

# MEASURING HUMAN RESOURCES: AN OVERVIEW OF PRACTICE AND A PRESCRIPTION FOR RESULTS

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*Many talk about measuring human resources (HR), but get lost because the issues are confusing. What to measure? How to measure it? When to measure? Where to measure? These questions make measurement of HR difficult. This article reviews the history of HR measurement; summarizes how HR measures may be done for professionals, practices, and functions; and offers specific guidelines for improving HR measures. © 1997 John Wiley & Sons, Inc.*

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## Introduction

Do human resources (HR) practice make a difference in business results? For HR professionals to become business partners, this question must be faced head-on. An old business maxim suggests, "You cannot manage what you cannot measure." Imagine the following scenario. An HR executive is part of a senior management team in a planning setting. The General Manager asks for input on what the plans should be for the business. The finance Vice President reports the economic requirements of the business and talks about key financial indicators, including: inventory, margins, product turnover, revenue, expenses, debt, and other financial indicators of success. The marketing Vice President reports the customer requirements of the business and talks about measures of customer service, market share, customer focus groups, customer retention, and other indicators of customer satisfaction. The technology Vice President reports on indicators of emerging technologies, cycle times for product introduction, and research and development budgets and investments. The manufacturing Vice President re-

ports operating efficiencies, product quality, and volume indicators. What measures does the Vice President of human resources bring to this table?

Traditionally, the HR executive could talk abstractly and conceptually about employee morale, turnover, and commitment. To fulfill the business partner role of HR, concepts need to be replaced with evidence, ideas with results, and perceptions with assessments. This article shows how and why HR adds value to business decisions. First, evidence is emerging which demonstrates the impact of HR practices on business results. Second, HR issues are being woven into business measures around a balanced scorecard. Third, HR assessments are being carried out on practices, professionals, and departments or functions.<sup>1</sup>

*To fulfill the business partner role of HR, concepts need to be replaced with evidence, ideas with results, and perceptions with assessments.*

## Linking HR and Business Results

*The 1980s: Initial Studies on HR–Business Results*

The relationship between HR practices and business results is built on a rather simple

premise: better deployment and use of HR practices should correlate with higher business results. While many early strategy HR writers assumed this relationship, relatively little evidence existed to actually test it<sup>2</sup>; in the 1980s a number of such test efforts were made (Devanna, Fombrun, Tichy, 1981; Dyer, 1984, 1985; Fombrun, Tichy, Devanna, 1984).

Susan Nkomo examined the correlation between how much firms invested in HR planning processes and business results. She found no correlation; investment in HR planning did not correlate with business performance (Nkomo, 1987, 1986). Dave Lewin and his colleagues (1988–1989) published similar results from their large scale survey of HR practices and financial results sponsored by the Department of Commerce (Delaney, Lewin, & Ichniowski, 1989; Delaney, Lewin & Ichniowski, 1988). Both of these studies were based on cross-sectional survey data.

At the same time, a research project called Organization and Strategic Information Service (OASIS) was undertaken as a joint venture among Strategic Management Associates (who created the PIMS database), Hay Consulting, and the University of Michigan. This project began with the PIMS database, one of the world's largest and most complex databases on business environment and strategy, and added organizational factors to it (Ulrich, Geller, & DeSouza, 1984; Cowherd & Kaminiski, 1986). The results of OASIS showed some relationships between specific HR practices (e.g., distribution of compensation systems) and business results, but they did not produce overall indicators of how HR practices affect business performance.

Two large-scale surveys involving many organizations were conducted to find such relationships: Survey 1—between strategy and HR, and Survey 2—between HR and financial performance. In Survey 1, Randall Schuler and Susan Jackson collected data from a large cross section of firms and showed how under different strategic conditions, HR practices would vary (Jackson, Schuler, & Rivero, 1989; Schuler & Jackson, 1987; Schuler, 1987). This work presented empirical evidence of the strategy-HR alignment, but did not then link this alignment to business results. In Survey

2, Arthur Yeung, Wayne Brockbank, Dale Lake, and I found that HR practices not only varied by strategy, but that the alignment of HR and strategy had an impact on business performance (Ulrich, Brockbank, Yeung, & Lake, 1993; Yeung & Ulrich, 1990). Among other findings, we discovered that under environmental conditions of low change, attention to HR practices had little impact on business results, but under environmental conditions of high change, executive attention to HR practices had a large impact on business results.

The conclusion from these studies, carried out and repeated in the 1980s, is equivocal. HR practices seem to matter; logic says it is so; survey findings confirm it. Direct relationships between investment and attention to HR practices are often fuzzy, however, and vary according to the population sampled and the measures used.

#### *The 1990s: Extended Assessment of HR Practices and Financial Performance*

The interest in quantifying the impact of HR practices on financial performance has led to a number of studies which linked the impact of HR practices to specific firm outcomes. Turnover, for example, has been linked to job security, presence of a union, compensation level, culture, and demographics (Arnold & Feldman, 1982; Baysinger & Mobley, 1983). Productivity has been linked to HR practices of “transformational” labor relations (those emphasizing cooperation), quality of work life programs, quality circles, training, extensive recruiting efforts, and incentive compensation systems (Cutcher-Gershenfeld, 1991; Katz, Kochan, & Keefe, 1987; Weitzman & Kruse, 1990). Investments in various HR practices have been linked to firm financial performance, such as: training (Russell, Terborg, & Powers, 1985), selection and staffing (Terpstra & Rozell, 1993), appraisals (Borman, 1991), and compensation (Gerhart & Milkovich, 1992).

Other studies have focused on HR practices and financial performance in specific industries. Studies have shown relationships between progressive HR practices and firm

performance in manufacturing (Delaney, 1996), cooperative and innovative HR practices and organizational productivity in steel plants (Ichniowski, Shaw, & Prenzushi, 1993; Arthur, 1994), and bundles of integrated HR practices and higher productivity and quality in automotive plants (MacDuffie, 1995).

While this research has grown and shown relationships between HR practices and firm results, the bulk of the research focuses either on individual HR practices or on individual industries. More recently, two major research studies have advanced the rigor and thinking about HR and business results.

*Society for Human Resource Management/CCH Study.* Under the direction of Dr. Cheri Ostroff, Associate Professor at the University of Minnesota's Industrial Relations Center, the Society for Human Resource Management (SHRM) and CCH Incorporated contracted for a study to evaluate the financial impact of HR practices (CCH, Inc., 1995). This research has resulted in a number of both general and specific findings about HR in general and the relationship between HR and financial performance in particular. In general: (1) HR professionals see HR issues as important to business performance; (2) line managers should be responsible and more involved in HR practices; and (3) use of HR practices varies widely. An overall quality of HR index was also developed for each firm based on the aggregate ratings of all HR activities adopted by the firm. This quality of HR index was related to four financial measures: market/book value (market value of the firm based on stock price divided by firm's assets, which represents "value added" by management), productivity

(dollar value of sales divided by number of employees), market value (stock price  $\times$  outstanding shares), and sales. All four financial measures increased dramatically with the quality of HR practices (see Table I). These data clearly indicate that when HR professionals perceive a higher quality of HR practices, these firms have higher business results.

In addition, specific results were generated when firms were clustered into five groups or types of HR users:

- *Comprehensive HR:* These firms incorporate the full spectrum of HR practices.
- *Traditional HR:* These firms use HR practices for hierarchical monitoring and control of employees.
- *Involvement HR:* These firms use HR practices to increase skill levels, involve workers in jobs, and increase feelings of personal achievement.
- *Identification HR:* These firms use HR practices to increase employee identification with the firm.
- *Little HR use:* These firms pay little attention to HR practices.

*More recently, two major research studies have advanced the rigor and thinking about HR and business results.*

Each of these clusters relates to particular business strategies. Firms with a comprehensive HR system tend to have high business results regardless of business strategy. Firms with an innovation strategy are likely to be more successful with an involvement set of HR practices. Firms with a cost strategy are likely to be more successful if they use comprehensive HR practices.

*HR Practices and Company Financial Perfor-*

**TABLE I** SHRM/CCH Study of HR Quality and Business Results.

Performance Index	Quartile of HR Index			
	Bottom 25%	Second 25%	Third 25%	Top 25%
Market/book value	0.15	0.23	0.24	0.40
Productivity index (output/employee)	0.16	0.17	0.20	0.21
Market value	878	1250	2031	3667
Sales	1017	1598	2090	4420

Source: CCH Incorporated, 1995. *Human Resource Management: Ideas and Trends in Personnel*, Issue 356.

*mance*. A comprehensive study of the relationship between human resource practices and firm performance was undertaken by Mark Huselid, a Professor at Rutgers University, and his colleagues. They drew on research which identified high-performance work practices across a number of firms. They worked to show relationships between HR practices and financial performance of large (more than 100 employees) publicly traded firms. Data were ultimately collected on 968 firms (28% of those sampled).

They then examined the impact of higher work performance practices on three organizational performance measures: *turnover*, *productivity*, and *financial results*. For *turnover*, they found that a one standard deviation increase (about 25%) in work performance reduces turnover 7.05% on a per employee basis. For *productivity*, they found that each standard deviation increase in work performance practices equaled a 16% increase in productivity (measured by sales per employee). In raw numbers, this meant \$27,044 sales per employee, since the average sales per employee in his sample was \$171,099. For *financial* performance, a one standard deviation increase in work practices yielded \$27,044 in sales, \$18,641 in market value, and a \$3,814 increase in profits.

While their research does not specify which management actions most impact these financial outcomes, their findings are compelling. They demonstrate that the confluence or set of HR practices used by a firm clearly relates to firm outcomes of turnover, productivity, and financial performance. There may be many intervening variables, but this type of empirical assessment demonstrates that HR practices do relate to firm results.

#### *Summary: HR and Business Results*

The current work by Ostroff and Huselid and their associates is moving beyond conjecture and results based on sample selection. It is beginning to move the HR profession toward a sound empirical base. Evidence now exists to show that investment in HR practices impacts business results, both financial results and the market value of firms. These overall findings

provide the basis for continued exploration of HR measurement issues.

### **Human Resource (Employee) Measurement as Part of Balanced Scorecard**

Every business has multiple stakeholders or groups of individuals with whom a business must interact to carry on business. Stakeholder models are not new; they have been used in strategic thinking literature for many years (Freedman, 1985). In recent years, however, the stakeholder model has been translated into what has been called a balanced scorecard (Kaplan & Norton, 1992, 1993).

The balanced scorecard is built on the logic that for a business to be considered successful, it must satisfy the requirements of three stakeholders: *investors*, *customers*, and *employees*. *Investors* require financial performance, measured in a variety of ways but focusing on economic profitability, market value, and cash flow. *Customers* who use products require quality and service, which can be measured through market share, customer commitment, customer retention, and other customer-focused issues. *Employees* of a firm want that firm to be a healthy place to work as measured by employee and organizational actions.

A number of firms have begun to use the balanced scorecard to assess overall business performance. As they have done so, of the three stakeholders, employees are often the most difficult to measure specifically. Employee measures are often less accepted and less rigorous than are investor and customer measures. As a result, much experimentation is occurring in integrating employee measures into the balanced scorecard. Generally, this experimentation can be categorized into three efforts which measure: productivity, people, and process. This logic is laid out in Table II.

#### *Productivity*

Productivity measures generally take the form of output divided by input. Output may be any of a number of indicators of what a business

**TABLE II** Balanced Scorecard.

<i>Investor</i>	<i>Customer</i>	<i>Employee</i>		
		<i>Productivity</i>	<i>People</i>	<i>Process</i>
		Ratio: output/input	Feel, do, know	How we get things done
		Revenue per employee	Satisfaction	Leadership
		Cost per employee	Commitment	Innovation
		Units produced per employee	Competence	Speed/cycle time
		Profit per employee	Turnover/retention	Learning
			Grievance	Unity/shared mindset
			Absenteeism	Equity

is trying to produce, such as revenue, profit, units produced. Common input measures are time, labor, or other resources used in producing goods or services.

Productivity measures, as part of the balanced scorecard, generally rely on some indicators of output per employee. Employees may be measured by head count, labor hours, or compensation. As already discussed, Huselid et al. used revenue per employee as an overall productivity measure. This measure would vary by industry, of course, with some industries much more labor intensive than others. In addition to broad productivity measures, specific industry productivity measures may be used as part of the balanced scorecard. For example, financial services productivity may be measured by transactions per employee; automotive or manufacturing productivity may be measured in cars or other output per employee; retail productivity is often calculated by revenue per employee, and store or firm comparisons may be made.

The advantages of productivity indices as measures of employees on the balanced scorecard are that the measures are relatively simple, understandable, and comparable across firms within an industry. The weakness is that productivity measures may not be true indicators of employee competence. Productivity numbers may also mask factors other than employees. For example, automobile factories with high technology investments may have higher output per employee scores but not have more capable or committed employees. Finally, productivity measures do not translate

easily into management actions; they are ends, not means.

#### *People*

Measuring people as part of the balanced scorecard may be done by assessing what people do, how they feel, and what they know. These measures relate the response of employees within an organization to the policies and practices of the organization.

*What People Do.* Behavior reflects attitude. How employees behave has been tracked in a number of different ways, the most common of which are turnover, absenteeism, and time analysis. Turnover, or retention, may be used to indicate employee commitment. Conceptually, when employees are dissatisfied with a business, they may show their dissatisfaction by leaving voluntarily. More subtle insights on turnover focus on retention of the right talent, on managing the replacement process so that critical jobs are filled quickly, on identifying the causes of turnover through exit interviews, and on tracking the impact of turnover on continuity of firm goals. Research has shown that high turnover of critical people is costly to the firm not only in terms of replacement, but in terms of shared values and continuity (Phillips, 1990). Absenteeism and grievances may also be indicators of employee attitude—showing a sense of employee commitment (or lack thereof) to the overall firm, to a particular supervisor, or to the policies within the firm.

*The balanced scorecard is built on the logic that for a business to be considered successful, it must satisfy the requirements of three stakeholders: investors, customers, and employees.*

*Employee survey data become useful for the balanced scorecard when the numbers are credible, longitudinal, and result in action.*

*How People Feel.* Probably 80% of the Fortune 500 use some form of morale or attitude survey to track how people feel about their work. These surveys can be tailored to a specific business or can be generic to allow comparison across companies. Employee survey data become useful for the balanced scorecard when the numbers are credible, longitudinal, and result in action. Sears, for example, has for years used an employee attitude survey, "My Opinion Counts." When the leadership was creating its balanced scorecard for executives, their historical database was used to identify two factors embedded within this scale (employee attitude about the particular job and employee attitude about the company overall). The designers were then able to identify specific items from the opinion survey which could be used credibly in the balanced scorecards.

*What People Know.* A third measure of people may come from identifying their knowledge or competencies. At a generic level, I have worked with a company to identify the top 100 jobs in the company. I asked how many people below the top 100 would be qualified to move immediately into these 100 jobs. This measure is an indicator of employee backup and depth. As this measure was tracked over time, a change from approximately 3:1 (three backups for each of the 100 jobs) to 0.7:1 (less than one backup for each of the 100 jobs) was observed. While broad and incomplete, this backup measure indicates the bench strength within a firm.

#### *Process*

Measuring processes as part of the balanced scorecard focuses less on people and more on the systems and dynamics within the firm. Since the employee dimension of the balanced scorecard emphasizes the organization and people components of a business, the processes related to organization and people may also be tracked. Three examples show the types of processes which may be tracked.

*AT&T.* AT&T began the balanced scorecard in 1994. In this effort, the company leaders track economic value added (EVA) by measur-

ing financial results such as cash flow, profitability, and margins. They also track customer value added (CVA) by doing continual surveys of both internal and external customers. To measure people value added (PVA), they decided to focus on two processes, leadership and diversity.

Table III summarizes the survey that is used in AT&T Network services to track how employees perceive the leadership and diversity processes within their business. These data are collected annually for each business unit or division. The scores are calculated as part of a manager's balanced scorecard and are used in calculating salary increases.

*General Electric.* While GE does not use the term "balanced scorecard," it does in fact keep one. In 1993 at the annual senior managers' meeting in Boca Raton, Jack Welch, the Chairman, talked about the GE 2 × 2. This matrix, shown in Table IV, was used to demonstrate that GE was concerned about two dimensions of managerial behavior: performance and values. Performance dealt with the extent to which the manager accomplished financial objectives. Values dealt with the ways in which the manager behaved.

Managers in Cell 1 (low performance/low values) and Cell 4 (high performance/high values) were easy to deal with. Cell 2 (low performance/high values) and Cell 3 (high performance/low values) were more challenging. Welch pointed out in 1993 that managers in Cell 3 were generally rewarded because they met their numbers, even if they did it without using the GE values. He also stated in 1993 that this practice would end at GE. He denoted that in 1992, five GE officers had been replaced, and four out of the five had met all the financial targets they were given; they were replaced because they were not practicing the GE values. He said that managers in Cell 3 would not be tolerated and that managers in Cell 2 (low performance/high values) would be given a second chance to learn to meet the financial goals.

The challenge that this statement presented was how to measure the extent to which GE leaders lived the values. The GE Leadership Effectiveness Survey (LES) was devised to describe the eight GE values behaviorally. This instrument has 48 behavioral-

**TABLE III** AT&T Network Systems: PVA (People Value Added) (Sample Survey Items).*Leadership*

I believe I have a good understanding of the goals and objectives of:

- A. My business unit or division
- B. AT&T

Business unit/division management generally understands the problems we face on our jobs.

All things considered, how would you evaluate the overall job your business unit/division's management is doing in the following areas:

- A. Stating organizational objectives clearly
- B. Providing leadership
- C. Communicating with its people

There is good communication between:

- A. My group and other groups in my organization
- B. My business unit/division and other AT&T business units or divisions

People are treated with respect in this company, regardless of their level.

Most of the time, it is safe to say what you think in this company.

My organization has established a climate where people can challenge our traditional ways of doing things.

I have the authority to make decisions and take actions to meet customer needs.

My job offers little opportunity to use my skills and abilities (Disagree).

My organization's emphasis on quality has resulted in measurable improvement in the following:

- A. Our products
- B. Our services

I think the focus on process and procedures in our quality efforts is improving our results.

Considering everything, how would you rate your overall satisfaction in AT&T at the present time?

Morale in my group is generally high.

I would recommend AT&T as a good place to work.

My supervisor is usually receptive to suggestions for change.

My supervisor acts on people's suggestions when possible.

My supervisor does a good job building teamwork.

*Diversity*

People are treated with respect in this company regardless of their level.

I think performance on the job is evaluated fairly.

My supervisor works effectively with people who are different from him- or herself (e.g., in gender, race, etc.).

I find it very difficult to balance my work and personal life.

In my opinion, top management supports diversity.

**TABLE IV** General Electric's Managerial Grid.

Values (Do you behave according to the GE values?)	Performance (Do you reach your financial objectives?)	
	Low	High
High	2	4
Low	1	3

*Employee success in the balanced scorecard may be tracked through productivity, people, and/or process measures, each of which becomes a basis for tracking the impact of HR within the business.*

ly anchored questions about the eight GE values. Each manager completes a 360-degree feedback in which data are collected about the manager from subordinates, peers, clients, and supervisors. These 360 data track the manager's performance against the values.

By translating GE values into behaviors and by creating a mechanism to track these behaviors, GE has a measurement system to monitor the process of value adherence.

*Motorola.* Motorola has always had a strong managerial commitment to employees. Under the direction of Chris Galvin (the Chairman), Motorola has created a process to monitor the equity process within the firm. Called the "Individual Dignity Entitlement," Motorola has identified six questions which operationalize the extent to which employees are being treated fairly. These six questions are stated in Table V. They demonstrate Motorola's commitment to the individual's skills, career, work environment, and personal differences.

Each manager is expected to have subordinates complete these questions once a quarter. The scores of all of each manager's subordinates are calculated into a score for that manager. The intent is that over a decade, each manager will have an individual dignity trend, which may be used for promotion decisions.

The AT&T, GE, and Motorola examples are illustrative of ways that processes (diversity, values, leadership, and equity) may be translated into measures which may then be integrated into a balanced scorecard to track managerial performance.

*Summary: Human Resources as Part of a Balanced Scorecard*

Balanced scorecards are not new. Managers have always been accountable to investors, customers, and employees; however, as the use of these scorecards grows, the employee dimension must be *accurately* measured. Em-

**TABLE V** Motorola Individual Dignity Entitlement.

1. Meaningful job that contributes to motivation  
Do you have a substantive, meaningful job that contributes to the success of Motorola?
2. Behavior and knowledge to be successful  
Do you have the on-the-job behaviors and have the knowledge base to be successful?
3. Training available to upgrade skills  
Has training been identified and been made available to continuously upgrade your skills?
4. Career plan  
Do you have a career plan and is it exciting, achievable, and being acted on?
5. Feedback  
Have you received candid, positive, or negative feedback within the last 30 days, which has been helpful in improving your performance or achieving your career plan?
6. Personal sensitivity  
Is there appropriate sensitivity to your personal circumstances, gender, and cultural heritage so that such issues do not distract from your success?

ployee success in the balanced scorecard may be tracked through productivity, people, and/or process measures, each of which becomes a basis for tracking the impact of HR within the business. These measures document the outcome of HR practices.

### HR Audits

In addition to using productivity, people, or process to track the impact of HR on the business, HR assessments are made of the function itself. The assessments may be framed as audits of HR, and three types may be carried out: on practices, on professionals, or on the department or function.

#### HR Practices

Auditing HR practices requires assessing the array of services offered by an HR department.

No commonly accepted typology exists to summarize HR services into domains, but elsewhere my colleagues and I have proposed that HR services can be clustered into six domains (staffing, training/development, appraisal, rewards, organization governance, and communication) (Ulrich & Lake, 1990). Within each of these domains are numerous practices and services offered by a HR department, and for each domain four types of assessments may be made; activity, customer value, cost/benefit, and research. (This auditing process is summarized in Table VI.)

*Activity.* Describing what services are offered is often a prelude, a beginning of an HR practice audit. An activity audit answers questions such as: Where do HR practices focus, on the more operational (day-to-day) or on strategic (long-term) issues? Who has what responsibilities for doing HR work, HR or line managers? How many resources are being used to ac-

**TABLE VI** Auditing HR Practices.

<i>Domains of HR (Illustrative practices)</i>	<i>Activity (What we do)</i>	<i>Customer Value (Perception of how we do)</i>	<i>Cost/Benefit (Formula for how we do)</i>	<i>Research (Assessment of how we do)</i>
Staffing (hiring, promotion, outplacement, orientation)  Development (training, career planning)  Appraisal (performance review, goal setting)  Rewards (compensation, benefits)  Organization governance (work flow, teams, labor policies, process improvements)  Communication (employee interactions, employee relations)				

comply with existing HR work? What is the portfolio of HR work, and what might be missing in that portfolio?

At times activity analyses of HR practices point out that some work related to employees may lie outside the HR function. In work with one company, I engaged in a dialogue as to where to locate the communications activities. Traditionally, it had been housed in the public relations department, separate from the HR department. After considering the activities inherent in effective communications (sharing information with employees, building employee commitment, structuring multiple mechanisms for sharing information), the company decided to incorporate communications into HR, feeling that much of the communication to employees could be done through existing HR systems. For example, in making succession planning announcements, in offering training, in introducing compensation programs, and in announcing new organization designs, communication issues needed to be intricately woven into the HR processes. In this company a result of the activity analysis was that communication was merged into the HR department.

*Customer Value.* Users of HR services may indicate the perceived value they find from the activity. HR customer surveys often are done by asking employees about their perceptions of the importance and/or effectiveness of a list of HR services. This form of HR audit is helpful because it focuses on HR as a service provider, and the users of the service assess the quality of service provided.

These HR customer surveys are often designed by listing HR practices, then asking users to rate both the quality of delivery and the importance of each of those practices. In one company, for example, the highest quality was delivered on HR practices which employees felt were relatively unimportant (e.g., tuition reimbursement). This analysis led the HR department to reprioritize its efforts toward the more important activities (e.g., training).<sup>6</sup>

In general, those who use services know how well those services are delivered. A number of challenges arise, however, when depending too heavily on customer surveys. *First*, users of HR services may know what they

want, but not know what is necessary for the success of the firm. In one company, for example, I found that employees wanted flexible benefits, but the employees did not recognize the economic impact of these benefit changes. *Second*, surveys may be scored by respondents to receive a reaction rather than to share true feelings. *Third*, surveys may reflect attitudes, but the underlying behaviors or practices which cause the attitudes may be lost.

*Cost/Benefit.* Formulas can be created that track the cost/benefit for each HR service. The value of these formulas is that HR services can be monitored explicitly, tracked over time, and compared to similar services offered by other companies. Conceptually, these measures have been called "utility" analyses, because they define the utility or value of an HR practice. By applying such disciplined formulas, HR practices can be translated into financial results.

Probably the most extensive and longitudinal database on the cost/benefit of HR practices resides at the Saratoga Institute. This institute, founded by Jac Fitz-enz, has created a national database on many HR services.<sup>7</sup> An annual report is prepared which shows industry averages and trends in many HR transactions. Many of the equations used by the Saratoga Institute and those summarized by Wayne Brockbank, a Professor at the University of Michigan, are shown in Table VII. HR professionals interested in auditing HR practices may either generate their own internal tracking mechanisms (e.g., comparing different units within a corporation or creating a longitudinal database) or join existing databases.

*Research.* Research on HR practices attempts to show the effectiveness of HR practices by carrying out experiments. While experimental designs within companies can never be perfect because all variables cannot be controlled, a number of experimental opportunities may arise. The basic logic of doing research on HR practices is to have both a control and an experimental group. The experimental group experiences an HR practice which the control group does not experience. Differences between the two groups can then be tracked. More natural experiments in organizations can also be utilized.

*Formulas can be created that track the cost/benefit for each HR service.*

**TABLE VII** Summary of Sample HR Practice Measures.

<i>Domain of HR activity</i>	<i>Possible Measures</i>
Staffing	<ul style="list-style-type: none"> <li>• Number of recruiting advertising programs</li> <li>• Acceptance per offer ratio</li> <li>• Number of applicants contacted compared with those reporting for job interviews</li> <li>• Time to fill a job</li> <li>• Cost of filling a job</li> <li>• Average tenure of employees (divided by low and high performers)</li> <li>• Percent of internally filled jobs</li> <li>• Percent of jobs filled with candidates on succession plan</li> <li>• Performance of hired applicants (e.g., performance of candidates from different schools, types of experience, etc.)</li> <li>• Percent of global units which are staffed locally</li> <li>• Percent of bilingual employees</li> <li>• Ratio of backup talent (number of prepared backups in place for top “X” jobs)</li> <li>• Performance of those hired with different techniques</li> </ul>
Training and development	<ul style="list-style-type: none"> <li>• Number of training days and programs held per year</li> <li>• Cost per trainee hour</li> <li>• Percent of employees involved in training</li> <li>• Number of courses taught by subject</li> <li>• Percent of employees with development plans</li> <li>• Number of courses taught by subject</li> <li>• Percent of payroll spent on training</li> <li>• Payroll expense per employee</li> <li>• Comparison: those who did and did not attend training</li> <li>• Ratio of advanced to remedial education</li> <li>• Time for new program design</li> <li>• Percent of new material in programs each year</li> <li>• Efficiency of training registration</li> </ul>
Performance systems	<ul style="list-style-type: none"> <li>• Acceptance of appraisal processes by employees</li> <li>• Effectiveness of appraisal process for dealing with poor performers</li> <li>• Percent of employees receiving performance appraisal</li> <li>• Percent of employees whose compensation is performance contingent</li> <li>• Percent of total salary at risk</li> <li>• Speed of salary action processing</li> <li>• Average merit increase granted by classification</li> <li>• Ratio of salary to competitor salary</li> <li>• Trends in health care costs to national averages</li> <li>• Extent to which measurement systems are seen as credible</li> <li>• Labor costs per revenue dollar</li> </ul>
Safety and health	<ul style="list-style-type: none"> <li>• Lost work days</li> <li>• Almost lost work days</li> <li>• Cost of injuries</li> <li>• Incidence of injuries</li> <li>• Percent of smokers</li> <li>• Percent of employees who are involved in wellness programs</li> <li>• Trends in workforce illness</li> </ul>
Labor relations	<ul style="list-style-type: none"> <li>• Percent of unionized employees on problem solving</li> <li>• Number of joint labor management problem-solving teams</li> <li>• Frequency of labor and management leadership interaction</li> <li>• Diversity of agreements</li> <li>• Number of nontraditional involvements of unionized workforce</li> <li>• Differences between union and management perceptions of throughput and output effectiveness</li> <li>• Number of local or business unit agreements</li> </ul>

*continued*

**TABLE VII** Continued

<i>Domain of</i>	
<i>HR activity</i>	<i>Possible Measures</i>
Internal communication	<ul style="list-style-type: none"> <li>• Consistency and clarity of messages from top management and from HR</li> <li>• Understanding of messages from top management and from HR</li> <li>• Acceptance of messages from management and HR</li> <li>• Effectiveness of information sharing among departments</li> <li>• Effectiveness of HR mediation between employees and management</li> <li>• Speed and effectiveness of responses to employee complaints</li> <li>• Average time for dispute resolution</li> <li>• Percent employees making suggestions</li> <li>• Percent of suggestions implemented</li> </ul>
Diversity	<ul style="list-style-type: none"> <li>• Perception of consistent and equitable treatment of all employees</li> <li>• Extent of meaningful jobs to handicapped employees</li> <li>• Compliance with technical requirements of affirmative action</li> <li>• Compliance with federal and state fair employment practices</li> <li>• Degree of objectivity and neutrality in rewards and promotions</li> <li>• Percent of nontraditional workers in applicant pool</li> <li>• Nontraditional workforce promotion rate</li> <li>• Nontraditional workforce turnover rate</li> <li>• Average age of workforce</li> </ul>

Many training programs, for example, offer natural experimental designs. To assess the impact of training in one company, I found a group of managers who were somewhat similar to those who attended training (e.g., title, job responsibility, seniority, level, etc.). I then examined the careers and reviews of those who attended a training program and those who did not. The more positive career outcomes (in terms of promotions, performance reviews, bonuses, 360 feedback, etc.) for those who attended the training than for those who did not were attributed at least in part to the training.

In another case, a firm decided to use competence-based models to hire sales representatives. Thirty sales representatives were hired using a competence model, and 30 were hired without using the competence model. A year later, the following items were measured: the sales generated by each group, the retention of each group, the performance reviews given to members of each group by their managers, and the attitude of each group toward the company. The overall result was that those hired using the competency model had approximately 20% higher performance outcomes than did those hired without using the competency model.

In each of the above cases, it could be argued that there was a Hawthorne effect—the fact that the employees were trained or hired

with a competence model set them apart more than did the HR practice. Even acknowledging this effect, however, such experiments help justify HR investments.

Another natural experimental design exists when a company has multiple sites (e.g., a retail chain, multiple plants, multiple distributors), and efforts can be made to document how different sites are doing HR. Difference can then be compared.

#### *HR Professionals*

Auditing HR professionals requires doing a 360 feedback on the extent to which an HR professional demonstrates competence. The following steps define the performance of this HR professional audit.

##### *Step 1: Develop a Model of HR Competencies.*

There are many models of what makes a successful HR professional, but most are woven around four clusters of competence: knowledge of business, knowledge of HR, knowledge of change/process, and personal credibility. In doing an audit of HR professionals, it is important at two levels to possess a model of HR competencies. *First*: conceptually, an HR competence model should identify the knowledge, skills, and abilities required to be a successful HR professional. *Second*:

behaviorally, an HR competence model should identify the behaviors required to demonstrate the trait.

*Step 2: Collect Data Using the Model.* Once a model has been identified, data can be collected to assess the extent to which an HR professional demonstrates the modeled competencies. Data for this evaluation may be a self-assessment; the HR professional rates him/herself. Data also may come from quantitative assessments on traits put into the survey form. Quantitative assessments are more uniform and systematic but are limited to the questions asked on the survey. Data may also come from focus groups or interviews in which individuals talk about the extent to which HR professionals demonstrate competence. In these interviews, a focus is often on critical incidents in which HR professionals did or did not demonstrate the appropriate competence.

*Step 3: Summarize Data and Feedback to HR Professionals.* The synthesis of data collected either from surveys or interviews needs to occur. With empirical data, this means identifying statistical means, standard deviations, and ranges of scores, often by type of respondent (e.g., peer, subordinate, or client). With qualitative data, this means doing a content analysis to highlight trends from the interviews. With either type of data, statistics or trends need to be translated into key themes which will indicate tendencies in the data. While any one individual may see an HR professional differently, when multiple individuals see similar proclivities in an HR professional, themes emerge. These themes can be codified to help an HR professional identify strengths and weaknesses.

Feedback on HR competencies (an important step) needs to be done in ways that do not violate the providers of the data (e.g., violating confidentiality or misrepresenting the data) and at the same time are sensitive to the receiver of the data (e.g., not overwhelm the receiver). In giving feedback, it is helpful to prepare the receiver not to overreact, but to listen before responding—not to try to figure out who said what, but to check the data with other inputs and to accept responsibility for the data.

One important source of feedback is to

compare self-assessment with other-assessment. Sometimes, an HR professional may score him/herself low on a particular competence, and feedback confirms it. At other times, there may be a disconfirmation; the HR professional rates him/herself higher or lower than do peers. At these times, it is important to explore why these differences might exist—because clients are not aware of what the HR professional knows or does?—because HR professionals may be good at things not valued by the client?

Individual data also can be summarized and integrated into an HR competence audit for the overall HR function. In doing a number of these functional competence audits, I have learned that not all members of the HR community *have* or even *should have* the same individual competencies. Sometimes, the strongest HR functions are those in which individuals have deep and specialized competence and are able to work as teams to make the whole function stronger than any one individual within it.

*Step 4: Create Action Plans.* Action plans can be created at two levels. (1) At an institutional level, building HR competence across a function requires doing HR for HR. (2) At an individual level, feedback from an HR competence audit may focus on how the individual can develop him/herself for future opportunities. An individual development plan may provide a tailored set of developmental experiences, including job and/or task force assignments, readings, and training opportunities.

*Step 5: Continuous Improvement.* Auditing HR professionals should not be a single event but an ongoing process in which HR professionals are constantly unlearning old and learning new skills. Creating a learning environment for HR professionals is evidenced when HR professionals invest annually in their own development by soliciting feedback on their performance, attending conferences, benchmarking practices, reading, and keeping abreast of innovations in their areas of expertise.

#### *HR Function or Department*

Auditing HR functions or departments may be completed in a number of ways. First, as dis-

*Individual data also can be summarized and integrated into an HR competence audit for the overall HR function.*

cussed above, computing functional competence may come from summing individual competencies.

Second, overall indicators of HR functions may be derived. They include:

- Ratio of total employees to HR professionals—from 1989 to 1994 Hewlett Packard went from a ratio of 50:1 to 75:1 while offering many of the same services. This was an indicator of the productivity of the HR department. This ratio is useful if it monitors progress within a function. It is not useful to compare across companies because what one company counts as HR may not be counted the same way in another company (e.g., some companies place health and safety in HR; others do not). It is time as an HR profession to come to a consensus around terms, definitions, and measures used for these indices.
- Ratio of dollars spent on HR function to total sales, general and administrative (SG&A) costs—this ratio can be used over time to compare the efficiency of

the HR function with that of other staff groups.

- Performance against plan—HR departments have annual budgets. Operating within those plans becomes an indicator of overall HR department effectiveness.

As these measures are tracked, they provide an overall assessment of the HR function or department.

Third, Dale Lake and I have performed HR department audits against benchmark standards. We identified a number of HR practice areas (e.g., training, staffing, compensation) and created scales which were anchored on one end with traditional and the other end with innovative HR activities. We then asked operating managers within a firm to describe how the targeted firm performed the activity and to rate where the activity fit along the traditional–innovative scale. For example, Tables VIII (sourcing) and IX (training) show how a company performed on two HR practice areas, sourcing and training. As these figures indicate, this company does a better job training than sourcing talent. This approach to auditing HR departments is a means

**TABLE VIII** Company X: Human Resource Ratings: Sourcing/Recruiting.

<i>Traditional</i>			<i>Company X</i>				<i>Innovative Practice</i>		
1	2	3	4	5	6	7	8	9	10
Selection criteria are poorly defined.			(2) Company X has made no effort to identify selection competencies which can be proven to yield desired business results.				Clear technical, organizational and competitive competencies are identified for present and future.		
Jobs are sourced to fill a current need.			(4) Basic work effort has been organized around customer and dealer interactions.				Work is defined to add value to the external customer.		
Filling the current position with a full-time employee is the only consideration in hiring decision.			(8) Temps and contractors are utilized and a 90-day probation period is used.				Consideration is given to alternate ways of accomplishing work, e.g. temps, contractors, etc.		
Traditional locations for new talent are relied on.			(4) Local talent recruited primarily. Consumer communication department used as entry vehicle for other departments.				Broad and diverse sources of job candidates are utilized.		

Numbers in parentheses represent Company X's rating on a scale of 1–10.

**TABLE IX** Company X: Human Resource Ratings: Training.

Traditional			Company X				Innovative Practice		
1	2	3	4	5	6	7	8	9	10
Human resource personnel design and run programs. Training messages are generic.			(6) Two commercial programs are made available to employees (Kaset, which is focused on collections, and Zenger Miller, which is focused on basic managerial behaviors). Both programs are well conceived. In addition, managers and other nonexempts can elect to participate in other programs. Also, liberal tuition benefits are given to those who wish to pursue degree work.				Shared responsibility for training exists among human resource and general managers.		
Training focused on improving current functioning.			(6) Some training is provided to help the individual gain new skills. Most is targeted at improving current skills.				Training focused on increasing productive capacity of individual.		
Education and training viewed as costs.			(6) Training viewed as a benefit to the employee.				Education and training viewed as investments.		

Numbers in parentheses represent Company X's rating on a scale of 1–10.

of generating discussion and dialogue about gaps in an HR department's delivery of HR practices.

#### *Summary: HR Audits*

HR audits are an important element of assessing HR effectiveness. As these audits are completed on HR practices, professionals, and/or departments, statements can be made as to the quality of HR within a firm. These audits report on the quality of management within the HR function itself.

#### **Conclusions: Measuring HR**

This article began with a question: *Do HR practices make a difference in business results?* By reviewing emerging research which shows the impact of HR on business results; by showing how HR practices relate to a business' balance scorecard through productivity, people, and process indicators; and by showing how to audit HR practices, professionals,

and departments, I believe the answer is a resounding "yes."

One of the most common weaknesses of HR professionals is fear of quantitative, measurable results. Such fears may come from lack of knowledge or experience with empirical assessments of HR work. It is clearly time to replace fear with resolve. HR measurement is complex, difficult, and at times confusing, but it can and must be done. When HR professionals start with a clear understanding of business goals (often measured in financial terms), they can turn those business goals into measurable HR practices. Such efforts focus attention on what HR practices, professionals, and departments must deliver to the business. Conceptualizing, defining, and operationalizing these deliverables are critical steps toward HR measurement.

At the beginning of the article, a hypothetical case was posed in which HR professionals were involved in executive staff meetings. As marketing, finance, technology, and other functional areas engage in dialogue using data and evidence, HR professionals can and should be able to talk *explicitly* about how

*One of the most common weaknesses of HR professionals is fear of quantitative, measurable results.*

they add value to business results. As a discipline, we in HR have a need to measure our impact, our tools to quantify it, our steps to

make it happen, and our actions that link work with business results. And, we have the data to prove it.

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## ENDNOTES

1. As each of these measurement issues is raised, I acknowledge that the entire measurement issue is both critical and challenging. In a measurement forum in November, 1995, representatives from approximately 20 companies were invited to discuss what they were doing in the HR measurement arena. Uniformly, it was acknowledged that HR measurement is in its infancy. Emerging models raise issues but are in the state of constant improvement. Pieces of the HR measurement puzzle are more advanced than are others, but the overall success is still uneven.
2. The early strategy human resource management writers assumed that more investment in HR would help make strategy happen. Implicit in this logic was the argument that as strategies were better carried out, business performance would improve.
3. OASIS research was further reported by Kaminski and Ulrich, 1986; Ulrich, 1986; and Ulrich and Tichy, 1986.

4. Further turnover studies include: Cotton and Tuttle, 1986; Sheridan, 1992. Studies of turnover have been summarized in Huselid, 1995.
5. Rick Quinn, Vice President of Quality at Sears, has been instrumental in creating the Sears balanced scorecard.
6. A number of surveys have been developed to do HR customer audits. A copy of the survey I have used is available from the author.
7. Work by the Saratoga Institute is presented annually at its national conference and in its annual report. The conceptual frameworks are found in Fitzenz, 1980, 1984.