1-1-2007

Tracking Performance: When Less Is More

Kathy Paulson Gjerde  
*Butler University*, k paulson@butler.edu

Susan B. Hughes  
*University of Vermont*

Follow this and additional works at: https://digitalcommons.butler.edu/cob_papers

Part of the *Business Administration, Management, and Operations Commons*

**Recommended Citation**  
https://digitalcommons.butler.edu/cob_papers/193

This Article is brought to you for free and open access by the Lacy School of Business at Digital Commons @ Butler University. It has been accepted for inclusion in Scholarship and Professional Work - Business by an authorized administrator of Digital Commons @ Butler University. For more information, please contact digitalscholarship@butler.edu.
Companies have long used various performance measures to quantify their results. Public companies use quarterly and annual net income, operating income, and earnings per share to summarize their results for the past period, and these are widely reported in the business press. Measures of financial performance are dubbed “lagging indicators” because they reflect the results of the prior period. But in today’s fast-paced global economy, many companies focus on leading indicators as well. When appropriately identified, measured, reported, and evaluated, leading indicators can inform management of the progress being made on initiatives undertaken to achieve higher profits.

Leading indicators are not a new phenomenon. For example, the variances computed with standard cost systems have traditionally provided managers with timely information on production inefficiencies, allowing them to focus their attention on unfavorable outcomes, to take corrective action, and to improve profits.
Since the early 1990s, many companies have developed balanced scorecards to link their strategic objectives, financial performance, and metrics associated with initiatives related to customers, internal business processes, and learning and growth. Many of the metrics associated with these last three categories are leading indicators. Favorable performance on these metrics is expected to lead to more favorable financial performance in the future.

In describing the balanced scorecard, Robert S. Kaplan and David P. Norton suggest it should include 20 to 25 measures. They break this total down into five financial, five customer, eight to 10 internal, and five learning and growth measures. While upper management may find it possible to track and evaluate that many measures, those in distinct operating locations—such as individual stores, warehouses, and restaurants—may lose sight of the goal as they juggle their operation’s performance to meet these various targets. In fact, a 1998 report indicated that 70% of scorecard implementations fail. Too many metrics and too much reliance on historic financial measures prevent the balanced scorecard implementation from adding value to the firm. It is no surprise that a 2004 study of successful scorecards found that the effective scorecards included only a limited number of metrics at the top, with supporting metrics listed below.

Companies that have not developed balanced scorecards track their performance using a variety of measures. In fact, there is some evidence that these companies may track a great number of measures to assess their performance. Think about your own firm. Whether or not you use a balanced scorecard, identify how many measures you track on at least a monthly basis—either because you believe they are important or because someone else believes they are important. Is it less than five? Less than 25? More than 50? Even in firms that use a balanced scorecard to assess performance, managers may find themselves evaluating performance on more than 15 measures. With or without the balanced scorecard framework, it is easy for managers to become overwhelmed when trying to improve a variety of measures or get frustrated when improving performance on one measure results in lower performance on another, at least in the short term. Given the trade-offs involved in managing the results of multiple measures, managers can easily lose sight of those measures that link directly to strategic objectives and those that may have less long-term significance.

**Identifying Key Indicators**

In a typical balanced scorecard, the four focus areas of financial, customer, internal business process, and learning and growth are usually found from top to bottom on the left-hand side. Initiatives (these may also be called objectives) for each area are found in the next column to the right. The initiatives identify actions (for example, hire additional line supervisors, secure new supplier) or goals (increase market by 5%, decrease rate of absenteeism by 10%) that managers are expected to achieve. Financial measures are lag measures. Initiatives in the other three areas are designed to lead to improved financial performance. As such, achieving these initiatives leads to improvements in future financial performance. Within some scorecards, the customer, process, and learning and growth may be assessed with what are termed lead and lag measures. Within this context, achieving the goal of a lead measure indicates that the initiative is on track, and achieving the goal of a lag measure indicates that the goal has been accomplished. For those readers unfamiliar with the layout of a balanced scorecard, an example can be found in “How Groups Produce Higher-Quality Balanced Scorecards than Individuals” in the Summer 2005 issue of *Management Accounting Quarterly*.

While all of the customer, process, and learning and growth initiatives may seem to be tied to long-term strategic objectives, some items may be tied more directly so are more significant than others. One way to identify these key lead measures is to find those that are directly associated with many different areas of the balanced scorecard. Figure 1 illustrates this relationship using objectives included in the scorecard from the Summer 2005 article. The top panel shows reducing the employee turnover rate directly impacts only initiatives in learning and growth. While important, this objective does not have broad impact. A different outcome is found if the company focuses on new product development. Here, achieving the objective results in direct improvements in all four areas of the balanced scorecard.
Figure 1: Distinguishing Between PI and KPI in a Balanced Scorecard

If the performance indicator (PI) is Employee Turnover Rate:
- Financial
  - X
- Customer
  - X
- Internal Business Processes
  - X
- Learning and Growth
  - Employee training and advancement

If the key performance indicator (KPI) is New Product Development:
- Financial
  - Double sales
- Customer
  - Brands that are marketplace leaders
- Internal Business Processes
  - Number of new products under development
- Learning and Growth
  - Awareness of core values

Measure of operating efficiency leads to strategic goal.
scorecard. So while reducing employee turnover is not a key lead measure, the rate of new product development is a key lead indicator. If it is identified as a key lead indicator, managers will know to focus on this objective while not harming that of employee turnover.

Another way to identify key lead indicators is to identify the measures that you accumulate frequently and that result either in achieving strategic objectives or changing strategic objectives. Measures that you track only quarterly or annually cannot be key lead performance indicators. They don’t provide timely information or allow for corrective action.7

Research on company performance and performance measurement provides insight into possible key lead measures. For example, a recent research study found that managers in nonmanufacturing firms achieved higher performance when they focused on employee and operational factors to build human capital.8 These findings suggest that key lead measures in nonmanufacturing firms are those associated with investment in human capital.

Recent research also supports the idea that less is more when it comes to the number of measures used to track performance. The results of a recent survey of members of the Institute of Management Accountants (IMA®), found that managers who worked with less complex measurement systems—defined as having 10 or fewer measurements—had reduced role conflict as compared with managers who worked with more complex systems.9 Reduced role conflict should result in more efficient and focused managers and increased job satisfaction. As such, identifying the key lead metrics should help focus management’s attention on those items most closely linked to the company’s strategic objectives and should improve the manager’s job performance and satisfaction, creating a win-win situation for the company and the manager.

Home Depot and Starbucks are two widely recognized U.S. companies that were in the news during the first half of 2007. Their stories illustrate that tracking too many measures not tied directly to a company’s strategic objectives results in less-than-desired financial results. The experiences of Steak n Shake, however, show how the identification of the right lead metrics results in improved performance.

**Home Depot**
Robert Nardelli came on board as the new CEO of Home Depot in 2000.10 At the time, the company faced a number of financial and operational problems that needed to be addressed to ensure its long-run profitability following 20 years of growth. At the store level, managers had considerable autonomy to respond to local market conditions, but this often translated into managers ignoring directives from headquarters. This entrepreneurial spirit also resulted in managers focusing on increasing their individual store sales at any cost, negatively impacting margins. Nardelli replaced the sense of “entitled autonomy” in the organization with a set of common objectives, goals, and metrics, and his efforts paid off as earnings per share doubled between 2000 and 2005.

But that is not the end of the story. As management focused on all aspects of a store’s productivity, customer service began to slip. Time spent measuring items ranging from how many pallets were removed from a truck per hour to how many extended warranties each employee sold per week translated into less time spent assisting customers. As result, sales began to slip. On January 2, 2007, Nardelli resigned as CEO and was replaced by Frank Blake, who made improving customer service a top priority.11

The Home Depot experience illustrates that a disconnect may develop over time between the organization’s strategic objectives and its measurement system. Figure 2 shows that focusing on store productivity may have improved internal business processes, but it failed to improve the customer experience and sales revenue. A focus on the key leading indicators that improved the customer experience might have led to different results.

**Starbucks**
Starbucks was ranked first in customer loyalty in the coffee-and-doughnuts category for the five years prior to 2007. In 2007, Dunkin’ Donuts took that ranking.12 In a February 2007 internal memo, Starbucks Chairman Howard Schultz wrote, “…we have had to make a series of decisions that, in retrospect, have led to the watering down of the Starbucks experience, and what some might call the commoditization of our brand.” In his memo, Schultz identified four changes that were
done to improve service, speed, and efficiency: the use of automatic espresso machines; moving the beverage production out of sight of the purchaser; limiting the time the customer spent with the barista; and the use of bagged rather than in-store roasted coffee. The focus on increased efficiency interfered with the customer’s purchase experience, negatively impacting ROI instead of improving it. Figure 3 illustrates that a focus on internal business processes resulted in negative impacts on the customer experience and satisfaction, a critical component in driving Starbucks’ demand and revenues.

**Steak n Shake**

A different set of measures was identified by the Steak n Shake Company. Steak n Shake is a restaurant chain that built a niche between quick-serve restaurants (for example, McDonald’s) and casual dining (TGI Friday’s). For many years, Steak n Shake recognized that appropriate levels of well-trained employees lead to more satisfied customers who generate larger revenue per customer order and more repeat business. In turn, satisfied customers lead to higher employee retention levels, in turn reinforcing customer satisfaction.

To increase customer satisfaction and revenues, Steak n Shake focused on three key lead metrics identified through internal and external research. The measures were identified as those that drive individual restaurant performance: associate turnover, drive-thru-window service times, and dine-in customer satisfaction. Each of the factors is an ideal key lead indicator because it can be measured frequently, thereby providing timely feedback on performance leading to future sales and profitability.13

---

**Figure 2: Disconnect Between Strategy and Measurement at Home Depot**

![Diagram showing the disconnect between strategy and measurement at Home Depot.](image-url)
Identifying Key Lead Performance Indicators

In each of the three company examples, management recognized the importance of establishing performance metrics, but each had different degrees of success identifying the true key lead indicators. Identifying the causal relationships among various metrics allows management to distinguish between key lead measures and those measures that exert lesser impact on profitability.

But even in a simple environment, clearly defining all of the interdependencies inherent in managing different measures is difficult. Working with a business simulation allows managers to develop insight into key lead measures and their impact on other measures. Unlike actual business experiences, the simulation may take less than one hour per cycle. Early failures do not impact either the actual company’s profitability or the manager’s incentive compensation, and participants can quickly observe how concentrating on some measures may result in short-term improvements but fail to achieve long-term success.

The interactive simulation game Building Service, Driving Profits is designed to help users develop their ability to manage service organizations. In the simulation, users work to understand how to manage human resources in a customer-oriented service industry. Users manage RGP Financial Services, a fictional firm, over a 10-year period. The goal is to reverse the vicious cycle of downward performance trends by indentifying the key lead metrics and then developing a coordinated human resources strategy. The seven possible metrics, presented in the form of levers, are:

- Incremental hiring;
- Layoffs;
- Starting salary;
- Salary change;
- Training;
- Service infrastructure (annual investment in computers, software, phone systems); and
- Promotion (marketing) expense.

Figure 3: Measurement at Starbucks

<table>
<thead>
<tr>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
</tr>
<tr>
<td>Speed and efficiency not what customers value</td>
</tr>
<tr>
<td>Internal Business Processes</td>
</tr>
<tr>
<td>Improved efficiency and speed of delivery</td>
</tr>
<tr>
<td>Learning and Growth</td>
</tr>
</tbody>
</table>

Focus on automation and standardization

Dunkin’ Donuts #1 in Customer Loyalty

Starbucks:
- Financial
- Customer
- Internal Business Processes
- Learning and Growth

Dunkin’ Donuts:
- #1 in Customer Loyalty

In each of the three company examples, management recognized the importance of establishing performance metrics, but each had different degrees of success identifying the true key lead indicators. Identifying the causal relationships among various metrics allows management to distinguish between key lead measures and those measures that exert lesser impact on profitability.

But even in a simple environment, clearly defining all of the interdependencies inherent in managing different measures is difficult. Working with a business simulation allows managers to develop insight into key lead measures and their impact on other measures. Unlike actual business experiences, the simulation may take less than one hour per cycle. Early failures do not impact either the actual company’s profitability or the manager’s incentive compensation, and participants can quickly observe how concentrating on some measures may result in short-term improvements but fail to achieve long-term success.

The interactive simulation game Building Service, Driving Profits is designed to help users develop their ability to manage service organizations. In the simulation, users work to understand how to manage human resources in a customer-oriented service industry. Users manage RGP Financial Services, a fictional firm, over a 10-year period. The goal is to reverse the vicious cycle of downward performance trends by indentifying the key lead metrics and then developing a coordinated human resources strategy. The seven possible metrics, presented in the form of levers, are:

- Incremental hiring;
- Layoffs;
- Starting salary;
- Salary change;
- Training;
- Service infrastructure (annual investment in computers, software, phone systems); and
- Promotion (marketing) expense.

Focus on automation and standardization

Dunkin’ Donuts #1 in Customer Loyalty

Starbucks:
- Financial
- Customer
- Internal Business Processes
- Learning and Growth

Dunkin’ Donuts:
- #1 in Customer Loyalty

In each of the three company examples, management recognized the importance of establishing performance metrics, but each had different degrees of success identifying the true key lead indicators. Identifying the causal relationships among various metrics allows management to distinguish between key lead measures and those measures that exert lesser impact on profitability.

But even in a simple environment, clearly defining all of the interdependencies inherent in managing different measures is difficult. Working with a business simulation allows managers to develop insight into key lead measures and their impact on other measures. Unlike actual business experiences, the simulation may take less than one hour per cycle. Early failures do not impact either the actual company’s profitability or the manager’s incentive compensation, and participants can quickly observe how concentrating on some measures may result in short-term improvements but fail to achieve long-term success.

The interactive simulation game Building Service, Driving Profits is designed to help users develop their ability to manage service organizations. In the simulation, users work to understand how to manage human resources in a customer-oriented service industry. Users manage RGP Financial Services, a fictional firm, over a 10-year period. The goal is to reverse the vicious cycle of downward performance trends by indentifying the key lead metrics and then developing a coordinated human resources strategy. The seven possible metrics, presented in the form of levers, are:

- Incremental hiring;
- Layoffs;
- Starting salary;
- Salary change;
- Training;
- Service infrastructure (annual investment in computers, software, phone systems); and
- Promotion (marketing) expense.
Although the effects of a particular strategy on various financial and nonfinancial measures can be observed after every year, emphasis is placed on monitoring three dashboard metrics (customer satisfaction, employee satisfaction, and the cash index) through the use of gauges. These metrics serve as the lag indicators in the simulation. The control panel of the game, highlighting the seven levers and the three dashboard metrics, is illustrated in Figure 4.

While the control panel does not differentiate between the levers, it is important to recognize that not all of the seven initiatives are of equal importance. In fact, after playing the game for a short time, it becomes clear that only two levers truly drive success. Given the service setting of this game, the key lead indicators are investment in training and service infrastructure. While the remaining five levers have the power to affect the magnitude of the success achieved by the company, they are not sufficient in and of themselves to reverse the downward spiral of the company. Only the investment in training and service infrastructure lead to significant improvement in the three lag indicators of customer satisfaction, the cash index, and employee satisfaction.

A typical winning strategy might start with a salary increase, which not only increases current employee satisfaction but may also attract higher-quality new employees. Salary increases, however, represent a short-term solution to the problem. To truly reverse the vicious cycle, the organization must also invest substantially in training and infrastructure to increase the average skill level of employees. Given the organization’s precarious financial position, the investment in infrastructure must be modest at first. As employee and customer satisfaction begin to rise, the key to success is to ramp up the investment in infrastructure, simultaneously spending generously on advertising to get the word out that service levels have improved. Figure 5 illustrates the trajectory for employee satisfaction, customer satisfaction, and profit under such a complete strategy.

Underlying this strategy’s success is a reinforcing feedback loop between employee and customer satis-
Figure 5: Complete Strategy

- Employee Satisfaction
- Customer Satisfaction
- Profit


Percentage

Thousand $
faction. As employee satisfaction increases, employees provide better service, which drives up customer satisfaction. Satisfied customers, in turn, cause employees to feel more satisfied with their work, thus starting the cycle over again. There is another reinforcing loop at work here as well. As customer satisfaction increases, the size of the customer base increases. This leads to an increase in revenue, which allows increased investment in infrastructure. Improved infrastructure increases the perceived quality of the service, yielding an additional increase in customer satisfaction. Thus, understanding the underlying relationship between a few key metrics is important in designing an effective strategy.

To see the critical role that investment in training and service infrastructure plays within the overall strategy, consider what happens when the level of investment is scaled back but the rest of the strategy remains the same. As illustrated in Figure 6, employee and customer satisfaction dip in the short run, then experience a modest increase. This pattern is similar to that observed in Figure 5. In the long run, however, the trajectories of employee satisfaction, customer satisfaction, and profit are vastly different in the case of no training and infrastructure investment vs. substantial investment. With insufficient investment, employee and customer satisfaction eventually plunge, resulting in persistent financial losses and the firing of the “manager” before the end of the 10-year period.

What happens if the manager focuses solely on training and infrastructure investments? Would such a strategy be sufficient to ensure success? The answer is a qualified yes. As seen in Figure 7, relying solely on training and infrastructure investments results in modest financial success. Comparing Figure 7 to Figure 5, however, clearly reveals that this success can be improved upon greatly by coordinating the remaining levers.

Thus, all levers, as in all metrics, are not created equal. Focus on the wrong lever, and you may get burned—as seen in the simulation game and in the cases of Starbucks and Home Depot. Focus on the right lever, and you may ensure your survival. In order to find the true key performance metrics, you must first have a clear understanding of the underlying mechanisms that tie the metrics together.

**Less Is More**

Companies often use a variety of measures to help them determine if they are on track to achieve forecasts, but too many measures may distract employees from the actual goal. Home Depot’s recent experience illustrates how the focus can be lost. Rather than focus on the customer experience and how that generates revenue, one metric focused on the speed with which pallets could be unloaded. From a cost-control standpoint, this may be important. Unfortunately, this measure does not lead to increased sales per customer, an increase in the number of repeat customers, or additional customers gained through positive referrals.

“You get what you measure” is a common idea in business performance. When companies use many different measures, it is likely that employees lose sight of the primary goal and work to achieve the goals of the individual measures. What would that mean to our highlighted companies? Home Depot employees could work to unload a truck rather than help customers place new purchases in their vehicles, Starbucks employees could focus on how quickly they serve each customer in line rather than enhance the customer experience, and Steak n Shake workers could be distracted by in-store politics rather than happily and efficiently serving customers. In each location, the lack of customer service would likely lead to reduced revenue from the customer and the customer’s friends and family in the future.

All three companies realized it is more efficient to track a few key metrics that best indicate if they are achieving the goal of increasing profitability rather than track a variety of measures that may distract employees from the true objective. How can other companies learn from these experiences? First, even if a balanced scorecard approach with 20 to 25 measures is used to assess strategic objectives, management may want to identify the three to five lead measures that most drive revenue and net income performance. Put simply, when communicating key metrics to employees, less is more.

Second, it is important that these measures are communicated clearly to all employees. Third, employees should see the link between achieving the key lead measures and their compensation. This was clear in the Steak n Shake story. If the in-store dining experience is
Figure 6: No Investment in Training and Infrastructure
Figure 7: Investment in Training and Infrastructure Only

- Employee Satisfaction
- Customer Satisfaction

- Year:
  - 1996
  - 1997
  - 1998
  - 1999
  - 2000
  - 2001
  - 2002
  - 2003
  - 2004
  - 2005

- Thousand $:
  - 0
  - 1,000
  - 2,000
  - 3,000
  - 4,000
  - 5,000
  - 6,000
  - 7,000
  - 8,000

- Thousand Percentage:
  - 0
  - 20
  - 40
  - 60
  - 80
  - 100
positive, customers are likely to order more, leading to higher tips for serving personnel. They are also likely to return and to encourage their friends and family to visit the restaurant, two more ways of increasing tips for service personnel. Fourth, companies should work to ensure that whatever metrics they use do not distract employees from seeing the goal clearly—increasing revenues, increasing income, and increasing positive cash flow. ■

Kathy A. Paulson Gjerde, Ph.D., is an associate professor of economics in the College of Business Administration at Butler University, Indianapolis, Ind. You can reach Kathy at kpaulson@butler.edu.

Susan B. Hughes, Ph.D., CPA, is an associate professor of accounting in the School of Business Administration at the University of Vermont, Burlington. You can contact Susan at shughes@bsad.uvm.edu.

ENDNOTES
6 For other ideas on items that impact multiple scorecard categories, see David Parmenter, “Winning KPIS Revisited,” Management, 2002, pp. 49-51.
7 Ibid., p. 51.