DATA- AND METRICS-DRIVEN APPROACH TO HUMAN RESOURCE PRACTICES: USING CUSTOMERS, EMPLOYEES, AND FINANCIAL METRICS

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Should scientific measures be used to evaluate the effectiveness of HRM practices? Can HRM demonstrate that its proposals cause a predicted outcome? If the allocation of capital within an organization is based upon projected financial returns, should HRM be required to demonstrate the expected returns of its proposals? Would the use of scientific and financial measures give HRM practices greater internal support and continuity? The authors demonstrate how metrics were used to evaluate two new HRM projects at one of the world's largest retailers. © 2000 John Wiley & Sons, Inc.

Introduction—The Allocation of Capital

A "Start-Up" Dialogue

Entrepreneur: I have an idea for a new business. I have done some customer research and put together a pro forma, and am trying to decide what my next steps should be.

Friend: How about deciding on a partner?

Banker: How about deciding how much capital you will need and how it will be allocated?

The fundamental decision every enterprise must make, no matter what stage of maturation, is the allocation of its capital and resources. When choices of strategy, expansion, acquisition, new products, and the like are reviewed, they are supported by detailed financial metrics that show the expected returns. More often than not, only those ventures that demonstrate the highest return are selected. This calculation is referred to as either a Return on Investment (ROI) or an Internal Rate of Return (IRR), which compares the cost of capital or "hurdle rate" against the return of the proposed project. In some cases, the projected cash flows of the initiative are estimated using the cost of capital as the discount rate. This method is referred to as the Net Present Value (NPV) calculation.

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An integral element to calculating any financial return is the measurement of customer perceptions and needs. As the business continues, the process repeats itself—customer input and data are assembled and analyzed; financial measures are taken; new approaches to improve product and service are tested, evaluated, and measured; and, where appropriate, additional capital is allocated to support the revised efforts to meet

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customer expectations. The process of using customer data and financial measures to plan, test, allocate, and evaluate can and should be applied to the practice of human resource management (HRM). Regrettably, it is not.

This article describes three practices that were implemented at The Kroger Co. The first used pilot studies of two proposed human resources practices that were controlled for certain factors to determine the causal connection, if any, between the practice and the measured results. The second used financial measurements to assess the real benefits and returns of these human resources practices. The third used customer data to design a selection system for new employees.

Human Resource Measurement

A human resource officer is arguing for the funding of a proposed training center. It will be a state-of-the-art facility. He has done his homework by studying training centers at other companies (benchmarks) and reviewing the setting, facility, location, curriculum, and technological appliances that will be used to enhance the learning process. The capital appropriations committee of his company inquires about the expected NPV of this new facility. He responds that such a calculation is not possible. His presentation is followed by the head of logistics who proposes the construction of a new regional warehouse for the company. Her analysis indicates it will lower overall product costs significantly and will reduce the time it takes to get product from the plant to the shelf. She has calculated a significant NPV for the facility. If the enterprise allocates capital based upon data and financial measures, who will get the money?

The field of human resource management has seldom used data (collected by scientific methodology) or financial metrics in competing for available resources within the organization. HR managers convince their organizations that turnover can be reduced if entry-level wages are increased. Accordingly, millions of dollars are expended, and turnover is reduced. The reduction, however, is only temporary because no effort was ever made to test the wage theory under controlled conditions to ensure that it actually does improve retention long term and, therefore, is worth the investment. Consequently, it comes as no surprise when other employers in the same labor market increase their wages and turnover once again increases. The untested wage theory was only a temporary solution; there was a negative return.

Traditionally, HRM has fallen short in designing its interventions—such as new employee selection, training, development, assessment and reward programs—by not providing substantive input or data to demonstrate customer needs and expectations. The decision-making process by the human resource specialist has been intuitive at best. In organizations that are willing to rely on such anecdotal support, capital has been allocated to HRM projects without support from financial measures or data reflecting customer input. If capital is not allocated based upon a disciplined application of financial measures, the ability of HRM to win unequivocal support for its initiatives is in jeopardy. Further, when revenue declines or a business crisis looms, it is frequently the HRM practices that were approved *without* financial measures or customer input that are the first to be trimmed or eliminated (see Fitz-enz, 1996).

HRM's lack of connection to the "real customers" of the enterprise is confused by its perception of employees or other internal departments as its exclusive customers. HRM measures its effectiveness by seeking input from these internal customers or by creating performance measures related to its internal work processes. Instead, HR should assess its practices based upon the expectations of the "real customers" of the enterprise. For example, if customer loyalty is based upon the ability of the enterprise to beat the prices of its competitors, HR must design compensation plans that are very cost effective and assure high productivity. If customers expect employees to have extensive product knowledge, training programs should be designed to meet this expectation. Similarly, if customers value personalized service, new employee selection processes should be instituted to ensure that service-oriented individuals are selected for employment. If HRM's link to the real customer is not apparent, its connection to the overall business strategy becomes obscured. HRM must understand and constantly evaluate the

linkage between its practices and the overall business strategy and must measure its contribution to the enhancement of sales and profits. Both Schuler (1992) and Huselid (1993) report that the direct relationship between customer satisfaction and HR practices has been proven to exist. Making HRM an integral part of the overall business strategy is vital for today's employers. According to Schuler (1990, p. 51) HR needs human resource practices with "a business issue, customer focus, and a bottom line orientation;" (see also Plevel, Lane, Nellis & Schuller 1994). The connection of HRM and business strategy is best illustrated in Figure 1 below.

By insisting on the application of financial measures and customer data to the design and evaluation of its practices, HRM will become accountable for delivering results that are integrated with the overall business strategy. HRM will be able to show, for example, the real value of practices designed to affect employee selection, customer service, turnover, reward systems, employee safety, improved methods of training, and other such interventions. These are of particular importance to companies in service-oriented environments.

Outline of the Article

Since it appears to many practitioners of HRM that measurement is either unnecessary or impossible, we describe the current state of HRM measurement. We then explain a financial measurement process that was piloted and tested at The Kroger Co., the nations largest supermarket chain with over 200,000 employees, 1,400 supermarkets, 500 convenience stores, nearly 40 manufacturing plants, and $27 billion in annual sales. The controlled pilot involved a Computer-Based Training (CBT) program and demonstrated the financial returns from implementing the CBT at Kroger. The importance of linking customer needs and expectations to employees will be discussed next. We describe a second controlled pilot program, Computer-Based Employee Selection (CBES), which the authors have instituted at The Kroger Co. It uses customer input as a means to design and, in part, measure HRM practices. This is followed by the introduction of a new framework for using financial measures and customer and employee input to design and evaluate all HRM practices, and to link these practices to the business strategy. We demonstrate that a data- and metrics-driven

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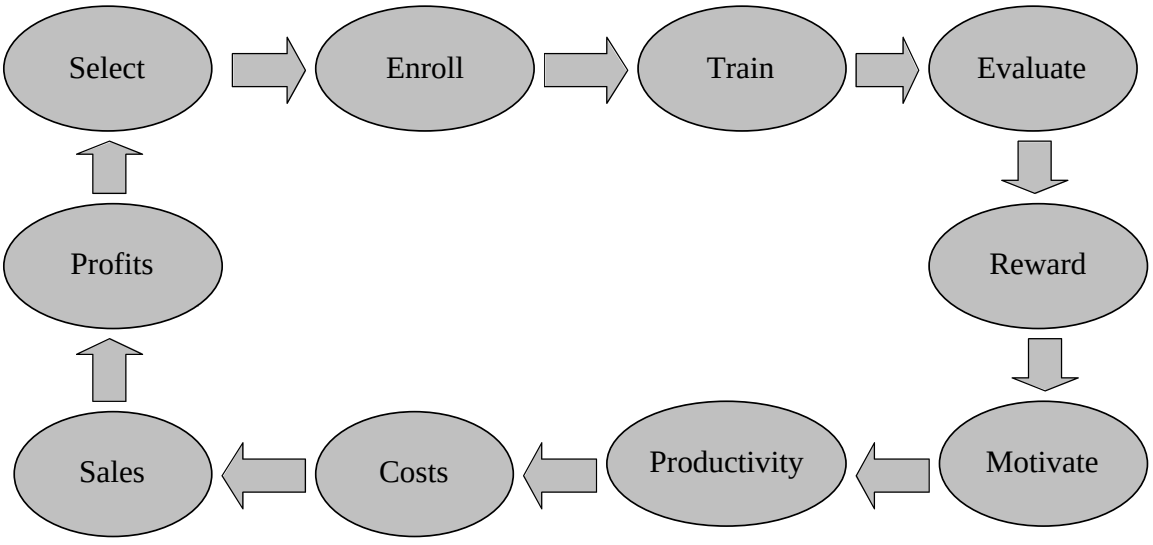

FIGURE 1. HRM's "Select to Profits" loop.

approach to HRM, which requires a five-step process, will provide the opportunity to design and deliver HRM practices that affect the bottom line.

Human Resource Measurement: Current Practice

A number of different measurement approaches have been described by various HRM commentators. For example, Fitz-enz (1995) has established a variety of work process measurements in "total quality" fashion, which can be applied to an array of human resource practices such as recruitment, selection, retention, responding to internal customers, and costing compensation alternatives and benefit options. As a result, cost per hire, retention rate, time to fill jobs, cost to train, benefit plan design alternatives, and a variety of other human resource activities are measured, providing the opportunity for comparisons to benchmarks and improvement.

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Fitz-enz (1996) has also developed a database of the above measurements and contrasted them against a set of "best practice factors" that seem to be common among companies with measurably high human resources performance standards. He notes a clear distinction between "best practices" that relate to specific interventions and may only be suitable for the particular needs of a particular company and "best practice factors" that are a set of holistic and cohesive approaches to management. Chief among the latter set of factors is "customer focus".

Becker, Huselid, Pickus, & Spratt (1997) selected a bundle of "leading edge" human resource practices and correlated them to market capitalization, thereby demonstrating through a regression analysis the "financial" significance of good human resource practices. Delaney & Huselid (1996) illustrated positive association between HRM practices (such as training and staffing selectivity) and perceived performance measures. Also, Huselid (1995) evaluated the impact of HRM policies and practices on company performance.

Ulrich (1992) noted the relationship between being a "preferred customer" and an "employer of choice". He concluded that companies, which make a strategic decision to pay close attention to both, achieved higher business results. He also urged the creation of a "shared mindset" among all company employees as it relates to, for example, customer service, quality, and team. Ulrich (1993) later argued for employee competencies that yield such a mindset to be assessed in screening new applicants.

In 1997, Ulrich developed an innovative matrix of human resource dimensions that he believed were critical to enhance the success of the enterprise. These included the human resource manager's role as a strategist, administrator, employee champion, and change agent. He encouraged human resource professionals to balance their work among these four roles and promise specific "deliverables" that will enhance company performance.

Similarly, Schneider & Bowen (1993) demonstrated the connection between a strong service orientation among employees and more positive customer experiences. Consequently, they called for enhanced human resources practices that can improve actual customer service perceptions. Their survey, taken among bank employees, showed a direct link between the employees' understanding of customer preferences and their appreciation of the bank's total human resources experiences and the customers' rating of service quality.

Rucci, Kirn, and Quinn (1998), writing about their first-hand experience at Sears, relate how they determined that employee morale was extremely low. They theorized that designing human resource interventions in response to needs assessed through employee research could have a positive impact on morale. Further, Sears learned that changes in employee morale had a direct relation to customer perceptions of their enterprise. Sears tried certain HRM practices and measured them with employee research. Those that improved employee "morale" showed a corresponding improvement on customers' perceptions. Furthermore, Sears estimated that certain increments in customer research could be transposed to measurable increases in sales and profits. Thus, Sears concluded that "investing" in improvements in employee morale had predictable financial consequences.

While all of these approaches may be useful, they are not significantly helpful in

supporting a human resource executive's request for financial backing of a particular HRM intervention. The possible exceptions are Sears and Ulrich. Fitz-enz measured activities instead of impact on customers, and Becker and Huselid showed correlation but not causation. On the other hand, Ulrich capably identified the basic dimensions of HR practice. Further, he was the first to insist that HRM must promise deliverables within a matrix that includes both tactical and strategic objectives. We believe, however, that it is no longer sufficient in some organizations to promise "deliverables" if it cannot be shown through measurement that the deliverable is causally linked to the financial result. In fact, Ulrich urges HRM to persuade line management that "soft stuff" matters. In some instances it does. Without measurement, however, we really do not know for sure, and HRM continues to be on the "soft playing field" in competing for the allocation of capital.

Sears comes closest in using metrics to connect employees to customers and linking HRM to bottom line results. It does not, however, use controlled pilots to determine which HRM practice is actually improving employee morale, nor does Sears know that a given investment in that practice will, in fact, cause an increase in sales and profits. It also does not use customers first to design its business practices. Improvements in employee morale are simply linked to customer satisfaction.

In the CBT and CBES projects at Kroger, we have gone farther. We have used financial measures to pilot and evaluate HRM practices—pilots under controlled conditions to establish proof that the intervention caused the change in financial measures and customer input to design and evaluate the HRM practices. We also are establishing a five-step data and metrics driven process that incorporates these concepts and can be used to make HRM accountable for delivering bottom line results.

Measurement at Kroger—The First Effort: Computer-Based Training

While logic would dictate that the first step in the design of a HRM practice would be to include customer input and then establish measurements, we started with the latter. We hypothesized that CBT is a better and more cost effective way to train new cashiers. With almost 100,000 new hires each year, CBT presented a perfect opportunity to demonstrate the utility of using metrics to measure its effectiveness and, thereby, justify the allocation of capital to support its widespread introduction within the company. We used controlled pilots and identified several potential performance improvements that we could attribute to the particular (cashier training) CBT courseware:

- improved customer service
- reduction of training costs
- improved employee retention
- consistent training message
- enhanced productivity

We used pilot programs in 20 test stores. Three baseline measurements were taken: training time and costs, elapsed time to achieve high productivity, and transaction accuracy. Although the pilot stores using CBT did show a reduction in turnover, we did not use this in our evaluation because we could not control for other factors relevant to turnover. CBT produced a more "consistent" training message, but we were not sure how to measure the financial consequence of this value. The pilot was developed to determine whether a significant expenditure of capital on in-store personal computers and software could be justified. The CBT trained cashiers were contrasted with traditionally trained cashiers. We used relevant and historic cost and productivity data from the same pilot stores.

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At the conclusion of the pilot, the data showed a significant reduction in training costs as shown in Table I. Further, CBT cashiers achieved benchmark productivity targets (items scanned per minute) in a significantly shorter time period. Also, mystery shopper interventions demonstrated that CBT cashiers were more capable of handling complex transactions accurately and without the assistance of other personnel. With the use of controlled pilots, we were able to demonstrate that financial results were in fact caused by the new CBT. In addition, our metrics demonstrated that, together with the projected introduction

of additional software applications in other service areas, CBT produced a significant ROI (see Table 1). As a result, capital was approved for the project.

Kroger now has CBT for cashiers installed and running in most of its markets and new courseware on safety, employee orientation, and other subjects has been approved and is being tested and installed. In this case, HRM (with help from Finance and MIS) used the same metrics as others seeking capital and won approval for the allocation of resources.

We then looked for an opportunity to measure interventions that would increase revenue and service enhancements that, in turn, drive sales improvements. We moved to our next project, employee selection. Armed with the successful application of financial measurement to an HRM practice, we looked at the problem of improving the quality of new hires. An organization cannot train, for example, unfriendly people to be friendly. We wanted to improve our selection process in order to enhance the effectiveness of courtesy and service training. Also, we needed a system that was both cost-effective and measurable. We agreed that a computer-based and self-administered employee selection system was the answer.

TABLE I **CBT Measures in Pilot and Control Stores.**

(A) Resources Needed to Train	(B) Cashier Productivity	(C) Transaction Accuracy & Self Sufficiency
Number of trainee hours	*Scan rate of items*	*Produce recognition*
Number of trainer hours		*Transaction complication*
Number of "buddy" hours		*Tender complications*

Using data quantifying the above three categories, we made the following measurements and conclusions:

(1) After a six-month test, we learned that the number of trainee hours, number of trainer hours, and the number of "buddy" (fellow employees who monitor new cashiers) hours needed to complete checker training were fewer in the Pilot stores than in the Control stores. Thus, the cost to train under CBT was lower than the traditional checker-training program.

(2) We also learned that CBT-trained-cashiers in the Pilot stores had higher rates of productivity than did the traditionally trained cashiers. Within a shorter period of time, their "scan rate" was higher. Finally, we determined that the CBT-trained cashiers in the Pilot stores were able to better recognize produce that had to be identified and weighed at the check stand, and that more CBT-trained cashiers at the Pilot stores could handle complex transactions, cash, food stamps, checks, and other "tender" complications without time-consuming assistance from the office. We converted these findings to costs and measured a Return on Investment.

(3) We compared the initial CBT/ROI to the ROI of other capital investment opportunities and won management approval to install CBT in many of our markets. New and relatively inexpensive courseware on such topics as safety, service, and orientation are being added to the CBT program, thus, further enhancing the return.

(4) One might consider that in future applications it would be more appropriate to use Net Present Value (NPV) calculations to measure the financial impact of HRM interventions. In such a case, the organization would use the appropriate discount rate, which is its cost of capital. This rate is, in part, based upon opportunity costs and risks. These factors, when applied to projections for new facilities, may not be particularly relevant to HRM interventions. Perhaps companies wishing to use NPV as a metric could develop discount rates that are based upon training and other investments designed to enhance service as opposed to using traditional capital allocations. We leave this for further study. We also note that with CBT we primarily measured cost savings.

Using a structured interview to improve selection was not enough. We had used similar methods in a number of markets over the years, and they proved to be very time consuming. Numerous personnel needed to be trained and certified as expert interviewers, and each interview took 45 minutes of management time. Except for an analysis of equal employment opportunity (EEO) impacts, the process was not evaluated with any scientific measurements. Thus, while touted by some regional Kroger HR managers, one could not logically conclude, for example, that there was a causal relationship between the new selection system and the changes in turnover. Accordingly, in some markets the new selection process was abandoned when sales fell and expense reduction programs intensified. We concluded that any new employee selection program should be self-administered by a prospective employee at a personal computer. No such software was available.

Moreover, the traditional structured interviews were designed to detect competencies that were identified either by company peers or management or were drawn from the experience of expert behaviorists. Customer expectations with respect to employee behavior were ignored. We concluded there were two deficiencies in the current selection practice: the lack of real measurement and the lack of customer input into the design of such selection instruments. Using customer data was both novel and compelling.

Linking Customers to Employees

Why Customer Data Is Critical: The Rationale

Employees are generally the most important link between any organization and its customers. Thus, the characteristics of the workforce are of paramount importance to the advancement of organizational objectives and their success. This requires each organization to assess its selection processes in order to be successful. Depending on organizational needs and labor market conditions, firms have utilized the following in the hiring process: application forms and historical references, unstructured and structured interviews, and tests to assess certain competencies. The validity of these alternatives is questionable without scientifically linking them to customer satisfaction and measuring their impact on bottom line results.

We designed a new approach for the selection process—one that uses both customer input and is measurable. It represents an opportunity to inextricably link HRM practices to the business strategy by improving customer service and achieving measurable financial results. The cause and effect, however, of this new approach must be demonstrated by data and scientific methods. Financial measures must be used to justify the allocation of capital for its support.

The success of any organization should be based not only on the loyalty and commitment of the employees but also on the employees' awareness of the customers' needs and expectations. It is evident from HRM literature and our own direct experience in the profession, that most human resource specialists believe gauging the needs and desires of customers (except, perhaps, "internal customers") is beyond their domain and expertise. While extensive customer data has been developed by the enterprise to improve its sales, merchandising, and service objectives, HRM specialists generally do not use the data available to design or measure their practices. Some do use the data to train and develop employees. Many, however, are simply not in touch with the "real customer" and do not consider the potential to use and measure customer satisfaction in the design and evaluation of their HRM programs. The time has come for HR specialists to link their practices to customer data and to evaluate them with financial measures. A balanced approach—where customers, employees, financial results, and business development can be bundled in an HRM strategy that is measurable—is both necessary and viable (see Kaplan and Norton, 1996). We firmly believe use of such input can improve sales, service, productivity, and the overall financial performance of the organization.

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The traditional avenues of gathering information from other sources such as benchmarks, internal customers, and employees are no longer appropriate for the goals of the human resource specialist. We believe HRM must insist that new

data, more specific to customer perceptions, be generated that will assist in the design and measurable evaluation of new HR practices. The customer should be the centerpiece of many HR and labor relations strategies, policies, and practices.

For example, a labor relations strategy should be initiated by examining customer data. The first questions in developing a strategy should be "What do the customers want from our workforce, and how is the labor agreement supporting or blocking their expectations? How can new ideas be incorporated to make sure that HR practices are enhancing customer service?" From there, negotiating strategies can be developed. Customer data must lead the business strategy, and HRM must insist on its use within its own discipline. Metrics should be the ultimate evaluator of success.

Our plan, called "*Linking Customers to Employees—a Data and Metrics Driven Approach*", will minimize management's guessing about customer needs and expectations and will demonstrate the cause and effects of various practices and interventions so as to validate their effectiveness and justify their financial support. It will work for organizations of all sizes; however, it is most effective for organizations that require high levels of customer service. Once we provide an outline of our approach, it should become evident that organizational norms vary across geographic regions and variations may be necessary. Customer satisfaction and needs may differ in other locations.

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Linking Customers to Employee Selection

Accepting this rationale, the authors—together with colleagues from Kroger's HRM field offices and the consumer research and finance departments—developed a plan to pilot the use of a new computer-based employee selection system. The plan was unique because it used a software based structured interview and included new and specific customer input in its design. Two different consulting firms with extensive experience in statistical customer and employee research were retained to develop the software for the CBES pilots.

Because of the introduction of CBES, user-friendly software suitable for interactive entry level employee utilization had to be designed; it had to incorporate customer expectations of employee behaviors. For this purpose, Kroger's research department was requested to develop a new customer research format that would provide the needed data for our new software. This new survey was utilized to identify employee competencies assessed by the structured interview and to serve as a baseline measure used to determine the precise impact of CBES with respect to customers. The controlled pilot was set up to compare baseline versus pilot financial measurements as a means to evaluate its success. The stage was set, but a special focus had to be placed on the new element of the structured interview, "Customer Satisfaction".

Utilizing and Measuring Customer Satisfaction

The most difficult challenges an organization faces are (1) identifying the needs and expectations of its customers, and (2) selecting and training its workforce to fulfill and sustain customer loyalty. To quote one of Kroger's division presidents, "We need to not just satisfy the customers, we need to cause them not to want to switch to our competitors." If this task is conducted correctly, it will reward the organization and its shareholders.

Customer data can help drive many aspects of the organization—its culture, its structure, its mission, and the behavior of its employees. Only the specific tactical choices to meet customer expectations need be passed on to the managers and employees. Non-supervisory personnel are the organizational bridges to customers. The employees should be indirectly selected by customers and trained in accordance with their needs, taking into consideration EEO and safety regulations.

For an organization to succeed, we believe an index of customer satisfaction must be created and incorporated into the design of an employee selection process. Such an index allows incorporation of organizational specific norms for the selection of employees. We believe the index of customer satisfaction is the key to organizational success as it assesses its performance and customer base.

The notion of customer satisfaction is not new (Berry, 1995; Schneider-Bowen, 1995; Heskett, Sasser, & Schlesinger; 1997); however, its scientific application for employee selection and training is both new and unique. The definition of customer satisfaction varies among organizations. It should be apparent that organizations are confronted with a variety of customers that necessitate different levels of customer satisfaction. The parameters, and their values across the spectrum of customers, vary greatly even within an industry. Thus, one has to measure an index of "customer satisfaction" for each general type of customer. For example, the measure of "customer satisfaction" in the airline industry is highly sensitive to the class of service. In the grocery industry, it is highly sensitive to the location of the store and the demographics of the customer base. The index of customer satisfaction is unique to each organization and its clients. We do believe, however, there is some overlap in identifying this index within and across industries. For example, we believe in a service-oriented environment where customers have identified the following behavioral characteristics and attitudes as desirable:

- Customers should be greeted in a friendly manner.
- Employees need to be attentive to customers and their needs.
- Employees should limit personal conversations among themselves.
- Employees should not complain about their jobs to the customers.
- Employees should demonstrate that they enjoy their duties.
- Employees should be informed and cooperative in responding to questions.
- Employees should be attentive to cleanliness and safety.

We suggest that each organization conduct a scientific survey of its customers relevant to its industry and gather information regarding different dimensions of customer service and satisfaction. Once this information is collected and systematically arranged, various hypotheses regarding required knowledge, attributes, and other competencies that affect the performance of a potential employee can be formed. Most human resource specialists believe they know the desirable characteristics of an ideal employee; however, these characteristics may not be the same as those preferred by the customer. Many HRM specialists consider discipline, pride in work, assertiveness, responsible, team player, personable, safety conscious, trainable, etc. as characteristics that should be considered in evaluating a prospective employee. Determining what behaviors the customer expects can serve to be a more powerful tool in identifying the most important characteristics to meet service expectations and organizational goals simultaneously.

The identification of the individual characteristics by a HRM specialist should be done scientifically. There are a number of approaches. One can use industry norms or conduct an internal evaluation of the existing workforce to identify the desirable features. The latter approach has some inherent danger if a scientific approach is not used; thus, internal evaluation might not be the best for some organizations. At Kroger, we used the gathered information from customers in our approach to employee selection.

Most human resource specialists believe they know the desirable characteristics of an ideal employee.

From Theory to Practice—Computer-Based Employee Selection at Kroger

Having developed a suitable Customer Satisfaction Index for Kroger markets, we were ready to begin the pilot of a new CBES program. Based upon our previous experience with structured interviews of entry-level store employees, we hypothesized that a new CBES program could have several positive impacts. As we have mentioned, our earlier efforts did not utilize a computer-based (self-administered) process, nor did we incorporate customer input in determining the qualities needed by entry-level employees. Also, we did not use any measurements to establish the impact on the business. Accordingly, in our new venture, we established a number of indices that are amenable to financial measures: Customer Service, Service Knowledge, Safety Index, Tenure, Validity/Candidness, and Accuracy.

These are being used to create an Employability Index for the CBES program. Customer

input is vital in this process and influences all other indices. For example, if customers require a safe place to shop, this can be incorporated into the selection process. Each of the indices listed above gauges a number of items relevant to the knowledge, skills, aptitude, and personality of the job candidates. It is clear that behaviors of potential candidates need to be assessed in an unbiased manner. One's thought process, tolerance for customers and job-related stress, and self control are important items that need to be incorporated into the decision-making process. Each of the items noted above varies under unique organizational situations. The job-related attitudes are the best proxy for on-the-job behavior of potential job candidates.

Our experiences with CBT and CBES have led us to conclude that there is a broader spectrum of HRM activities—more than just selection and training—which should be incorporated into this data- and metrics-driven process.

The pilot covered a nine-month period and involved 90 stores across several regions in the United States. Prior to the implementation of CBES, we conducted scientific customer surveys considering a wide range of customer-related issues in all the pilot stores. We formalized and arranged the data and correlated our findings with a number of behavioral attitudes and characteristics of potential employees. These helped to identify a number of important factors in creating our psychometric scales for the purpose of employability.

This structured interview or survey was conducted interactively on a computer. Prospective entry-level employees within the pilot stores were directed by management to complete the survey on the computer. Store management then received one of the following recommendations from the system:

- Recommend to hire
- Qualified recommend to hire
- Not recommended
- Invalid

For the purpose of evaluation, three financial metrics (both baseline measures and post pilot) were considered in this study:

1. Customer service perceptions at each store
2. The turnover rate (measured in rate and cost using Activity Based Costing)
3. Employee safety (measured in accident rate and cost)

We also can measure and contrast baseline store profitability and other financial items, but the above three were considered most likely to be directly affected by an improved selection system.

At the conclusion of the pilots and the gathering of the data, these financial measures will be used to determine what impacts, if any, the new selection system has had. It will enable us to determine whether an allocation of capital for store computers, software, and a full-scale CBES initiative is justified.

Our measurement also used a controlled pilot system to make sure that it was the HRM intervention, in this case CBES, that was directly causing the change in baseline measurements. We used three categories of stores to form pilot groups: (1) stores that offer the survey and use the results for selection of new employees; (2) stores that offer the survey but do not receive feedback nor use the results for selection of new employees; (3) stores that use the traditional approach in hiring. A number of factors such as store sales volume, accident rates (employee and customer), profitability, and store location were used in the selection of pilot stores and their assignment to different groups. As evident from our grouping, a number of important items could be monitored and contamination of our observation was minimal.

At this point, we are not sure what results will come from CBES, but at the end of the pilot period we will be certain of our hypothesis concerning CBES. Either it will or will not demonstrably improve selection and affect financial measures. If these cannot be shown, other strategies and HR practices should be considered.

Linking Customers to Employees—A Data-Driven Approach

Our experiences with CBT and CBES have led us to conclude that there is a broader spectrum of HRM activities—more than just selection and training—which should be incorporated into this data- and metrics-driven process. Using customer data to design and evaluate HRM practices and scientific methods to link the cause and effect of the practice to the result provide a sound basis to evaluate the process

and predict its financial returns. This can then be used to support a clear and sustained justification for the allocation of capital. We now have an HRM process that incorporates the use of customer data, metrics, employee data, controlled pilots, and a continuing evaluative methodology. We believe it is applicable to most, if not all, of the HRM practices (select, enroll, train, evaluate, reward, motivate, enhance productivity, reduce costs, improve sales, and increase profits) listed in Figure 1. There are five major steps in our data driven methodology:

1. Assess and measure customer perceptions of employee services. How does the organization measure up? What are the gaps? This process involves the use of extensive customer research.
2. Determine from employees what the barriers and opportunities are to meeting customer expectations of service. Here we recommend an intensive use of employee research instruments that cover all levels of the organization.
3. Based upon the research, develop and prioritize one or more HRM activities (e.g. recruitment, selection, orientation, training, reward, motivation, and development) that could lead to improved customer service. This is where the HRM professionals and others within the organization develop specific strategies and action plans to respond to the expectations of the customer and the issues raised by the employees.
4. Pilot and test actions under controlled conditions to determine which practices work and which do not. Hypothesize potential financial returns and set baseline measures. Measure results of pilots against baseline financial metrics and customer research. Use controls to make sure the practices have a causal relationship to the changes in baseline measures.
5. Implement the successful practices and those with financial returns, reinforce the behaviors that support them. Continue to measure customer perceptions and employee behaviors.

Based upon our experience at The Kroger Co., we believe the application of this data driven approach should enable HRM to make successful, strategic contributions to their enterprise. HRM can positively affect service, productivity, sales, and profits. It can unequivocally demonstrate that its practices are having a direct impact on the bottom line and are providing the organization with a competitive edge. Using data identifying customer perceptions and expectations to drive, design, and to scientifically measure these practices will assure senior management that such

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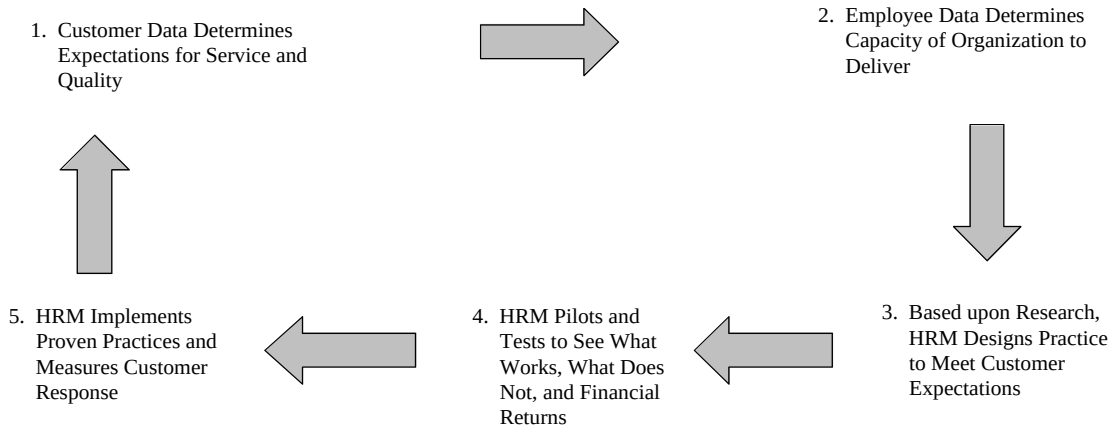

FIGURE 2. Linking customers to employees: A data and metrics driven approach.

practices must be supported and sustained. This process is shown in Figure 2.

Conclusion

We have demonstrated that our data and metric driven approach transforms HRM from a unit that uses intuition and hunches and relies on benchmark practices from other companies, to one that directly links its interventions to customers and employees, and that evaluates its work with scientific and financial metrics. Within the organization, the process will put HRM on the same plane as other departments that are competing for capital. It will also ensure a total and lasting commitment by the organization for those HR practices that are supported by a data driven process.

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