Ouch!
Marketing research is vitally important to help guide some of the most critical decisions that companies face. Unfortunately, a good deal of marketing research is of questionable quality. Even worse, many managers are unable to distinguish between good and bad research, leaving them vulnerable to the superficial suggestions of consultants and market research firms. Most business executives want to do the right things—for their companies and for themselves. The fundamental problem is simple: Most managers haven’t been trained to think critically about research.
**Executive Summary**

This article reviews some of the basic errors that undermine research in the business world. Drawing on my book *The Halo Effect ... and the Eight Other Business Delusions That Deceive Managers* (Free Press, 2007), it is intended as a brief guide to critical thinking about research. Most managers haven’t been trained to think critically about research. The goal here is to help those who conduct marketing research but also, and perhaps more importantly, to provide a guide for consumers of marketing research.

**Ensuring Data Validity**

The halo effect. A basic problem that plagues research has to do with the validity of data. Any time we test a hypothesis, whether in science, medicine, or marketing, we seek to measure the effect of one or more factors on some outcome. The outcome is known as the dependent variable, and the factors that affect it are independent variables. A basic hallmark of valid research is that our independent variables need to be measured independently of what we are seeking to explain. Unfortunately, in so much business research, this basic requirement of data independence is violated. The resulting findings may seem plausible, but they don’t meet the level of scientific rigor they claim.

One of the most pervasive problems in data independence is the halo effect, which refers to the common tendency to make specific inferences on the basis of an overall impression. First identified by psychologist Edward Thorndike in 1920, it is found in many walks of life. The halo effect is well-known in the field of marketing as the tendency of brand image to shape consumer perceptions. The Apple brand, for example, is seen by many to stand for a combination of innovation and sleek design and confers a perceived advantage on new products. The same sort of halo effect occurs in other domains, too. Whenever we find ourselves saying things like “It’s a Toyota, so it must be high quality” or “She worked for three years at GE, so she must be well-trained” we are allowing a general impression to shape a specific judgment.

My concern is with the halo conferred by high performance. When a company is performing well, with higher sales and profits and a booming stock price, people are often quick to infer that it has a capable leader, a vibrant corporate culture, excellent customer focus, and more. When that same company experiences a dip in performance, it’s irresistible to infer that the leader became ineffective, execution skills deteriorated, and customers were ignored. Sometimes companies really do change in these ways, but usually the explanation is simpler: A decline in financial performance leads us to perceive the company differently. The fact is, concepts like leadership, corporate culture, and customer focus are rather fuzzy and ambiguous. Rather, a company’s financial performance creates an overall impression—a halo—that shapes how we perceive its strategy, leaders, employees, culture and other elements. As a result, many of the things we normally believe drive company performance are instead attributions based on performance.

The halo effect of company performance can often be found in how we talk about concepts in marketing, such as customer focus. When Cisco Systems was a rising star during the dot.com boom, it was held up as a shining example of excellent customer focus. It was described by *Fortune* magazine as having “extreme customer focus.” CEO John Chambers was called “the most customer-focused human being you will ever meet.” A year later, as performance fell, Cisco was said to have exhibited “a cavalier attitude toward potential customers,” and its sales tactics had been “irksome.” Unless we believe that Cisco actually got worse—and no one suggested that was the case—all we have are changing attributions about customer orientation made on the basis of worsening financial performance.

But the halo effect is not limited to magazine articles; it can also undermine examples of serious marketing research. One study, by John Narver at the University of Washington and Stanley Slater at the University of Colorado, set out to study the link between customer orientation and company performance. Performance was defined as business unit profitability. To capture customer orientation, they asked managers to rate their companies on six criteria: overall customer commitment; creating customer value; understanding customer needs; setting customer satisfaction objectives; measuring customer satisfaction; and providing after-sales service. When Narver and Slater ran their statistical tests, they found a significant correlation between performance and customer orientation. But that is precisely what we would expect to find given the halo effect. It is entirely predictable that companies that are performing well tend to be seen as having strong customer orientation. If we want to test whether customer orientation leads to high performance, the last thing we should do is ask managers, “How customer oriented is this company?” All we are likely to get is an attribution based on performance.

To have any validity at all, we need to rely on measures that are independent of performance. What’s a better way to measure customer orientation? We should ask about specific practices that are not likely to be shaped by perceptions of financial performance. For instance, are customers involved in the product design process? How frequently is customer satisfaction measured? What percentage of employees have variable compensation based on levels of customer satisfaction? These are just three ways to ensure that we are not measuring attributions based on performance because, so long as judgments are attributions that reflect a company’s performance, the logic will be circular. None of this, by the way, suggests that customer orientation doesn’t lead to higher performance—I suspect that if we measure it carefully, we’ll find that it does, at least to some extent. But passing out a survey where responses are likely to be shaded by the halo effect is not the way to go.
Some large-scale studies have fallen into precisely this trap. Consider the book *Firms of Endearment: How World-Class Companies Profit from Passion and Purpose* by Rajendra S. Sisodia, David B. Wolfe, and Jagdish N. Sheth (Wharton School Publishing, 2007). The authors claim, on the basis of extensive research, that firms should strive to become loved by their customers and that becoming a loved company is the only path to long-term competitive advantage. They write, “These are the *Firms of Endearment*: Companies people love doing business with. Love partnering with. Love working for. Love investing in. Companies for whom ‘loyalty’ isn’t just real: It’s palpable and driving unbeatable advantages in everything from marketing to recruitment.” Further, they conclude, “You need to become one of those companies. This book will show you how. You’ll find specific, practical guidance on transforming every relationship you have: with customers, associates, partners, investors, and society.”

It all sounds good and appears to be supported by evidence showing that these beloved companies outperform the S&P 500 average. But whether these expressions of love are the driver of high performance or whether they are reflections of high performance—a halo—is not clear. Show me any successful company, and I can probably claim that it must be loved by customers and employees; show me any company that has fallen on hard times, and I can probably find evidence that its customers are less pleased and its employees less confident and committed. But those may be reflections, not drivers, of performance.

**The delusion of correlation and causality.** Suppose we do a good job of ensuring that our data do not suffer from the halo effect. Rather than rely on perceptions that are shaped by performance, we look at untainted measures. For example, imagine we gather data about the level of spending on customer awareness and find a high correlation between spending on customer awareness and company performance. That would be free of the halo effect, but such an approach still raises other questions.

Now the challenge is to untangle the direction of causality. Does spending on customer awareness lead to better company performance? That could be true because that better awareness could bring about higher sales and more revenues. Or does better performance mean we have more money to spend on marketing campaigns that aim to raise awareness? That could be true, too, in which case the causality is backwards: company performance leads to greater spending. Knowing which leads to which is critical if managers want to know whether they should invest in customer awareness. But, so long as we gather data at one point in time (cross-sectionally), we won’t know. Psychologist Edwin Locke made the point emphatically: “While the method of correlation may be useful for the purposes of suggesting causal hypotheses, it is not a method of scientific proof. A correlation, by itself, explains nothing.”

One way to improve our ability to explain causality is to gather data at different points so that the impact of one variable on a subsequent outcome can be clearly isolated. This approach, called a longitudinal design, is more time-consuming and expensive to carry out, but it stands a better chance of preventing mistaken inferences from simple correlation. It is far easier, of course, to rely on data from a single point in time and make an assumption about the direction of causality, but that method is prone to serious problems.

**The delusion of single explanations.** Even if we ward off the halo effect and the tendency to infer causality from cross-sectional data, we may still encounter a third problem, that of single explanations. Let’s come back to the question of customer orientation. We know we can’t measure customer orientation just by asking, “Is your company customer oriented?” because all we’ll catch is the glow from the halo. But there’s a better way. A study by Bernard Jaworski at the University of Arizona and Ajay Kohli at the University of Texas-Austin looked into the link between market orientation and performance. They defined market orientation in terms of three elements—market intelligence generation, market intelligence dissemination, and business unit responsiveness to market intelligence—and then asked respondents to evaluate 32 separate statements. Most of these statements were not about perceptions, but asked about objective facts. For example, respondents were asked whether they polled end users at least once a year to assess the quality of products and services. Presumably that’s something we can measure objectively and will not be answered differently based on performance. Respondents were also asked whether “data on customer satisfaction were disseminated at all levels in this business unit on a regular basis.” Either that happens or it doesn’t; the rating shouldn’t be susceptible to the halo effect.

Jaworski and Kohli gathered data from a broad sample of companies in three different competitive environments—market turbulence, competitive intensity and technological turbulence. That way, they could compare results across different environments and tell if any effect between market orientation and firm performance was explainable by things like market turbulence or competitive intensity. When they ran their calculations, they found that market orientation was strongly associated with higher performance. The effect was, in statistical terms, highly significant, meaning it wasn’t just some random occurrence. Their model had an $r^2$ of 0.25, meaning it could explain about 25 percent of the variance in company performance. Those are strong results, which led the
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The delusion of absolute performance. These errors lead to a fourth delusion that is worthy of mention because it colors so much that is written in the field of business. It is not limited to marketing, but speaks more generally to company performance. Many studies of business performance, including some of the biggest best-sellers of recent years, claim that a company can achieve high performance if it follows a specific set of steps. Some recent books have claimed that companies can virtually guarantee success by following these six steps, that four-point formula, or those five principles. A few claim that their findings have the rigor of science. They congratulate themselves on the vast amounts of data they gathered, but overlook the fact that it’s the quality of data that matters, not the quantity. Unfortunately, if the data are biased by the halo effect, the results will be misleading as well.

These studies may appear to show a predictable relation between actions and high performance, but in fact they do nothing of the kind. If companies are selected on the basis of past performance, and data are gathered from sources that are undermined by the halo effect, we won’t isolate the drivers of performance at all. The resulting analysis may suggest that a given set of factors leads predictably to success, but the logic is backwards: It would be more accurate to say that successful companies tended to be described in a common way.

In fact, following a given formula can’t ensure high performance for a simple reason: In a competitive market economy, performance is fundamentally relative, not absolute. Revenues and profits depend not only on a company’s actions, but also on those of its rivals. A company can improve its operations in many ways—better quality, lower cost, faster throughput time, superior asset management, and more—but, if rivals improve at a faster rate, its performance may suffer.

Take the example of Kmart. Once the leading discount retailer in the United States, Kmart faltered during the 1990s and by 2002 was bankrupt. Business school professors, journalists and industry analysts have been critical of Kmart, claiming it had a poor strategy, incompetent management, an inefficient organization, and more. But a closer look suggests a different story. On many measures of performance—measures that are objective and not shaped by the halo effect—Kmart actually got better during the 1990s. Inventory turns improved by 60 percent. Greater reliance on central purchasing lowered procurement costs. Point-of-sale information technology improved the speed and accuracy of reordering. Supply-chain efficiencies improved as well. Yet, by the end of the 1990s, Kmart’s market share had declined and profits suffered, eventually landing it bankruptcy court. Did Kmart improve its performance in the 1990s? Yes, if we look at absolute measures. But certainly not if we think in relative terms, which, after all, is what competition is all about. While Kmart was improving in many ways, two major rivals (Wal-Mart and Target) were getting even better on those same measures. Kmart’s failure is a relative failure, not an absolute one.

So what drives company performance? In a competitive market economy, performance means doing things differently from rivals, which means strategic choices that invariably take place under conditions of uncertainty. The role of the strategist is to gather data to make as intelligent a choice as possible, improving the company’s chances of success but never imagining that a given set of steps can predictably bring about high performance. Only when research has been flawed by errors of design and compromised by invalid data do we conclude that there exists a blueprint of success. The nature of competition is very different. After all, if all companies in an industry followed the same formula, they would not all be highly successful. The nature of competition means that performance is relative and that choices under uncertainty are unavoidable.
The Halo of Brands

Any discussion of the halo effect in marketing would be incomplete without mention of its positive elements. As explained above, the halo effect can undermine the validity of data and lead to questionable research findings, but it also has an important role in marketing—especially as it relates to brands. After all, what is a brand but the deliberate effort to create a powerful halo, to have customers make favorable attributions based on a general brand? Given what we know about the halo effect and its ability to shape perceptions, we can understand why building positive associations is so powerful.

And yet research into the value of brands is often poorly done. Several publications, including BusinessWeek and the Financial Times, have a special section that ranks the top global brands. In the latest Financial Times ranking, Google finished first, followed by General Electric, Microsoft, Coca-Cola and China Mobile. Others in the top 15 include Marlboro, McDonald's, BMW and Bank of America. The effort is conducted by a brand consulting company called BrandZ, which is part of Millward Brown Optimor. It's not very different from BusinessWeek's annual cover story, which is conducted by Interbrand.

Each of these efforts is slightly different, using a somewhat different formula, but they all have something in common: They define the value of a brand very broadly. BrandZ's method first attempts “to isolate how much of a company's intangible earnings are attributable to the brand.” After removing some expenses and factoring taxes, we get a figure that is said to represent brand earnings. The result of all of this is impressive: Google's brand was said to be worth $66.4 billion in 2006, up from $37.4 billion in 2005. GE's brand was said to be worth $61.8 billion, and Microsoft weighed in at $54.9 billion.

But a skeptical reader should ask if this approach has compromised what brands are generally understood to mean. It is certainly a far cry from the days when the value of a brand was established in blind tests, such as the classic study that showed consumers preferred Pepsi when the test was blind, but that Coca-Cola prevailed when brands were visible. That was a clean and rigorous approach to identifying brand value. What's the equivalent when it comes to, say, General Electric? What would be the equivalent test to measure the impact of the GE brand on jet engines or financial services? Or consider Microsoft. Its massive returns are due to the fact it has had a quasi-monopoly in operating systems and then in a suite of applications. Where is the freedom of choice, with low switching costs, that lets us know how much of Microsoft's returns are due to the brand?

Some may argue that such a restricted definition of brand...
is outmoded. Brand experts like to say that a company’s brand is the sum of everything it does and stands for—a generous definition that has the effect of aggrandizing the importance of their specialty. But such a broad definition comes at a cost. By lumping together all intangibles, the notion of “brand” may lose rigor or incisive meaning. When we’re told that Google has the best brand in the world, what is meant is a bit different: Google has the greatest amount of intangible revenues that cannot be attributed to a specific asset or cost, so it all gets attributed to the catch-all error term, which we call brand. No one complains—not the brand experts, who feel validated and important; not BrandZ, which has evidence for the importance of its specialty; and not Financial Times or Business Week, who get wonderful attention grabbing headlines about multibillion brands.

**Raising Our Standards**

Thinking clearly about the fundamentals of good research is not rocket science. Being able to ask basic questions about the validity of data, about correlation and causality, and about controlling for other explanations is something all of us can and should do. Yet it’s remarkable how much marketing research commits basic errors of either design or data—or some combination of both. Anyone conducting marketing research should meet these basic tests of research integrity. For their part, managers should not be taken in by the hyperbole and false promises of so many business studies, but should develop their skills of critical thinking. That way, they may be able to assess the quality of marketing research on their own and be able to separate the nuggets from the nonsense.

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