

# Beyond Employee Satisfaction, ROI, and the Balanced Scorecard: Improving Business Results Through Improved Human Capital Measurement

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## Summary

The authors discuss the need for changes in human capital measurement systems. Problems with current systems are presented. This paper goes on to address attributes that such systems need and how to systematically weave them into current systems. The authors also discuss how certain measurement methods can be used. A case study from a Fortune 500 company is presented.

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We stand at a great juncture in economic history—the point at which human capital has overtaken both physical capital and natural resources as the primary source of prosperity and wealth creation. Given the infrequency with which such junctures occur (the last such juncture was the transition from an agricultural to an industrial economy), it is difficult to quickly sort out the opportunities and perils that they create. But this much is clear: the rules that heretofore governed wealth creation are in the midst of being turned upside down and inside out.

Previously it was ownership and superior management of either physical capital or natural resources that generated wealth. This, in turn, determined how human capital was managed and rewarded. Now that human capital has become the primary source of prosperity and wealth creation, the reverse is true. It is the superior management of human capital that determines rewards in the marketplace.

In addition to this reversal of roles, there is one enormously important distinction between the current knowledge era and preceding eras. Unlike physical capital and natural resources, human capital cannot be “owned” by employers. Consequently, an enormous premium now accrues to those organizations that have developed superior

capacity for managing human capital. In fact, a growing body of research points to human capital management as the single most important predictor of an organization's ability to outperform its competition (McBassi & Company, 2004).

The sea of change that is taking place as developed economies continue to become more knowledge-intensive is requiring senior executives to focus on human capital management as never before. This, in turn, requires measurement systems that can help them optimize their return on people. The current state of human capital measurement within most organizations, however, typically consists of some (mostly unhelpful) combination of the following:

- Traditional "HR metrics" (which are, at best, lagging indicators of business results and, at worst, have nothing to do with business results) that have simply been relabeled as "human capital metrics"
- Employee satisfaction surveys with no known connection to business results
- Simplistic "balanced scorecard" measures, such as percentage of managers who have been through a development program (while these measures are intended to be forward-looking and predictive, few actually meet these criteria)
- Historic "ROI" measures (too often designed primarily for budget justification and typically unable to provide any guidance for how to improve an organization's return on people)

Thoughtful executives are desperate to change this state of affairs and to begin using a new generation of human capital measurement systems, which can actually serve as a guide to organizations seeking better business results through the improved management of their people.

This article provides guidance for senior executives on how to create such a system. The first section delineates the essential attributes that such next-generation human capital measurement systems must possess. The next section then maps these attributes onto currently available measurement systems, thereby providing a systematic basis for assessing their strengths and weaknesses. The third section outlines the content that should be captured by next-generation human capital measurement systems, and the fourth section outlines basic measurement methodologies that can be used to create powerful, actionable insights. The fifth section provides an example of how such a system has been deployed in a Fortune 500 firm. The final section provides some concluding thoughts on the subject.

## Essential Attributes of Human Capital Measurement Systems

Six key attributes must be possessed by a human capital measurement system if it is to be of maximum use to executives in managing and deploying people effectively within an organization. The system must be:

1. *Descriptive*—at a minimum, a measurement system should produce summary statistics that provide a clear and succinct summary for each issue of interest. Descriptive data tend to focus on the occurrence of a phenomenon, its frequency, or its intensity. For example, descriptive statistics can help an organization monitor the degree to which an important best practice is (or is not) actually being implemented throughout the organization. While necessary, in and of itself descriptive data is insufficient since it typically measures only “inputs” or “process,” but provides no information on outcomes or results.
2. *Credible*—a measurement system must be designed to provide the credible and unbiased insights needed to improve business results. Typically, any system designed primarily for the purpose of self-justification is quickly seen as suspect and is given little credence by senior executives. Many ROI initiatives, for example, fall into this category. Similarly, measurement systems designed by consulting firms can suffer from credibility issues if there is the perception (or the reality) that the system is designed to justify the sale of the consulting firm’s products or services.
3. *Predictive*—a measurement system must produce statistics that help an organization predict where it is headed. Predictive measures are those that have been linked to the organization’s desired business results. If the descriptive data generated by a measurement system have not been (or cannot be) linked to business results, then the usefulness of the underlying data is of questionable value. In short, “input” or “process” data that have no known impact on organizational success will be of little value to senior executives who need insights that will help them to improve organizational performance.
4. *Detailed*—the information produced by a measurement system must be sufficiently detailed and disaggregated to provide the insight needed on where action should be taken. For example, many types of information must be available across departments or business units in order to allow for a possible intervention to be targeted on those areas where it might be most successful. Consequently, data on an organization that is gathered from a single

individual or function will not be sufficiently detailed to provide a basis for action. HR Scorecards typically suffer from this shortcoming.

5. *Actionable*—a measurement system should focus on those issues over which an organization can exert influence; other items (however interesting they may be) are unhelpful in enabling action to drive business results. The best example here is a counter-example; one well-known measurement system (the Gallup Q12) measures whether or not employees “have a best friend at work.” While this is indeed an interesting descriptive statistic (and might even be predictive and detailed), it is not an actionable piece of information and hence should not be an area of focus within a measurement system.
6. *Cost-effective*—as important as a powerful measurement system is to a well-managed business, it must be cost-effective if it is to be sustainable.

## Attributes of Currently Available Measurement Systems

In the discussion that follows, we rank a variety of commonly used measurement systems from 1 to 5 on each of those six attributes. (A “1” indicates that the attribute is absent and a “5” indicates that the attribute is fully present.)

### Balanced Scorecard

The Balanced Scorecard movement started with the best of intentions—to help organizations focus on the leading indicators of future business results (rather than focusing primarily on financial results, which are lagging indicators). Despite these good intentions, most Balanced Scorecard initiatives have fallen well short of their promise when it comes to the “people” component. Since few organizations have done the analysis to know definitely which people-related measures are the important drivers (predictors) of future business results, these initiatives end up providing relatively inane descriptive statistics (e.g., percentage of managers who have been through a leadership development course).

Descriptive	3
Credible	3
Predictive	1
Detailed	1
Actionable	1
Cost-effective	1

## Employee Satisfaction Surveys

Employee satisfaction surveys typically have the capacity to provide highly detailed, descriptive data. Rarely, however, is the necessary analysis undertaken to determine whether the descriptive information is actually predictive. Hence, the information often receives less attention than it might because it is not viewed as significant.

Descriptive	5
Credible	5
Predictive	1
Detailed	5
Actionable	1
Cost-effective	3

## Gallup Q12

Unlike most employee satisfaction surveys, Gallup has a research-based measurement tool that has identified a core set of measures that predict business results. This work, however, has three primary shortcomings: (1) it is based on the implausible assumption that twelve key attributes are equally important in all organizations; (2) some of the information (e.g., do employees have a best friend at work?) is simply not actionable; and (3) it is designed to be sold as a part of Gallup's consulting services (which undermines the appearance of being an unbiased and impartial measurement system).

Descriptive	5
Credible	2
Predictive	3
Detailed	5
Actionable	3
Cost-effective	1

## HR Scorecard

HR Scorecards are typically used to analyze and benchmark the efficiency of an organization's HR function. As such, they are descriptive—but not at all predictive (since the efficiency with which HR transactions are accomplished has little discernible impact on either overall organizational costs or value creation).

Descriptive	3
Credible	3
Predictive	1
Detailed	1
Actionable	1
Cost-effective	2

### Kirkpatrick Levels 1 Through 4

Kirkpatrick's four levels of evaluation have been used to evaluate the impact of training interventions. Although it is certainly necessary to know whether investments in training are generating their intended impacts, these evaluations typically fail to answer an equally important set of questions about the cause of the results. So while they can produce actionable information as to whether or not a training course should be continued, they typically fail to produce actionable insight into how to improve outcomes. These evaluations also have credibility problems (especially at levels 3 and 4) when they have not been well-designed. Careful design and execution, however, can be quite expensive.

Descriptive	4
Credible	3
Predictive	2
Detailed	4
Actionable	2
Cost-effective	2

### ROI

Return on investment evaluations are sometimes used to evaluate training interventions (often referred to as "Level 5" evaluations), as well as other HR initiatives. Such evaluations are quite difficult to do well, however, because they require an accurate and credible estimate of what would have happened in the absence of the intervention. Moreover, too often ROI estimates are undertaken as a means of justifying budgets or staff positions. When they are motivated by any purpose other than providing the information and insight necessary for improving organizational outcomes, the results are seen as highly suspect. Even when properly done, however, their historical focus means that they typically fail to produce actionable information about future outcomes.

Descriptive	3
Credible	2

Predictive	2
Detailed	1
Actionable	1
Cost-effective	1

## Watson Wyatt Human Capital Index

Like Gallup, Watson Wyatt has a well-researched measurement methodology. As is the case with Gallup, it suffers from the following shortcomings: (1) it is based on the implausible assumption that a single set of human resource practices and policies are equally important in all organizations; (2) all of the information on which it is based is provided by a single individual, and hence no disaggregated detail is available; and (3) it is designed to serve as a business development tool for Watson Wyatt (undermining the appearance of unbiased impartiality).

Descriptive	3
Credible	2
Predictive	3
Detailed	1
Actionable	2
Cost-effective	5

## Summing Up

Although none of the commonly used measurement systems possess all of the essential attributes described in the previous section, the mapping outlined above begins to point to a path forward for creating next-generation human capital measurement systems that possess all of these attributes. By embedding research-based, predictive measures into employee surveys (and avoiding the potential credibility problems associated with consulting firms), it is possible to create vastly improved, forward-looking measurement systems.

## Key Human Capital Measures That Every Organization Should Track

Research (ours and others') has shown that there are four general types of human capital management factors that consistently predict business results (Bassi & McMurrer, 2005; Becker, Huselid, & Ulrich, 2001; Buckingham & Coffman, 1999). These represent

a “core set” of measures that organizations should track through their human capital measurement systems. The predictive measures can be broken into five categories, as follows<sup>1</sup>:

1. *Leadership practices* include managers’ and leaders’ communication, performance feedback, supervisory skills, demonstration of key organizational values efforts, and ability to instill confidence;
2. *Workforce optimization* includes an organization’s success in optimizing the performance of its workforce through the establishment of essential processes for getting work done, provision of good working conditions, strong hiring decisions, and emphasis on accountability;
3. *Learning capacity* includes an organization’s overall ability to learn, innovate, and continually improve;
4. *Knowledge accessibility* includes an organization’s “collaborativeness” and its capacity for making knowledge and ideas widely available to employees; and
5. *Employee engagement* includes an organization’s capacity to engage, retain, and optimize the value of its employees.

The best way to measure these factors within an organization is through a thoughtfully constructed survey of employees. Note that such a survey would vary considerably from the typical “employee satisfaction survey,” which has little (if any) proven linkage to business results. The most important distinction between a more thoughtful survey and the typical survey is the maintaining of an intense focus on the links between the factors being measured and key business outcomes.

Using statistical techniques (such as those that are briefly described in the following section), each of the five human capital categories—as well as their specific components—can be linked to a variety of alternative measures of business outcomes. Such linkages provide senior executives with a clear prioritization—a road map of sorts—of the human capital management initiatives that will generate the greatest improvement in business results.

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<sup>1</sup>Because of space limitations, we are unable to include a detailed description of each of the factors that constitute these five indices. Such a description is, however, available from the authors on request.

## **Measurement Methodologies That Identify the Drivers of Business Results**

Have a system in place that's providing you with detailed, trustworthy information on your organization's human capital management—but not sure how to make the best use of the data? The most fundamental point to recognize is that, nine times out of ten, the information you have will be most useful to you after you've linked it with your organization's business results—either financial ones (growth rate, revenues generated) or non-financial ones (safety, customer satisfaction)—to determine which of your people-related factors are driving your business results.

A few basic statistical techniques can be employed quite effectively to link these human capital measures to business results in a way that is both credible and actionable.

### **Inputs and Outcomes**

The central challenge in doing so is to isolate how one factor (e.g., training investments or the effectiveness of managers' communications) causes another factor (e.g., revenues or safety) to change.

After gathering information on a given set of factors (through a measurement system and employee survey of the type described above), the effects of each factor can typically be isolated by applying the principles of a "quasi-experimental design." This identifies and quantifies causal relationships between "inputs" and "outcomes."

Consider for a moment a drug dosage experiment wherein patients (all of whom have the same ailment) are given varying dosages of a medicine. The severity of the patients' illness varies, and each is different along a variety of dimensions (e.g., gender, weight, age). A statistical technique called regression analysis can be used to isolate the effect of the medicine on the "outcome" of interest (improved health), while controlling for both the variations in the dosages of the medicine (the "input" of interest) and the effects of "confounding variables" (gender, weight, age).

Similarly, the effect of human capital management "inputs" on business "outcomes" can be isolated by controlling for the effects of "confounding variables" that affect different parts of your organization in different ways (e.g., age of plant and equipment, local economic conditions, exchange rates).

### **Take Advantage of Multiple Offices/Locations**

This can be done by identifying and making use of the "natural experiment" that exists within every organization. Suppose your organization has twenty-five sales offices (or factories, or branches, or locations) and that you have comparable outcomes measures (e.g., sales per employee, safety) available for each office.

By “regressing” the input measures—such as those that might be measured through an employee satisfaction survey or by documenting varying “dosages” of training—on the outcome measures, it is possible to determine the magnitude of the effect (and its statistical significance) of each input of interest on the outcome of interest after eliminating the confounding effects of other factors that also affect outcomes.

## **Maximizing the Power of Your Data**

Your ability to estimate such impacts with statistical precision will increase with the number of different units being analyzed. In addition, the capacity to eliminate the effects of confounding variables is enhanced if outcomes (and inputs, if possible) are observed on more than one occasion for each unit. This allows for the “differencing out” of the effects of unit-specific confounding factors. (For additional information on the statistical techniques described in this section, see Kmenta, 1997, or Chiang, 1984.)

When the number of units (e.g., sales offices) is not large enough to support regression analysis, alternative statistical techniques are available, such as differences of means (t-tests) and correlation analysis (Pearson coefficients). Or you might consider using a different “unit of analysis.” Instead of using outcomes for each sales office overall, you could use individual managers’ or employees’ outcomes (e.g., absentee rates, turnover, or sales productivity). This would significantly increase the number of units available for analysis, thereby vastly increasing your ability to identify and isolate effects.

## **Examining Other Links**

The statistical techniques described here can also be used to analyze the circumstances under which the impacts of interest are particularly large or small (e.g., certain types of learning interventions might be effective only in units with high scores on learning capacity). This analysis generates insights into why the results are as they are and hence is useful in determining what actions should be taken to optimize organizational performance.

## **Summing Up**

In sum, it is possible to rigorously quantify how an organization’s management of human capital affects business results when multiple (disaggregated) observations of both outcomes and inputs exist. The type of analysis outlined above essentially combines the strengths (and eliminates the weaknesses) of the balanced scorecard, employee surveys, and ROI analysis.

If you have training investment data and/or can undertake a thoughtfully constructed employee satisfaction survey (as described in the previous section), techniques are readily available that allow executives to be provided with the information they need to improve business results through enhanced human capital management.

## **An Example from a Fortune 500 Firm**

American Standard, an established global manufacturer in the areas of air conditioning systems, bath and kitchen products, and vehicle control systems, has tracked the five human capital indices within the organization over the past three years and has used them to manage its talent across and within its major business units. The indices have become an integral component of American Standard's strategic management process, feeding into and improving its balanced scorecard measures and its performance management system.

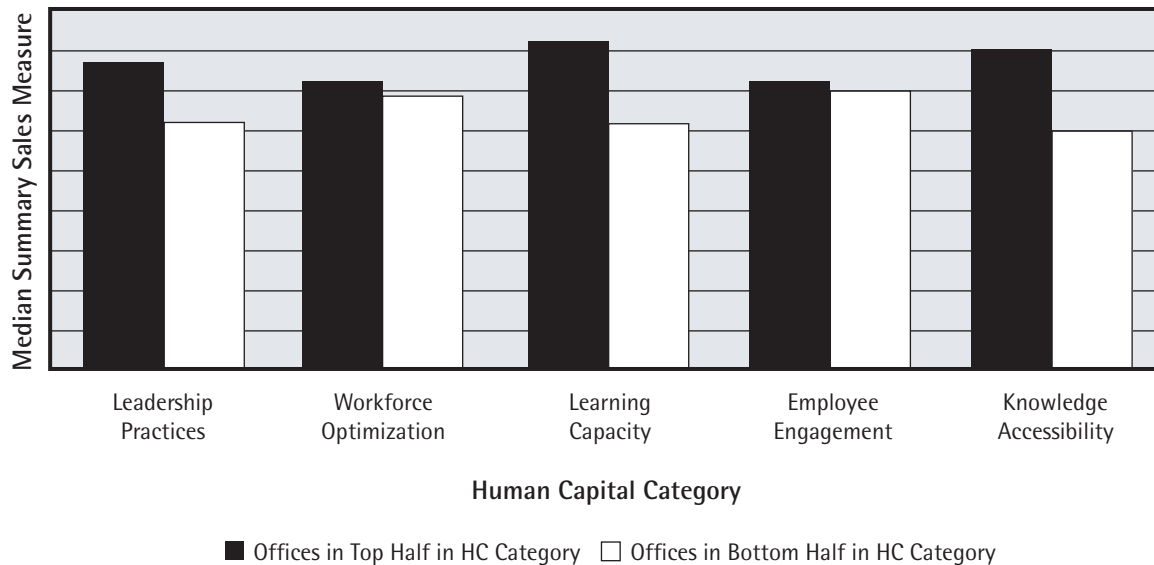
We worked with American Standard to examine the relationship between the human capital indices and a key internal American Standard measure that was designed to summarize the financial results and growth trends of the U.S. sales offices within one of its major business units. The analysis found a clear relationship between the indices and the summary sales measure, pointing to the importance of human capital factors in shaping sales success. Sales, of course, is a fundamental determinant of business success—or failure.

For each of the five indices, the sales offices that were in the top 50 percent of all offices in their score on the given human capital index also had a higher median summary sales score. Depending on the specific index, the median sales scores were between 6 and 35 percent higher for offices in the top half of the human capital distribution (see Figure 1). The largest differences were seen between the top half and the bottom half in their scores on Learning Capacity and Knowledge Optimization.

The combination of summary findings like those included in Figure 1, with more detailed information (not shown here) on individual sales offices' scores on each index (and on the specific items that comprise each index), provides American Standard with information on the links between human capital and sales success, pointing to a clear method to identify specific human capital initiatives that would be expected to bring about the greatest improvements in sales productivity.

The senior vice president for human resources at American Standard, Lawrence Costello, describes the impact of these findings in this way:

“For the past three years, American Standard has been creating a much more strategic process for investing in the development and management of our people. The missing piece for us was a way to link our investments to bottom-line results.



Note: The specific levels of the summary sales data are not available for publication and are therefore not included in the figure.

**Figure 1. Median Summary Sales Office Measure for American Standard**

Our human capital measurement methodologies created that link, helping us to develop a clear road map for improving business results. Equally important is our improved capacity to persuade managers to make the necessary investments by providing them with compelling evidence on the bottom-line impact that results from improved development and management of their people.”

In short, understanding the actual business impact of human capital investments was a crucial advance for American Standard in its efforts to improve the effectiveness and targeting of those investments.

## Concluding Thoughts

The quality of human capital management is now the single most important predictor of an organization’s business results. Given its importance, the measurement systems that most organizations use to evaluate and improve the effectiveness of human capital management and its impact on their business outcomes are grossly inadequate. Successful organizations are moving toward a “next generation” measurement system that provides executives with credible, actionable insights for driving business results through the improvement of their human capital management. Organizations like American Standard can now identify the human capital investments that are most closely tied to their sales—a key business outcome. A system that reliably provides such insights is well

within the reach of most mid- to large-size organizations. All that is required is a thoughtfully constructed employee survey that focuses on human capital metrics that are known to predict business results, some basic statistical tools, and the will to move beyond traditional "HR metrics."

## References

- Bassi, L., & McMurrer, D. (2005). What to do when people are your most important asset. *Handbook of business strategy*. Bradford, England: Emerald Group Publishing.
- Becker, B., Huselid, M., & Ulrich, D. (2001). *The HR scorecard: Linking people, strategy, and performance*. Cambridge, MA: Harvard Business School Press.
- Buckingham, M., & Coffman, C. (1999). *First, break all the rules: What the world's greatest managers do differently*. New York: Simon & Schuster.
- Chiang, A. (1984). *Fundamental methods of mathematical economics* (3rd ed.). New York: McGraw-Hill/Irwin.
- Kmenta, J. (1997). *Elements of econometrics* (2nd ed.). Ann Arbor, MI: University of Michigan Press.
- McBassi & Company. (2004). *The impact of U.S. firms' investments in human capital on stock prices*. [Online]. Available: [www.mcbassi.com](http://www.mcbassi.com).

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