g., to reflect market growth).

What drives quality perceptions? What drives price perceptions? An additional regression equation can allocate the variation of an overall quality rating among a set of underlying quality attributes. The process-attribute model shown in Exhibit 5 provides a useful schematic diagram.

Exhibit 5 – A Process Attribute Model



KMOQ Denotes Key Measure of Quality

Each attribute is an aspect of overall quality that is related to (i.e., derived from) a customer need and is clearly and unambiguously related to a specific process within the firm that attends to that identified need. In telecommunications, for example, sales-support, installation and maintenance are attributes of overall quality. In the Process-Attribute Model, the attribute (i.e., key dimension of overall quality) is on the left, and Key Measures of Quality are on the right.

Key Measures of Quality (KMOQ), sometimes called Direct Measures of Quality, are those measures of (product quality or service) process performance that are derived from customer needs and tend to predict customer satisfaction. For example, customers might have a need for “prompt repair.” The extent to which the firm is perceived to be prompt will influence customers’ ratings on the firm’s maintenance attribute. Potential KMOQs for objectively measuring the promptness of the firm’s maintenance process might include the Average Speed of Answer (for taking the customer’s trouble call) and Mean Time To Repair, the interval between receipt of the customer’s call and restoration of the customer’s service.

Each row of the Process-Attribute model represents an equation that estimates the extent that the performance levels reflected in these measures drive attribute ratings. Such equations have been called “Performance-Satisfaction” functions (Ramaswamy, 1996), which have the following form:

$$(3) \text{ Attribute Rating} = h(\text{KMOQ}_1 \dots \text{KMOQ}_n)$$

Ordinary Least Squares regression suffices for estimating these equations. To analyze variation in price-competitiveness ratings, substitute a price-differential index for the KMOQs on the right-hand side of the above equation.

Taken together, the above equations form a recursive system that estimates:

- How actual quality levels drive quality perceptions,
- How price differentials drive price perceptions,
- How quality and price perceptions drive value perceptions,
- How relative value perceptions drive market share, and
- How market share drives top-line revenue. (It also influences profitability, but this particular model does not address profitability directly.)

Although the specific results of applying this model within AT&T are proprietary, they clearly confirm the model’s validity and usefulness in terms of improving the firm’s ability to predict market share. However, whereas the PSEG model did not include measures of business process performance, this model does not take “employee satisfaction” into account. The next section demonstrates relationships between work climate, employee satisfaction and process performance.

How do work climate and employee satisfaction affect business outcomes?

A high-involvement, “empowered” work climate simultaneously increases employee satisfaction while increasing the speed or reducing the cost of service. The US Department of Veteran’s Affairs (VA), supported by a National Science Foundation grant, sponsored research using its extensive databases to examine relationships among their workplace conditions, employee attitudes/perceptions, and

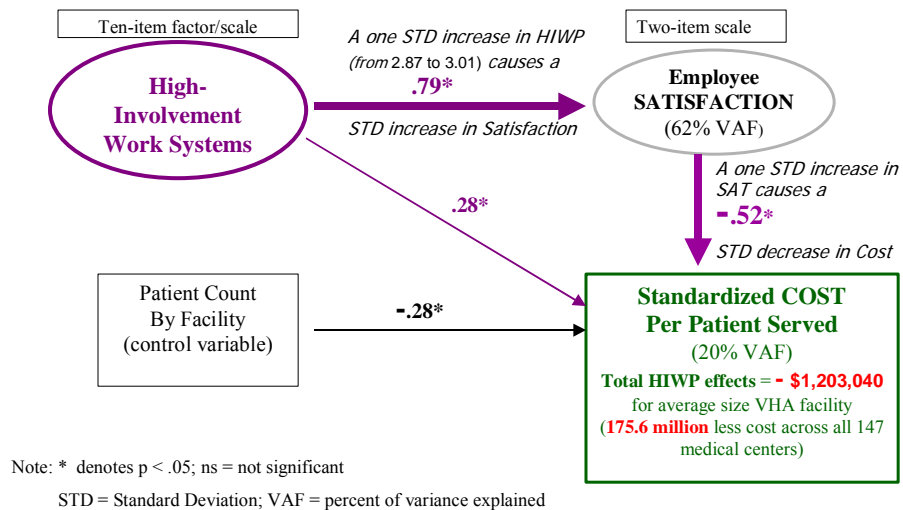
organizational performance. We report here the findings from two studies linking “High-Involvement Work Systems” to employee satisfaction and business results.

High-Involvement Work Systems (HIWS; also referred to in the literature as High-Performance Organizations) represent an holistic organization design perspective that has attracted the attention of both practitioners and researchers in recent years, and that is increasingly being used by Fortune 1000 companies (Lawler, Mohrman & Ledford, 1998). Through extensive confirmatory factor analyses using the employee survey responses of 124,000 employees, the VA team developed a highly reliable (alpha .96) ten-item scale to measure the degree to which its employees perceived that their workplaces possessed the key qualities usually associated with high-involvement work systems – employee involvement and influence (the core of this construct), alignment of employee and organizational goals, an innovation-stimulating climate, a trusting, supportive supervisor-employee relationship, necessary information, investment in employee development, performance-enabling work conditions, and performance-based rewards (note the similarity to key drivers in the PSEG models above).

The VA team then developed several facility-level Structural Equations Models that related HIWS and employee satisfaction to the speed and cost of VA services. Goodness of fit statistics (e.g., CFI, RMSEA) suggested all these VA models fit the data well. The first model, shown in Exhibit 6, aggregated the employee survey data for each of the Veterans Health Administration’s 147 medical centers and tested their relationship to patient treatment costs in each center. Patient count was included as a control variable, because patient volume could influence through economies of scale the cost efficiency of patient treatment. A modest improvement in HIWS was directly associated with a significant increase in employee satisfaction (the same finding noted in the PSEG employee driver analysis above), and indirectly linked through satisfaction to savings of hundreds of millions of dollars in service delivery costs. Specifically, HIWS increased employee satisfaction ($\beta = .79$) and employee satisfaction reduced costs ($\beta = -.52$). Thus, HIWS affected cost both directly (increasing costs, $\beta = .28$) and indirectly through its effects on employee satisfaction (reducing costs, $\beta = .79 \times -.52 = -.41$). This shows that there are real expenses associated with moving towards HIWS (e.g., costs to consult with,

develop, and reward employees). However, there appear to be compensating cost-reducing effects through greater satisfaction and reduced organizational turmoil, for a net effect of -.13. In practical terms, this equates to a 50th percentile facility, with an average patient service cost of \$3851, improving to a 44.83% percentile facility, with an average patient service cost of \$3799.50; a savings of \$51.50 per patient. For the average size VA Healthcare facility serving 23,360 patients a year, such an improvement represents an average annual cost savings of \$1,203,040. Generalized to the national level, this amounts to an annual savings of over \$175.6 million throughout the VHA healthcare network. Such complex effects are not always easily recognized by managerial observation and intuitive analysis. Simultaneous-effect modeling allowed the VA team to see more clearly the positive “chain reaction” caused by HIWS.

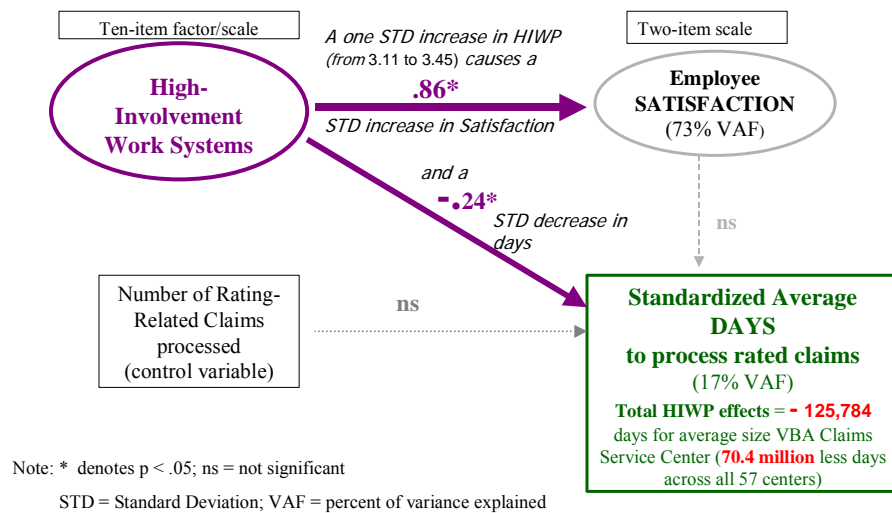
Exhibit 6 – Veterans Health Administration Results of Structural Equations Modeling



The second model, shown in Exhibit 7, took an identical approach with regard to claim-processing speed for each of the Veterans Benefit Administration’s 49 claims processing centers. A modest improvement in HIWS was directly associated both with a significant increase in employee satisfaction and with millions of fewer days to process claims. In practical terms, the total HIWS net impact of -.15 represents an average annual savings of 125,784 days for the average size VBA Service

Center processing 13,976 claims a year. Generalized to the national level, this amounts to an annual savings of over 70.4 million days throughout the VBA network of Regional Offices (Note: processing time and costs of claim processing are highly correlated, $r = .49$).

Exhibit 7 – Veterans Benefits Administration Results of Structural Equations Modeling



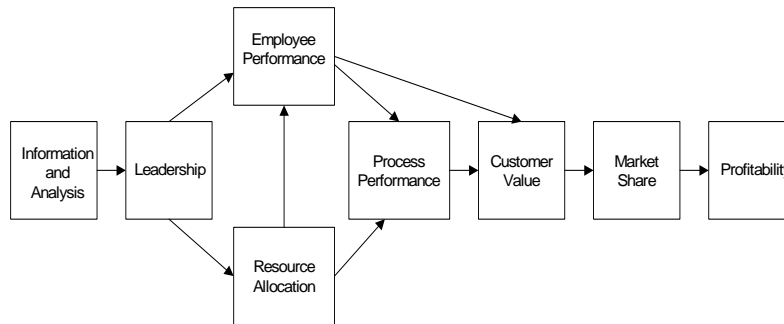
The finding that employee satisfaction-enhancing work conditions simultaneously increase the speed and/or reduce the cost of service should be interesting to private sector firms as well as public service organizations, because it suggests how work climate might indirectly affect the underlying drivers of customers' value perceptions. Speed of service often influences customers' perceptions of overall quality. In fact, using data from customer (veterans) satisfaction surveys, the VA team found a significant correlation ($r = .55$) between claim processing speed and overall satisfaction with how well claims were handled. Lower cost of service allows firms to price more competitively and positively influence customers' price perceptions. Higher quality and/or lower price enhance customers' value perceptions and affect their future purchase behavior.

Toward a More Comprehensive Theory of Business

This article has described models built for three private-sector companies and one government agency. One was an econometric time-series model. The others were cross-sectional models. The AT&T econometric model traced the path from objectively measurable levels of quality and price, through customer perceptions of quality and price at the attribute and overall levels. It showed how quality and price perceptions lead to formation of value perceptions. *Relative* value perceptions drive changes in market share. Once market share is estimated, it is trivial to translate that level (or change) into marginal revenue. This model, however, did not include two key constructs that would be of interest to most senior managers, employee satisfaction and brand image. The construct of brand image is beyond the scope of this article. The models discussed below address the construct of employee satisfaction.

The model built using Lucent data demonstrated that customers and employees see things in similar ways. The model built for PSEG echoes and expands upon the Lucent model. It suggested the importance of senior management's roles in fostering a high-performance work climate and providing sufficient resources, including training, to produce a high level of customer satisfaction. The PSEG employee driver analysis further reinforced the critical importance of the local work unit manager in creating the environment for respect and diversity, and an empowered work climate. The models built for the VA affirm PSEG's findings and suggest that there are two distinct and important benefits of a healthy, high-involvement work climate. First, it increases employee satisfaction. Second, it seems to have strong effects on the cost and speed of service. Since speed of service is often correlated to customers' perceptions of overall quality, it is possible that in a private-sector case a high-performance work climate has indirect effects on revenue via the chain of relationships described in the AT&T model. Further, by controlling for economies of scale (i.e., volume), the VA models suggest that the positive effects found apply across operations of varying sizes.

Exhibit 8 – An Emerging Theory of Business



These four models suggest that a more comprehensive “theory of the business” awaits empirical validation. The development of this larger model would require combining data that are typically analyzed in isolation from each other: employee performance and satisfaction, process performance, customers’ value perceptions, market share and profitability. We note the remarkable conceptual similarity of the comprehensive theory that seems to be emerging, shown in Exhibit 8, to the already existing categories of the Malcolm Baldrige National Quality Award: Leadership, Strategic Planning, Customer and Market Focus, Information and Analysis, Human Resource Focus, Process Management, Business Results. Within the Business Results category, prospective applicants must report four types of data: Customer-Focused Results, Financial and Market Results (e.g., market share), Human Resource Results, Organizational Effectiveness Results (i.e., process-performance results). We further note the similarity of these results categories to the four elements in Kaplan and Norton’s Balanced Scorecard framework (*Harvard Business Review*, 1992): Customer Perceptions, Internal Measures that “stem from business processes that have the greatest impact on customer satisfaction,” Innovation and Learning, and Financial Performance. Kaplan and Norton state: “Ideally, companies should specify how improvements

in quality, cycle time, quoted lead times, delivery, and new product introduction will lead to higher market share, operating margins, and asset turnover or to reduced operating expense. The challenge is to learn how to make such explicit linkages between operations and finance.” In addressing this challenge and making a chain of lagged relationships more visible, our article begins to go beyond The Balanced Scorecard and toward greater awareness of the existence of this chain.

Conclusion

Companies make trade-offs – and implement cost-cutting initiatives – via budgetary processes. The effects of these cost management actions, however, are often unknown and largely invisible. Taken together, the results presented in this article begin to make visible the chain of effects that result from resource allocation decisions. Specifically, actions that have negative effects on employee work climate and/or the performance of customer-affecting processes might be accompanied by unintended and adverse cost and revenue consequences in future periods.

In their article, “Managing Our Way To Economic Decline,” Hayes and Abernathy (1980) labeled the shortsighted, financially focused view, the “new management orthodoxy.” While the increasingly widespread implementation of the Balanced Scorecard approach provides a broader view, it does not adequately capture the relationships among resource allocations, quality levels, work climate, customer perceptions, market share and revenue. Moreover, the Balanced Scorecard might imply to some the existence of a set of trade-offs among results. Instead, as the chain of relationships among results becomes more thoroughly researched and more widely known, it is our hope that companies will move toward a managerial approach that takes the chain of effects initiated by cost management into full consideration. Such an approach would help us manage our way toward economic prosperity.

Citations

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