

## A GUIDE TO USING YOUR HUMAN CAPITAL DATA TO IMPROVE BUSINESS RESULTS

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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?

Here's a quick guide. 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, 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 where patients (all of whom have the same ailment) are given varying dosages of a medicine. The severity of the patients' illness varies, and they are each different from one another 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" (e.g., 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 (and/or Timing Differences)***

Identify and make use of the "natural experiment" that exists within every organization. Suppose your organization has 25 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.

If you have a training intervention that was introduced at different times in different parts of the organization, you can also take advantage of this variation in timing. Using "time series" data (e.g., monthly data on sales or other key outcomes) and applying similar statistical techniques to those described above, it is possible to examine whether changes occurred earlier in those locations where the intervention was introduced sooner.

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

Your ability to estimate such impacts with statistical precision will increase with the number of different units are 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.

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 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 effects 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 will executives to be provided with the information they need to improve business results through enhanced human capital management.

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