

GETTING RESULTS THROUGH LINKING RESEARCH

By Kyle M. Lundby, Ph.D., Sally Blecha, M.A., Susan Jambor, M.B.A.

July 2002

Introduction

In the current business climate, financial and human resources are limited. One popular tool organizations use to manage these resources is the Balanced Scorecard. The Balanced Scorecard says effective organizations are aligned, or balanced, in four major areas: internal processes, learning and innovation, customer satisfaction and financial goals. But each of these areas has different objectives (sometimes competing) and serves a different constituency. Attaining “balance” can be a daunting task—one that is often thrust upon the shoulders of HR.

HR practitioners frequently oversee implementation of the Balanced Scorecard. A difficult challenge—but one that is essential if HR practitioners are to retain their place at the strategy table—is to demonstrate the impact of their initiatives. *Linkage research* can determine how the various areas are statistically related. It connects employee data with customer and/or financial data and identifies “what causes what.” Combining information on current performance (*How are we doing?*) with the knowledge of cause-and-effect relationships (*What will make us get better?*) positions HR practitioners to champion actions that will have the greatest impact on important outcomes like ROI and customer satisfaction.

Hypothetical Case Study

Southeastern Savings and Loan (SSL)¹ faced a situation not unlike most other retail service organizations. During the late 1990s, they operated in an increasingly competitive environment in which employees demanded fair pay, growth and a positive work environment; customers expected excellent service at competitive prices and shareholders wanted a consistent return on their investment (ROI). However, with 400 branches and roughly 6,000 employees serving a variety of customers and offering a number of different services, juggling these multiple goals was not an easy task for HR practitioners. They turned to linkage research to help them understand how these areas relate to each other, so they could take the right actions to impact the organization and balance the competing demands.

What Gets Measured?

The potential benefits of linkage research are well documented. In *The Employee-Customer-Profit Chain at Sears*, Tony Rucci (Rucci, Kirn, & Quinn, 1998) and his colleagues developed a model linking employee attitudes, customer satisfaction and

financial measures. Statistical analyses revealed that a 5-point increase in employee attitudes corresponded with a 1.3-point increase in customer satisfaction and a .5 percent improvement in revenue growth. For Sears, targeting units with lower employee attitude scores translated into more satisfied customers and millions in revenue. So SSL was inspired to try linkage research.

At SSL, unlike some organizations, at least some data were already collected in each of the four scorecard areas. But having disparate sets of isolated data didn't answer the basic question of "what causes what." SSL's HR department intuitively felt that certain employee attitudes and behaviors had *some* impact on customer attitudes and behaviors and that customer attitudes and behaviors impacted financials. However, it wasn't as intuitively obvious which employee attitudes influenced *which* customer attitudes or how this translated to the bottom-line. This was compounded by the variety and amount of data that were available.

- Once a year, employees completed a survey that asking for their opinions on a variety of issues, including service orientation, branch processes and satisfaction with training, autonomy and supervision.
- On a quarterly basis, customers were asked to rate branch tellers and loan officers on quality and timeliness of service, ability to answer questions and decision-making.
- Financial data (deposit and loan growth) were available on a daily basis.
- Other metrics were collected on an ad hoc basis, including statistics about process quality and efficiency, average number of services used by each customer and employee retention.

Not surprisingly, pulling these diverse data together and finding meaning in them—particularly cause-and-effect relationships—was a difficult one. Fortunately, linkage researchers have a variety of statistical tools at their disposal that can be used to identify cause-and-effect relationships.

Challenges to Linkage Research

While linkage research can provide a great deal of valuable information, the practice can be difficult to set up. Two issues in particular can cause problems:

Organizational Inertia. Linkage research requires the use of data that are typically collected and "owned" by different functional groups. In SSL, HR was responsible for the annual employee opinion survey and for tracking turnover. Marketing collected customer satisfaction data and Operations Support pulled together information from all the branches on various bank processes. Finally, Accounting/Finance had all growth and sales information. Individuals from each of these areas had to come together, break down their functional silos and combine their resources in a way they had never done before. Eliminating these physical and mental barriers can be a stumbling block for some companies.

Data Management. Effectively managing the data required for linkage research can also be a challenge. It requires that everything (employee, customer, financial and internal metrics) be combined into a single database. The logistical issues are obvious—different functions probably use different systems and capture and structure their data differently. There may also be political considerations—some functions may have reservations about sharing their data.

SSL decided to form a *linking team* comprised of individuals representing each source of data (i.e., each functional area). This helped minimize the logistical and political barriers that threatened to derail their linking project. Giving each area input into the design of the study enhanced their commitment to it. Meeting regularly promoted trust and a willingness to share information.

Other Considerations

Developing a Theoretical Model. The first step in any linkage research project is to develop a theoretical model that represents the linking team's best guess as to what causes what in their particular organization. This model is like a roadmap for the analyses that will be conducted. While it's tempting to charge ahead without having a model in mind, it's a much better idea to put some thought and reflection into where you want to go. A thoughtfully developed theoretical model:

- Ensures an accurate depiction of all the categories (e.g., the areas in the Balanced Scorecard) that you want to use in your analysis.
- Forces you to think about what data you currently have available for each category and highlights “gaps”—data that you want in the model but that is not currently being captured by your organization.
- Allows the linking team to consider potential causal relationships before they see the data and begin thinking about what they may need to change. This helps the team plan ahead on how to gain organizational commitment for change or obtain necessary resources.

SSL's model incorporated their employee and customer satisfaction data, process quality and efficiency measures and financial data. Although there was some interest in including lost-customer data (information from previous customers), they decided that they did not have a well-designed or accurate method for collecting such information. This was a potential area for future research.

Timing of Data Collection. Cause-and-effect implies a “direction” to a sequence of events, i.e., one occurs before the other. For instance, SSL assumed that employee attitudes influenced customer attitudes and not the other way around. While this isn't always the case (satisfied customers may interact more positively with employees, making the employees more satisfied), a general notion of the order of events should be incorporated into the theoretical model. As much as possible, data collection should proceed in this same order. Therefore, SSL decided to use its second quarter employee

data and its third quarter customer data from the previous year and link that data to year-end financials.

Unit of Analysis. At SSL, as in most organizations, employee and customer opinions came from individuals. However, financial and process data were collected at the branch level. Linkage research needs a common unit of analysis. This meant that employee and customer data had to be aggregated or “rolled-up” to the branch level. So instead of looking at the opinions of 6,000 employees and hundreds of thousands of customers, SSL’s linkage research was conducted using 400 units of analysis (the 400 branches).

Is there a minimum number of units necessary to conduct linkage research? This is a statistical question that depends on a number of things--how well the metrics have been designed, the amount of reliability and/or variability in the metrics, the type of analyses that will be used. Although linkage research has been conducted with as few as 20 units, larger samples are more desirable. Because there is no one answer to the “how many” question, a good rule of thumb is to gather as much data as you can and then apply the most rigorous and appropriate analyses possible.

What Do You Learn?

First of all, the linking team reviewed the current level of performance on each of the measures in the model. They began by identifying the strengths in the employee, customer, financial and internal process data--places where they were currently doing well. Then they looked for the weaknesses--areas where they believed improvement was necessary.

After learning where the organization currently stood on each category, attention was turned to identifying the key leverage points. Leverage points are the significant *links* in the model. Knowledge of the “causes” having the greatest “effects” can be used as leverage to influence the outcomes you want. Once the cause-and-effect relationships are identified, it is often clear what needs to change to achieve the outcome you want.

At SSL, different relationships were found for the branch tellers and loan officers. When branch tellers rated job training, autonomy in decision-making, supervision and technology and equipment positively, customers rated the quality and timeliness of the service provided by the tellers more positively. The highest relationship was found in job training, which contributed to transaction efficiency, which resulted in fewer transaction errors, which affected customers’ overall satisfaction and loyalty. Customers were more likely to report that the tellers were knowledgeable, made good decisions and were effective at dealing with problems. And these positive relationships had significant long-term benefits. In branches where tellers and customers responded favorably, scores on other measures (e.g., deposit growth, employee retention, processing accuracy and number of services per customer) increased significantly.

The findings for loan officers differed slightly. Among loan officers, the greatest contributors to customer satisfaction were service orientation--primarily interpersonal and

communication skills—and autonomy. The relationship developed and maintained between the loan officer and the customer translated into higher loan growth and an increase in the number of services per customer.

Taking Action

Once current performance and key leverage points were identified, it was time to determine what issues to target for action. At an organizational level, SSL looked for issues that had a significant effect on other variables and where the organization as a whole was not performing well. But they also looked at results on a case-by-case basis. With any organization of 400 branch locations, they knew that some locations might be doing better than others. So rather than institute a company-wide initiative that may not be needed everywhere, they could be more selective in their focus.

Based on the linkage research, HR knew they needed to focus on job training for tellers and interpersonal and communication skills for loan officers. Based on the employee survey data, they knew which branches to target. They now knew where to focus their limited resources to positively affect financial growth.

The next step was to develop appropriate action plans. The linking team, in conjunction with subject matter experts (SMEs) from the branches, put together detailed action plans to clarify the problems so appropriate actions could be put into place. They gathered more information where necessary to make sure they understood the root cause of the problem (e.g., was the perception of inadequate training due to poor instruction, frequent changes in processes that made keeping up-to-date difficult, too short a training period?). Actions were then designed to deal with the root cause.

Of course, it's important to have an evaluation component for any initiative. SSL's linking team set measurable goals for each action and designed procedures to help them evaluate whether those goals were having the desired impact. This is where the "rubber meets the road" for the linkage model. The actions taken should show the corresponding effects that were predicted. This is how linkage research helps an organization achieve "balance" and improve its effectiveness and its ROI.

Dynamic Model

Over time, it may become necessary to modify the linking model. For example, as actions are taken to address problem areas, those issues may become less important drivers of desired outcomes while other new "problem areas" may arise. By continuing to collect data, test and revise the model as appropriate, HR practitioners can continue to help the organization move toward "balance" and its desired outcomes.

Summary

Effective organizations are aligned in that everything is working toward the same goal. Linkage research can tie together data from key areas—employees, customers, internal

processes and finances—and show their cause-and-effect relationships. This puts organizations in a much better position to take corrective actions that will have the greatest impact on achievement of those goals. And while we used SSL to demonstrate the application of linkage research, it should be noted that this approach is not limited to the banking industry. Linking has also been carried out in many different kinds of organizations, including manufacturing firms, restaurants, insurance agencies and convenience stores.

References

Lundby, K.M., K. Fenlason and S. Magnan. “Linking employee and customer data to business performance—difficult but not impossible: some lessons from the field.” *Consulting Psychology Journal: Practice and Research*, 53(1), 2001: 22-34.

Rucci, A.J., S.P. Kirn and R.T. Quinn. “The employee-customer-profit chain at Sears.” *Harvard Business Review*, 76 (1), 1998: 82-97.

Schneider, B. and D. Bowen. “Employee and customer perceptions of service in banks: Replication and extension.” *Journal of Applied Psychology*, 70, 1985: 423-433.

Wiley, J. W. “Linking survey data to the bottom line.” In *Organizational Surveys: Tools for Assessment and Change* by A.I. Kraut (Ed.). San Francisco: Jossey-Bass, 1996: 330-359.

Endnotes:

¹ SSL is a fictitious organization that represents an amalgamation of companies who have conducted linkage research. Thus, the issues and challenges discussed in this paper are real and not limited to the banking industry.

Thanks to Kyle M. Lundby, Ph.D., Sally Blecha, M.A., and Susan Jambor, M.B.A., for contributing this paper. It is intended to provide general information, and is not a substitute for legal or other professional advice.

Kyle Lundby is Director, Consumer and Technology Research with Data Recognition Corp. He has a Ph.D. in Industrial and Organizational Psychology. His current research emphasis has been on linking employee to customer and financial data. Kyle is also an adjunct faculty member at Augsburg College in Minneapolis.

Sally Blecha is a senior research consultant at Questar. She has been in the field of employee research and consulting for over 18 years, and has authored many of Questar’s training and process guides.

Susan Jambor is currently Director of Research and Consulting Services at Questar, as well as the head of HR. She is a long-time member of SHRM.