DETERMINING AND MEASURING YOUR STRATEGY
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Determining and Measuring Your Strategy

AS THE CONSUMER MARKET continues to explode and a succession of new technologies gives rise to entirely new ways of marketing, how can companies plan and weigh the effectiveness of their marketing strategies? From the basics of whom to aim for—consumers on the high-end, low-end, in the middle, or embedded in larger networks—to the complicated array of metrics available to measure everything from ROI to customer value, the variety of marketing strategy options and tools can create more confusion than cohesion. The following articles from *Knowledge@Wharton* look at some key strategy elements that marketing executives should consider, such as the potential downside to pursuing market share, the value of consumer networks, and product diffusion among "influentials" and "imitators."

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"In the U.S. and around the world, the consumer markets are bifurcating into two fast-growing pools of spending," writes author Michael J. Silverstein in his new book *Treasure Hunt: Inside the Mind of the New Consumer.* Between the high end and the low end lies a vast range of mediocre, medium-range products that Silverstein claims is doomed to decline. What implications does this have for companies and their brands? In an interview, Wharton Marketing Professor David Reibstein discusses that question with Silverstein.

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According to Wharton Marketing Professor Z. John Zhang, in the West, the outbreak of a price war is viewed as the failure of managerial rationality. In China, the outbreak of a price war is considered a legitimate and effective business strategy. In a recent paper, Zhang and Dongsheng Zhou, a marketing professor at the China Europe International Business School in Shanghai, analyze two price wars that took place in China in the mid-1990s.

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How does a company measure the effectiveness of the various components of its marketing strategy? What metrics are most effective, and how can these help maximize profits? In an interview with *Knowledge@ Wharton*, Marketing Professor David Reibstein, coauthor (with Paul Farris, Neil Bendle, and Phillip Pfeifer) of the book *Metrics Every Executive Should Master* (Wharton School Publishing), talks about the pros, cons, and tradeoffs associated with metrics.

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Two Wharton researchers have developed a mathematical model that they say will allow companies, for the first time, to predict at what pace new products will gain acceptance in markets where purchasing decisions by knowledgeable, influential customers sway the buying habits of others. Wharton Marketing Professor Christophe Van den Bulte and doctoral student Yogesh V. Joshi say their model can be put to use in industries as diverse as movies, music, pharmaceuticals, and high technology.

The "Myth of Market Share": Can Focusing Too Much on the Competition Harm Profitability?

IT IS A COMMON PRACTICE of many companies to focus their attention on grabbing market share from their competitors. But such efforts can actually be detrimental to the firm's profitability, according to Wharton Marketing Professor J. Scott Armstrong.

For years, Armstrong has been conducting research showing that competitor-oriented objectives, such as setting market-share targets, are counterproductive. After co-authoring a paper in 1996 that reached this conclusion, he and a different co-author, Kesten C. Green of Monash University in Australia, have written another paper summarizing 12 new studies that add additional weight to the original conclusion. Their study is entitled "Competitor-Oriented Objectives: The Myth of Market Share."

Business has long been likened to warfare, Armstrong says, so it is hardly surprising that companies want to beat their competitors. In the 19th century, it was common for many American executives to strive for revenue maximization. To see how well they were doing, companies compared themselves to competitors in their industries. But in the mid-20th century, some academic scholars began to question the widespread focus on market share. In 1959, one researcher "lamented the common use of market-share objectives and discussed the logical and practical flaws of pursuing such objectives," according to Armstrong and Green.

In the 1996 paper, Armstrong and Fred Collopy of Case Western Reserve University summarized a host of studies by other researchers that examined the prevalence of competitor-oriented objectives.

For instance, several researchers in the 1950s and 1960s had groups of subjects play repeated games in which cooperation was necessary to maximize profits. The researchers found that when they provided feedback to subjects on other subjects' performance, nearly 90 percent of the choices that the subjects made were competitive and hence low profit. In another example, Armstrong and Collopy asked 170 MBA students over a period of years whether the "primary purpose of the firm is (a) to do better than its competitors, or (b) to do the best it can." One-third of the students chose (a), suggesting that a large number of the students believed that beating the competition is more important than other goals, including profitability.

In their 1996 study, Armstrong and Collopy also analyzed data amassed by scholars to measure the level of competitor orientation of 20 major corporations, as stated by the companies themselves, and how the level of competitor orientation was related to the firms' after-tax return on investment (ROI) for five 9-year periods beginning in 1938 and ending in 1982. "Competitive-oriented objectives were negatively correlated with ROI for these data," Armstrong and Collopy concluded. In other words, the more managers tried to be the biggest in their market, the more they harmed their own profitability.

For example, companies whose only goal was profit maximization—DuPont, General Electric, Union Carbide, and Alcoa—posted stronger returns on investment than did the other firms studied. By contrast, the six firms whose only goal was market share—National Steel, the Great Atlantic & Pacific Tea Company, Swift, American Can, Gulf, and Goodyear—fared worse in terms of ROI. Indeed, some of these companies, like National Steel and American Can, no longer exist.

For years, Armstrong has been conducting research showing that competitor-oriented objectives, such as setting market-share targets, are counterproductive.

Armstrong acknowledges that the 1996 paper was controversial. Aside from some coverage in the popular press, corporate executives largely ignored the study, and academics criticized it.

Since 1996, however, Armstrong and Green have continued their efforts to collect data on the effect of competitor-oriented objectives. They have incorporated the results of these efforts into their new paper.

Competition vs. Cooperation

Once again, Armstrong and his co-author examined both laboratory and field studies conducted by other researchers. One lab study compared the performance of MBA students with that of computerized profit-maximizing pricing strategies. Each game involved three players. The subjects were unaware that in two out of three games the third player was one of the computerized strategies. The game was designed to represent the market for mature, frequently purchased consumer goods. It was possible for cooperative players to make a profit of $20 if they all charged $1.50 per unit. Subjects playing the roles of managers were instructed to maximize their profits and were told that their compensation would be partly based on their profitability.

Despite these instructions, the students tended to charge close to the price that maximized the gap between their own profit and that of the other subjects. When the students played against other students only (i.e., there was no computer player), the average profit was $7.19, well below the potentially achievable cooperative profit of $20.

In another study, a team of researchers including Armstrong analyzed additional data, through 1997, on the 20 companies originally studied by Armstrong and Collopy. The researchers introduced two new criteria: real return on equity and the percent of after-tax return on sales. All of the correlations between competitor-oriented objectives and profits were negative, ranging from minus 0.28 to minus 0.73, according to Armstrong and Green.

These two studies—and others that are recounted in the Armstrong and Green paper—strengthen the authors' assertion that the oft-touted advice to chase market share in order to achieve greater profitability, is a harmful myth.

In addition, Armstrong and Green write, they "have not found a single paper that challenges the finding that competitor-oriented objectives harm profitability. While advocates of market-share objectives have provided no evidence to support their contention, their writings seem to have had a big impact" on strategic-management research and executives' beliefs that increasing market share is a worthwhile goal. Armstrong and Green also note that many management textbooks erroneously "repeat the claim that increasing market share will boost profitability."

Toyota and Canon

In an interview with *Knowledge@Wharton*, Armstrong pointed to contemporary examples that appear to underscore his long-held contention about the myth of market share.

For instance, Toyota is a profitable company and expects to build more vehicles than any other automaker in 2007, but grabbing market share is apparently not one of its goals. An Associated Press story on Toyota's imminent rise to the top described Kazuo Okamoto, executive vice president, as being "nonchalant" about Toyota's achievement. "We aren't that concerned about vehicle numbers," Okamoto told the AP. "But we are determined to go at it to develop cars that make a lot of people happy." Indeed, researchers have long known that, in general, Japanese automakers shun market share as an objective, according to Armstrong.

According to Armstrong and Green, they "have not found a single paper that challenges the finding that competitor-oriented objectives harm profitability."

As another example, Armstrong points to two long-standing competitors in the printer and copier business, Canon and Xerox. During the period that Fujio Mitarai was CEO and president of Canon USA—from 1979 to 1989—the value of Canon's stock rose by a factor of nine times, while the value of Xerox shares was virtually unchanged. "I changed the mindset at Canon by getting people to realize that profits come first," Mitarai told *BusinessWeek* in a story published in 2002. Mitarai is now chairman and CEO of Canon in Japan.

The harm that competitor-oriented objectives can cause the companies that pursue them was the subject of a December 4, 2006, article

in *The New Yorker* by James Surowiecki, the magazine's business writer. Surowiecki describes how Sony, with its PlayStation 3, and Microsoft, maker of the Xbox 360, are beating each other's brains out trying to capture the biggest share of the video-game market. Meanwhile, third-place Nintendo, with its new game console called Wii (pronounced "wee"), has quietly become the most profitable game console company in Japan.

Nintendo "has not just survived out of the spotlight; it has thrived," Surowiecki writes. "It has $5 billion in the bank from years of solid profits, and this past year, though it has spent heavily on the launch of the Wii, it made close to a billion dollars in profit and saw its stock price rise by 65 percent. Sony's game division, by contrast, barely eked out a profit, and Microsoft's reportedly lost money. Who knew bringing up the rear could be so lucrative?"

Armstrong says the focus on beating the competition remains entrenched in the world's biggest companies. Jack Welch, the former CEO of General Electric, famously stated that GE would not be in any business in which it could not be first or second in market share. Welch's belief in the myth still holds sway in boardrooms, but Armstrong says it is never too late for CEOs to change.

"We're not saying companies shouldn't pay attention to their competitors; they might be doing reasonable things that you may also want to do," Armstrong says. "What we're saying is that the objective should not be to try to beat your competitor. The objective should be profitability. In view of all the damage that occurs by focusing on market share, companies would be better off not measuring it." ■

Network-Based Marketing: Using Existing Customers To Help Sell to New Ones

MARKETERS HAVE LONG USED all sorts of demographic and geographic data to target potential customers—age, sex, education level, income, ZIP code. But there's another variable that companies may want to consider: Who is connected to whom?

A study, co-authored by Shawndra Hill, Wharton professor of operations and information management, found that consumers are far more apt to buy a company's product if they are "network neighbors" with existing customers. Mining data from "social networks"—who talks to whom or who e-mails whom—could allow companies to pinpoint likely customers who otherwise would be overlooked. Hill, Foster Provost of NYU's Stern School, and Chris Volinsky of AT&T Labs Research detail their findings in a paper entitled "Network-Based Marketing: Identifying Likely Adopters via Consumer Networks," published in May 2006 in the *Journal of Statistical Science.*

"One of the main concerns for any firm is when, how, and to whom they should market their products," the authors write. "We provide strong evidence that whether and how well a consumer is linked to existing customers is a powerful characteristic on which to base direct marketing decisions. Our results indicate that a firm can benefit from the use of social networks to predict the likelihood of purchasing."

The study examines the influence of social networks by studying a large telecommunications firm that was marketing a new service. "Network neighbors—those consumers linked to a prior customer—adopt the service at a rate three to five times greater than baseline groups selected by the best practices of the firm's marketing team," the study finds. "In addition, analyzing the network allows the firm to acquire new customers who otherwise would have fallen through the cracks, because they would not have been identified based on traditional attributes."

While the research focuses on people linked by way of a telecommunications company, the findings can apply to other social networks,

such as MySpace and Facebook, according to Hill. "What these networks are enabling you to do is find likely customers who you may not have complete information on. The networks enable you to find potential customers who are linked to your existing customer base."

The concept of network marketing—a recognition that links among consumers help sell a product—is not new. Often it involves word of mouth. If someone recommends a new restaurant to friends and acquaintances, who then in turn tell others about it, the network effect is at work. A famous person may be able to create a huge network of believers around a given product. Hill's paper offers the example of Oprah's Book Club. The TV star recommends a book to her viewers, and suddenly it becomes a hit. Likewise, marketers helped create a buzz around *The Da Vinci Code* by mailing 10,000 free books to influential individuals and booksellers.

Some network marketing involves "implicit" rather than "explicit" advocacy, the paper notes.

For instance, a woman carrying a designer handbag is, in effect, marketing the purse even if she doesn't tell her friends or coworkers that they should buy one. "Firms commonly capitalize on influential individuals (such as athletes) to advocate products simply by conspicuous adoption," the authors write.

The availability of vast databases of information these days can allow companies to do "network targeting," taking advantage of documented links among consumers. While traditional marketing research can offer detailed profiles of potential customers, and that's certainly useful, it doesn't reveal the social connections that exist among consumers.

The researchers focused on a large telecommunications firm that was marketing a new Internet-based communications service. The company organized a direct-mail campaign to target potential customers for the service using various demographic and geographic characteristics. Because the service involved new technology, the targeted group was deemed likely to be interested in high tech.

The company also made a marketing pitch to another group—people who were "network neighbors," meaning they communicated with an existing customer of the service. (Company records allowed the researchers to see who communicated with whom, though names were kept anonymous.) "People who communicated with a customer who already had the service were more likely to purchase the product than people not communicating with someone in the network, about 3.4 times more likely," Hill says.

The take rate was highest for those "network neighbors" who were already considered good prospects using traditional marketing attributes: They were almost five times more likely to buy the service than people who did not communicate with an existing customer. But even "network neighbors" who were considered poor prospects using traditional marketing methods were about three times more likely to buy the service than consumers who looked like good prospects but had no connection to a customer.

"It is tempting to argue that we have shown that customers discuss the product and that discussion helps to improve take rates," the researchers write. But they could not prove that. "Telecommunications firms are not legally able to collect information regarding the actual content of the communication, so we are not able to determine if the consumers in question discussed the product," they note.

> The availability of vast databases of information these days can allow companies to do "network targeting," taking advantage of documented links among consumers.

Another possibility is that because people often tend to talk to people like themselves, their buying tastes would be similar regardless of whether they ever discuss the product. "Social theory tells us that people who communicate with each other are more likely to be similar to each other, a concept called homophily," the researchers point out. "…Linked consumers probably are like-minded, and like-minded consumers tend to buy the same products."

It's possible, Hill says, that by tapping into consumer networks, companies are taking advantage of certain attributes that aren't identifiable through traditional marketing research. "It may well be that direct communications between people is a better indicator of deep similarity than any demographic or geographic attributes," the researchers write. In other words, who you talk to may be more important than where you live.

Gadgets vs. Grapes

Companies are forever looking for ways to identify and target potential customers; being able to do it better could both save them money and increase profits. Marketing campaigns are expensive and not effective if the right people aren't targeted. "Firms make marketing decisions based on how much they know about their customers and potential customers," the researchers say. "They may choose to mass market when they do not know much. With more information, they may market directly based on observed characteristics."

According to Hill, taking network data into consideration could help companies better focus and fine tune their marketing efforts, even when a company has the best marketing

research at its disposal. But would the "network effect" work the same with all types of products? Hill and her team tried to answer that. "We expect the network-neighbor effect to manifest itself differently for different types of products," they write.

Specifically, they note, people are more likely to talk about "a new, high-tech gadget or a recently released movie. We expect there to be less buzz for less 'sexy' products, like a new deodorant or a sale on grapes at the supermarket."

The researchers were able to test that theory because the telecommunications firm happened to be selling two products, its new Internet service and a new pricing plan. While network neighbors were far more likely to buy the new service, the "network effect" was not as pronounced when it came to signing up for the new pricing plan. "This difference might be due to the new service creating more word-of-mouth or perhaps we are seeing the effects of homophily," they write. Again, without knowing the content of the conversations, they couldn't say what was at play.

The researchers suggest that their findings could prove useful for a variety of companies, not just telecommunications businesses. "For example, eBay recently purchased Internet-telephony upstart Skype for $2.6 billion; they now also will have large-scale, explicit data on who talks to whom," they write. "With gmail, Google's e-mail service, Google now has access to explicit networks of consumer interrelationships and already is using gmail for marketing; directed network-based marketing might be a next step."

In addition, social networking sites such as MySpace, Friendster, and Facebook could be "fruitful fields for network-based marketing." Blogs, which tend to attract people with similar interests, could also be harnessed.

As for concerns about privacy issues that are raised when companies use a customer's personal information to help sell their products, Hill acknowledges that firms that use direct target marketing walk a fine line between generating value for their consumers and intruding on their privacy. But, she says, "we show in our study that a wider variety of consumers are made aware of cost-effective telecommunications products than would be aware of them without the targeted marketing strategy. Overall, the cost savings and additional features result in tangible benefits to the targeted consumers."

Ultimately, she says, "firms own their customers' data—including e-mail content and MySpace messages—and legally can use it for such purposes as target marketing and fraud detection. Therefore, consumers should be aware that when they reveal both traditional and social network personal information to firms, this information might be used for target marketing or other purposes."

Hill has presented these findings and follow-up research at several conferences this year, including one on social networking sponsored by Yahoo. As more data that can be used to directly link consumers becomes available, the potential for network marketing will grow, she predicts.

She and her co-authors presented an interesting scenario of how even academic departments might take advantage of network marketing. "The enrollment in specialized classes could be bolstered by 'marketing' to those linked to existing students," they write. "Such links exist (e.g., via e-mail). It remains to design tactics for using them that are acceptable to all." ■

Death in the Middle: Why Consumers Seek Value at the Top and Bottom of Markets

"IN THE U.S. AND AROUND THE WORLD, the consumer markets are bifurcating into two fast-growing pools of spending," writes author Michael J. Silverstein in his new book, *Treasure Hunt: Inside the Mind of the New Consumer.* "At the high end, consumers are trading up, paying a premium for high-quality, emotionally rich, high-margin products and services. At the low end, consumers are relentlessly trading down, spending as little as possible to buy basic, low-cost goods and services." Between both piles lies a vast range of mediocre, medium-range products that Silverstein claims is doomed to decline. What implications does this have for companies and their brands? In the following interview, Wharton Marketing Professor David Reibstein discusses that question with Silverstein.

REIBSTEIN: *How did this book come to be written?*

SILVERSTEIN: Three and a half years ago, I co-authored a book with Neil Fiske called *Trading Up: Why Consumers Want New Luxury Goods…and How Companies Create Them. Trading Up* is the story of how middle-class consumers around the world are buying products at 50 percent to 200 percent price premiums in categories like homes, cars, vacations, and food. We call these new luxury goods. Following the release of that book, we began doing a lot of work helping companies understand this premium segmentation. It's a very rich opportunity, with more than $600 billion in sales in the U.S. in homes, transportation, dining, travel, food and beverages, personal products and services, apparel, and home goods.

I spoke with some 10,000 people during the past couple of years. Many people would come to me after my presentations and say, "We loved *Trading Up*, we think it's very insightful, but it's only half the story. You didn't get it all." So I listened. Most of the people approaching me were women, who were heavily into purchasing and acquisition of goods and taking care of their families and very interested in maximizing their budget. The part of the story that they said we missed in *Trading Up* was basically the trading down side. It was true that consumers were trading up to premium products, but they were also trading down to low-cost products and services and avoiding the boredom and low value that increasingly characterize the middle. This polarization was reshaping the consumer goods market.

Two years ago, we began our second wave of major research around trading down. We looked at how consumers spent their money, as they traded up or down. We asked in what categories consumers were trading down and why. We also looked at differences across households, by gender, age, income, and geography. We made it a global research project and looked at Europe, Asia, and the U.S.

We came to the conclusion that trading up and trading down were big opportunities for companies and for consumers. The amount of spending on trading down was approximately twice the amount of trading up. Both ends of the market offered huge opportunities. Markets were bifurcating, which meant that the top and bottom were growing and the middle was in horrible decline—and that is creating quite a few casualties. In every category we looked at—and we studied 30 of them in detail—there was this war. The war was for this consumer to either trade up or down or to evacuate. In the car business for example, the middle market has shrunk by 12 market-share points. In the television market, it has shrunk by 40 points. In the U.S. washer market, the middle market has declined by 16 points, and on and on.

Those findings led to this book, *Treasure Hunt.* We thought about calling it *Trading Down*, but in fact from a consumer's point of view, it's not really trading down. It is about consumers living a rich, balanced life, being careful with their money, and buying a handful of products where they trade up and others where they trade down.

It's about consumers comparing, contrasting, experimenting, and bargaining. It's about relentless behavior that is primarily female. It's about the female head of a household operating in many situations like a purchasing agent, separating truth from charade, and marketing claims from real benefits. It is a powerful force in the global economy, creating both opportunity and threat.

REIBSTEIN: *We do see growth at the top and at the bottom. But it's not like the middle has gone away.*

SILVERSTEIN: The middle is still very large, but it is declining. If the bottom end of the market is at $1.2 trillion and the high end at about $600 billion, the middle market is around $1.5 trillion. If you believe what our research suggests, the middle is going to decline at 5 percent or 6 percent a year over the next 5 years. The top is going to grow at 10 percent to 12 percent and the bottom is going to grow at 5 percent or 6 percent. If you are in the middle, that amount of volume loss can be devastating. It fundamentally requires you to shut plants, change your overhead structure, and get out of categories. A big company that is facing this death in the middle is Kraft, which we have referenced in the book. Fundamentally, this is in the cheese category. Consumers are buying private label cheeses that are 20 percent to 25 percent less expensive than the Kraft brand, or they are buying expensive romance cheeses, imported from Europe, for which they pay $12 to $15 a pound.

REIBSTEIN: *That is what I find fascinating—the implications of your research for specific brands. What do they need to do to either get with the program or get out of the way?*

SILVERSTEIN: Well, we can talk some more about Kraft. If Kraft awakens—and it is a sleeping giant—it will realize that cheese is a very positive category that consumers love and crave. What they are looking for are companies that provide them with a product that has ease of use and convenience. In the shredded cheese category, there is Sargento—and it is doing very well, thank you—Kraft has basically given that market to them. In the car category, BMW has less than a 2-percent global share, but its market value is higher than General Motors, Ford, and Chrysler combined.

REIBSTEIN: *Take a company like P&G. What are the implications of your research for some of their best-selling brands?*

SILVERSTEIN: Well, what is interesting about P&G is that they recognized there was a phenomenon happening called "trading up." It was the largest single company buyer of that book, by the way, according to Amazon. P&G has basically gone through every one of its categories and said, "How can we add new value, how can we innovate, how can we get underneath the needs of the consumer and basically change the category representation?"

A good example would be Oil of Olay. If you remember, back in 1980 Oil of Olay sold in a little bottle for about 22¢ an ounce. It had one form—you did a little dab on your skin and that was it. If you were to go to the drugstore today, you would actually see that Oil of Olay is a section. It looks at all the different skin care problems that women have and says, "We have a solution—and it's a value-added solution." Another example is the Oil of Olay Daily Facial. It's not really a facial; it's a pad with a special ingredient. They charge $1.50 for it, and the woman says to herself, as she is applying the product, "God, I'm going to be beautiful tomorrow!" She feels more beautiful, and she feels like she is taking care of herself.

This has been a systematic process at P&G. It has happened across all categories. They've done it with Tide, in dishwashing soap, the whole product line. Now, they've bought Gillette, and that is probably the most expert company in doing this for men. I don't know whether you've seen the fusion blade—it is supposed to prevent you from being cut to pieces.

REIBSTEIN: *Crest has introduced a product called Crest Vivid White. They've done it under the Crest name, which is the premium toothpaste brand, so this is exactly what you are talking about. Still, the vast majority of their volume is in the middle market. Even though the market may be getting bifurcated, as you say, I think that it is really important to get across that the middle still exists. While it is shrinking relative to the other areas, it still represents a huge portion of the overall market.*

SILVERSTEIN: It does, but it's huge and declining…and that really is the problem. We do a tracking study with consumers, and we

asked a standing panel of approximately 2,000 households how are they feeling and what are they doing. We received some really incredible results. These numbers are not intuitive: 72 percent of consumers feel in control of their finances; 73 percent are saving money every month; 70 percent believe that they will be better off and have higher income in the future; and half, a full half, believe that they enjoy a higher standard of living as a result of their smart shopping behavior. Some 92 percent of people tell their friends when they get a great deal, and only 8 percent pretend that they paid full price. In terms of this exploration of the market, consumers say treasure hunting is exciting, fun, and makes them happy.

REIBSTEIN: *Have you spent any time with the people at Costco? What is interesting to me is that they describe their store experience as a treasure hunt. It is interesting that they use the exact terminology you are using.*

SILVERSTEIN: I did not know that specifically, but consumers believe that cheap is good. They realize that being a savvy shopper is important and that they can contribute to their savings rate by buying better goods cheaper, and many of them use Costco. Costco is a fantastic treasure hunt store—it's about trading up and trading down, under one roof. It's one of the few retailers in the world that can do it. It hooks people in and they end up actually spending their savings back into the store.

We have done shop-alongs with consumers in Costco. During the shop-along, the consumer knows what she wants to spend—$200. She has a list of items she wants to buy: meat, canned goods, frozen items, paper products, and some drinks. Then it sort of clicks in her head that she has spent $180 and that was at least 10 percent less than if she had bought these products at a supermarket. So she pats herself on the back and says, "I can go to the wine section and buy that $20 bottle of Kendall-Jackson that I've never given myself."

Personally, it's an experience—the treasure hunt at Costco. We have a home in Naples, Florida, and there is a Costco just down the road from us. I went there with my wife on a Sunday afternoon. They sell a great pumpkin pie for $5.99, and we went just to pick up a couple of pies. I dropped her off. The parking lot was crowded; it was a real scene. About 10 minutes later, I walked into the store. She was standing there with a cart and putting in a piece of art. I looked at her and said, "What are you doing?" She said, "Well, they have original prints here. This one is a Miro." So instead of buying just two pumpkin pies, we bought the two pumpkin pies and one Miro.

REIBSTEIN: *We hear so much about micro-segments. First of all, segmentation is alive and well, but it might be going down—even eventually getting to a segment of one.*

SILVERSTEIN: I don't think that the segment of one is dead, but it is very difficult to execute.

REIBSTEIN: *Let me interrupt before you jump there. I don't want to dwell on whether we can implement the segment of one or not. Let us focus on the concept of segments. While it's hard to implement segments of one, lots of people have thought about multi-segments. I'm wondering if, when we talk about the bifurcation, that gets us away from thinking about the refinement of segmentation and into thinking that there are these two large groups at the top and bottom of the consumer market. Help me think through some of that.*

SILVERSTEIN: Well, our book has a series of individual consumer stories—and even consumers of the same age, income, and demographics trade up and down in different categories. That is a big finding.

We also find that a small group of users tries the dominant share of volume. It's 10/80 as a typical representation—10 percent of the users are trying to get 80 percent of the volume in these trade-up and trade-down categories. They are very heavy users, almost daily users. We call them the "apostles"—and they basically help a brand. They cause you to put your arm around your buddy and say, "You ought to try this." We are talking about a big movement in the economy in terms of trade up and trade down.

Within each individual category, there is a daily battle, and it is: "Are you going to win me?" Am I going to buy Kellogg's cereal or General Mills' cereal? If I'm going to buy Kellogg's cereal, you will have to tell me why. So, I'm agreeing with you that segmentation is the way to go. It's about concentration of resources against a small number of like users, with like habits and like

habituation. It's about creating programs that cause them to affiliate and to connect.

REIBSTEIN: *It's very clear to me that we have customers who jump from one group to the next and that you are not always in one segment. What I was wondering is if your research takes us down the path of saying, "Don't think about segments any more."*

SILVERSTEIN: What our research strongly suggests is that we should think about and understand the heavy users and their purchase pathway. What got them to that position? What are the drivers of their future behavior? How do you hold on to them? How do you get them to embrace your brand and to recommend your brand? That is an off-shoot of segmentation. I think a lot of people do big graphic segmentation studies. Frankly, I have found them not worthless, but not helpful either.

REIBSTEIN: *I find them worse than not helpful, because I think sometimes they can be distractive.*

SILVERSTEIN: For big companies, they basically become red herrings. But on the other hand, all our research says that there is an age, gender, and income segmentation that is possible in most categories. The last time I was at Wharton, I gave a presentation. There were 650 kids in the room, it was in one of the big halls, it was fun, and they were great kids. One of them said to me, "So what do I buy?" I looked him straight in the eye and said, "Well, I can tell you that you trade up in electronics, that you are looking for a big screen TV, and that you have two iPods. One is in your pocket and one is at home." I basically laid out everything about how he spends his money.

For affluent, educated young men, you can define quite precisely what categories of goods they are buying. What we have found is that for almost every age, geography, and gender, you can figure out what's hot, and what's not and why.

A good example of somebody who applied segmentation with fantastic results is Lew Frankfort at Coach. The company was spun out from Sara Lee when they decided that they wanted to get a more structured group of brands. Sara Lee had about $500 million in sales, and Lew had run their sports apparel business in the Carolinas. He wasn't an expert in pocketbooks, but he went to the Coach store on Madison Avenue and he watched the traffic. He saw how women thought about handbags, accessories, and purses. And then he began to do some research to figure out for his core consumer—how many items did she buy a year? And the answer was, she basically bought one purse a year.

One purse a year for $200 is a nice little business, but it's not a growth business. So he asked himself, "How many dresses do they buy? How many skirts do they buy? How many times do they go shopping?" He then decided that he needed to provide a range of fashion and make personal accessories a fashion business. He said, "I need to create excitement, energy, and drive traffic. I need to make sure that when she goes to the mall, that she goes to my store." And that is what he did.

For his core consumer, the number of pocketbooks and purses purchased each year has increased from 1 to 4.4. This is one of the most dramatic stories out there in retail. He has gone from $500 million in sales to $1.7 billion, and his gross margin is 76.5 percent. His market value is about $14 billion. It's all about concentration: He has three core consumer segments to whom he appeals. The first is young, fashionable women who want to have a purse or a pocketbook to match every outfit. Second, there are older, more professional women who actually don't like to buy clothes any more because they're size 14 or 16, and they know that they're not going to get compliments, but they know they will get compliments on the new bag they are carrying. And third, there are the suburban women who shop at his factory outlets and want to buy a product that is classic, well-designed, and highly durable, at a bargain.

REIBSTEIN: *One thing I couldn't help but think about while listening to you was C.K. Prahalad's book,* The Fortune at the Bottom of the Pyramid.

SILVERSTEIN: I have read it, and it is a good book. There is a big difference, though. I mean, he is talking mostly about the third world.

REIBSTEIN: *That's right, which is why I wanted to ask you to relate what you have done to his book. Also, how much is the phenomenon that you are talking about U.S. specific vs. global?*

SILVERSTEIN: Our books are totally different. Prahalad's book is about opportunities in the third world. I think that it is an interesting book, but it is somewhat unproven that in fact you can make a lot of money at the bottom of the pyramid. The only company that I know that really makes a fortune is Unilever. It is one of the most profitable and most interesting companies in the world, but a very unique company. The vast majority of the companies selling bottom of the pyramid goods in China are breaking even or only slightly profitable.

This phenomenon of the middle class is a global phenomenon. It is largely in the western world where you have those who have earned their way to higher incomes through education. This was an important finding in both *Trading Up* and *Treasure Hunt*, that education is the primary driver of real income growth. And you have populations that are savvy and sophisticated about buying products. They are the kind of people who go to the internet and research products before they buy them.

In fact, we see the emergence of what we call the SKU buyer. These consumers are buying a specific stock-keeping unit, and they are looking to acquire it at the lowest possible price. They know they want to buy a BMW 330I, its product characteristics, what attracts them to the car, and what their current car is worth. When they go to the dealer, they have a print-out that they show the salesperson and they tell him, "This is the price."

This is happening all over the world; it is not only a U.S. phenomenon. In Mexico, 2 percent to 5 percent of the population has some money to spend on highly branded new luxury goods; they're doing it, it's a nice little market, and it's grown rapidly. And I believe that over the next 20 years it will grow dramatically. You're going to see consumers move from very low-subsistence incomes to low-cost incomes and you'll see a tremendous boom in the middle market in Mexico, for example.

REIBSTEIN: *This is basically my last question. Are you going to end up suggesting that what companies need to do is that they need to be developing products for the tails? Is that where the growth is, sort of the phenomena of what you described that P&G is doing?*

SILVERSTEIN: There are two choices that companies have. If you're in the middle market, you have to understand that you fundamentally can't do both things. You have to decide who you are and whom you serve. It's very much the Warren Buffett model of running a company, which is to delay or reduce spending and focus in on delivery of a very successful pricing formula. That's one way. The other way is to turn up the heat on innovation and to think about the emotional characteristics of consumer needs and to give them goods that they can crave, goods that will allow them to celebrate their lives and celebrate their success.

REIBSTEIN: *I think that this is a very compelling story. Any final thoughts?*

SILVERSTEIN: I think the most important thing is the optimism and sense of success that consumers feel as a result of this phenomenon. And you don't see this very much in the popular press. If you read the *New York Times* you may think that Americans are angry and dissatisfied with their lives and they don't save a dime. I think that our research actually says that they are really very optimistic about the future.

In the book, we have a character named Sarah. Sarah has a propensity to drop into tears in a second. But we spent about 14 hours interviewing her and watching her in her home. She is an incredibly devoted mother, loves her three girls, loves her husband, and is happy in her suburban life. She thinks that all of the three girls are going to be college educated and will go on to graduate school. They will have come from a home where there's a lot of love and lots of support. If there is anything that the girls really need they will get it. And this is on the combined income of her and her husband.

He is a school teacher, and she is a part-time nurse, and their combined family income is right around $100,000. They live in a house that has a $325,000 value, and they have a $240,000 mortgage—but they make the budget balance every month. They go on vacations, they buy things, they buy durable goods, and they keep their cars in good repair. He has a couple of hobbies. I think that *Treasure Hunt* is a celebration of how happy and fulfilled the low-cost consumer is. And you don't read about that, you don't get that sense. In fact, they view themselves as in the driver's seat and in charge. ■

How and Why Chinese Firms Excel in "The Art of Price War"

WHEN IT COMES TO PRICE WARS, Wharton Marketing Professor Z. John Zhang can't help but notice that companies in the West and companies in China are quite literally worlds apart.

In the West, Zhang says, a price war is something to be avoided. The outbreak of a price war is thought to have disastrous consequences for companies and is viewed as the failure of managerial rationality. This prevailing philosophy was once highlighted in a *Fortune* magazine article that asked, "What are price wars good for?" The answer? "Absolutely nothing."

In China, where companies have earned a reputation for starting price wars, the outbreak of a price war is considered a legitimate and effective business strategy.

In the last 10 years particularly, according to Zhang, businesses in China have initiated price wars in a wide range of industries, including consumer electronics, home appliances, personal computers, mobile telephones, and, most recently, automobiles. And like leaders of legendary battles, price war warriors who happen to be CEOs often become vaulted idols in China, revered by aspiring managers who are eager to enter the price war battlefields and return victorious—which, in price war lingo, means earning the most customers, capturing the greatest market share, and driving up profits.

When Zhang began to analyze the sharp contrasts in attitudes toward price wars in China and the West, the price war landscape raised an intriguing question: "Are those Chinese companies simply lucky survivors in chaotic price wars, or do they know something about how to wage price wars that their Western counterparts do not?"

In a recent paper entitled "The Art of Price War: A Perspective from China," Zhang and co-author Dongsheng Zhou, a marketing professor at the China Europe International Business School in Shanghai, answer that question by analyzing two price wars that took place in China in the mid-1990s, one in the color television industry

and another in the microwave oven industry. Using what he calls an Incremental Breakeven Analysis (IBEA), Zhang looks at the incentives facing firms that initiate and fight a price war, which by definition always involves a deep price cut. Step by step, Zhang and Zhou analyze the "art of price war" and draw a conclusion that may make Western companies think in a more sophisticated way about price war battles.

"Our study has convinced us that luck has nothing to do with being a victor in a price war," write the researchers. "Good planning and execution are the keys to winning. In other words, Chinese companies do seem to know something about price wars that executives in the West do not, or have forgotten."

Growing vs. Mature Markets

Two important factors in understanding price war distinctions are first, the state of each area's market and second, the price sensitivity of consumers in each area.

"Chinese companies do have a lot more experience with price wars, which are widely

reported business events," says Zhang. "They are good at it. In the past 10 years, what triggered [the price wars] is the fact that the markets in China are growing. This business environment provides many profitable opportunities for [companies] to engage in price wars and to hone their skills. In a growing market, there are all different companies competing—some good, some bad—and the industry finds a way to consolidate. The only way to do that is a price war, where you bring down the prices and squeeze out the inefficient [companies]."

But the Western market is a more mature market, offering what Zhang calls "oligopolistic competition among mostly equals." In lieu of price wars, this so-called mature market "encourages more finesse in devising marketing strategies," which may help explain why price wars are so frowned upon.

When it comes to customers' price sensitivity in a price war, the Holy Grail would be customers who are extremely price sensitive—and therefore more likely to respond quickly to dropping prices. "Chinese consumers are very price sensitive," says Zhang. "When you lower a price, you make more sales, a lot more sales. In China, anytime you lower the price a little bit, you do draw a larger buying audience."

The Western market "encourages more finesse in devising marketing strategies," which may help explain why price wars are so frowned upon.

Consumers in U.S. markets, however, are not as price sensitive, he says. "I think the U.S. market is more layered. When you lower the price, you gain some sales" but not on the scale triggered by the price-sensitive Chinese consumers.

Understanding the price war mentality is important not only for Western companies who compete with Chinese companies and products on their own turf but for companies who do business in China. "One must understand how Chinese companies use price wars as a strategic weapon to be able to see them coming, to fight price wars effectively, or to avoid them altogether," the researchers write.

Color TVs

Zhang and Zhou chose examples from China's color TV and microwave oven industries to analyze price war strategies. The goal was to answer these questions:

- How do Chinese companies assess their business environment to identify the opportunity for a price war? This question assumes that they do not just randomly start a price war.
- How do they decide whether and when to start a price war?
- How do Chinese companies prepare for and execute such a war?

According to Zhang and Zhou, China's color TV industry was highly fragmented in early 1996, with more than 130 manufacturers. Only 12 had annual sales of more than half a million units, and only four had annual sales of more than one million units. On average, most manufacturers sold less than 120,000 sets. "They all slogged along because a vast majority of these companies were owned by local governments and they were protected in their local markets. Thus, there was very little room for any ambitious Chinese company to expand their sales and to achieve scale economies through market entry or mergers and acquisitions," the authors say. Also, China's TV market was a "two-tier market." Foreign brands served the high-end market and held a dominant position in China; local brands competed with each other in the low-end market.

A company called Changhong, led by CEO Ni Runfeng, was considered the largest and most efficient color TV producer in China, with 17 production lines and a manufacturing capacity that was at least double that of the next-largest one. Changhong was also the largest manufacturer of many key TV components—plastic injections, electronic components, and remote controls—which would turn out to be a key factor in the company's strategy. Another factor was Changhong's location in Sichuan, a less-developed region in China that offered cost advantages to the company. This resulted in a 20-percent net profit margin for the TV manufacturer that was far above most of its domestic rivals.

According to Zhang and Zhou, Changhong's position as the strongest domestic TV manufacturer did not promise long-term security. In fact, the company's success had made it a recent target of foreign manufacturers. "Lured by the sheer size of the China market, foreign investments in the Chinese TV industry were red-hot," Zhang and Zhou write. "All 10 of the largest TV manufacturers in the world at the time were rapidly expanding their production in China… One business plan prepared by a large global color TV manufacturer boldly suggested that in 3 years, by investing some $3 billion in China, the company could destroy Changhong, the largest local competitor."

Clearly, Zhang and Zhou say, "Changhong had to worry about its long-term survival, and it had to find ways to increase its market share quickly to shore up its future." Through a series of interviews, surveys, and analyses, the company came to a conclusion that "would startle any Western executive: A price war was the weapon of choice."

Why this strategy? First, Zhang and Zhou say, at a time when there was less fiscal assistance from the government, a price war would put small, inefficient domestic TV manufacturers at a disadvantage. Changhong knew these manufacturers would suffer and drop out of the market because of low margins or lost sales. Second, a price war also created havoc for foreign competitors, especially the Japanese. "Low prices and mud wrestling with a Chinese manufacturer could…only erode their brand equity and undermine their brand image." Plus, any drastic pricing change required approval from foreign parent firms, which could be a lengthy process that worked to Changhong's advantage in a price war. For those reasons, Changhong did not expect any significant price cut by foreign manufacturers, at least not initially.

In addition, a price war in 1996 would also take advantage of Changhong's huge inventory—one million units—and its reliable supplies of key components. "With an uncertain future but ample ammunition, Changhong thus found it an opportune time to stir up the industry with an unprecedented price war," the authors write. On March 16, 1996, Changhong announced a price reduction of 8 percent to 18 percent for all of its 17-inch to 29-inch color TVs.

The result? Changhong's overall market share increased from 16.6 percent to 31 percent, with the greatest increase seen in the 25-inch TV market, which jumped from about 21 percent to slightly more than 45 percent. Changhong's gain resulted from decreases in domestic brands (only 42 of the 59 local brands that sold in China's largest department stores survived after the price war) and foreign brands (domestic market share increased to around 60 percent by the end of 1996, compared to 36 percent when the price war began).

In China, a price war is considered a legitimate and effective business strategy.

"In 1997, 8 out of the top 10 best-selling brands in China were Chinese, and three local players, Changhong, Konka, and TCL, became the best-selling color TV brands in China," the authors write. "Thus, the first-ever large-scale price war in China drastically changed the landscape in the industry in favor of Chinese companies, and the CEO of Changhong, Ni Runfeng, became a hero for Chinese national industries."

Microwave Ovens

The microwave oven industry in China was also a ready candidate for a price war, but for different reasons. According to Zhang and Zhou, Galanz, a microwave oven manufacturer since 1933, reported a 25-percent market share in China in 1995. The company was on a healthy growth trajectory, seen as more focused than its chief competitor, Whirlpool-Xianhua. The majority of the company's senior management preferred to maintain the company's high profit margins (30 percent to 40 percent) through a safe, steady growth strategy. But after intense discussions, a minority advocated for a price war, and the CEO agreed. The gamble paid off. From 1996 to the end of 2000, Galanz initiated five major price wars and, as a result, became the world's largest microwave oven maker, with nearly 30 percent of the worldwide market and 76 percent of the Chinese market.

Why did Galanz ultimately choose the price war strategy? According to Zhang and Zhou, the microwave oven market was about to grow substantially as "a significant portion of Chinese

households were ready to modernize their kitchens." Galanz "estimated that significant price reductions would increase sales by about 100 percent." In addition, Galanz was looking after its future, hoping that a price war would consolidate the industry by weeding out the smaller players "before they had a chance to grow."

Finally, a well-planned and executed price war could significantly benefit Galanz in terms of establishing its cost advantages in the marketplace. How? By cutting its prices, Galanz would substantially increase it sales and take customers away from weak competitors; this would then help Galanz reduce its unit cost through scale economies in "production, distribution, and components sourcing, which, in turn, would make the price cut more profitable in the first place."

Galanz went into the price war with ample supplies, running its production lines on a three-shift, 24-hours-a-day schedule 2 months before it launched the first price war in August, an off-peak selling season that took the market by surprise. "You have to pay attention to the tell-tale signs of price war," says Zhang. "When the competition is thinking of initiating one, they have to do preparation—accumulate inventory, ramp up production, work on distribution channels—because they need to make sure they have the products to occupy the market when the price goes down."

The strategy worked during five different price wars. Sales increased, unit prices dropped, profits climbed. Key to the company's success was "a simple and systematic way of setting its price to drive volume," says Zhang. "It set its price at the break-even level for its nearest competitors. During the price wars, Galanz's price would even go significantly lower than this break-even point. Using this strategy, Galanz always made rivals reluctant to cut prices, and thus it always stayed ahead of competition in capturing more volume."

Key to any price war is "lowering your prices in a substantial way," adds Zhang. "When you actually use the price as an instrument, you have to lower it 10 percent to 20 percent, a substantial gap. Lowering it 1 percent or 2 percent? No one will say you have a price war."

Ultimately, price wars can change the consumer landscape. Says Zhang, "When the price wars began, the microwave oven was considered a luxury good. Only well-to-do families had a microwave oven in the kitchen. Then, after a few rounds of price wars, everyone has a microwave oven."

The Incremental Breakeven Analysis (IBEA)

Using these two examples, Zhang and Zhou developed a formula to help companies plan and execute a price war. The formula helps determine the break-even sales price point and important variables necessary to initiate a price war, including the size of the price cut and the reduction in marginal costs relative to the price reduction. Called the Incremental Breakeven Analysis (IBEA), the formula shows that price wars are not driven by luck but are the result of careful planning and execution, Zhang says. "As with any other business strategy, the usefulness of price wars depends on the circumstances."

By plugging the numbers from the Galanz price war into the IBEA formula, Zhang and Zhou argue that "initiating the price war was the rational thing to do… The value of IBEA goes far beyond that simple calculation, of course. Some rigorous analyses of the formula will help us to understand the incentives facing a firm in initiating a price war."

The formula also helps explain why more mature markets in the U.S. don't start as many price wars—although Zhang did point out that there have been recent price wars in the airline and computer industries, with mixed results. While the computer price wars seem successful, the price wars in the airlines industry "have had a disastrous result. No one is making money, though that has begun to be resolved as the industry consolidates and the number of companies that compete is reduced." Or, as Zhang and Zhou note in their paper: "A firm can gain a larger market share when less cost-effective firms in an industry are weeded out. A price war will put strains on all firms in an industry. However, less-efficient firms will buckle first, and surviving firms will fatten their market shares."

A price war does not necessarily have to be a long one. "A 'shock and awe' strategy can quickly convince an inefficient rival to get out of the way, as any resistance is either futile or

fatal," Zhang and Zhou suggest. And although a price war typically succeeds when there is an increase in market share, "not all bets are off if a firm cannot increase its market share by starting a price war. Another important factor in a firm's price war calculus is the change in the industry demand. When a price war breaks out—even if all competing firms in the market are equally efficient and they all follow suit, cutting their prices so that no firm can gain any additional market share—firms can still benefit from price wars if they expand the industry demand sufficiently."

Which brings Zhang and Zhou back full circle to understanding why there are more price wars in less-mature markets. "There is nothing intrinsically Chinese, as far as we can detect, about the calculus that the Chinese executives use in planning and executing price wars," the authors note. "What is intrinsically Chinese, however, is the fact that a whole generation of Chinese executives has grown up in a business environment characterized by growing markets, heterogeneous firms with a wide distribution of cost-efficiencies, and new technologies with significant scale economies. This business environment provides many profitable opportunities for them to engage in price wars and to hone their skills, whereas in Western markets, oligopolistic competition among mostly equals in mature markets encourages more finesse in devising marketing strategies. In both cases, firms are weighing the same factors, [although] making different strategic choices in the end." ■

Marketing Metrics and Financial Performance

WHEN COMPANIES TALK about marketing these days, topics of conversation include promotional strategy, advertising, and distribution; customer perception; market share; competitors' power; margins and pricing; products and portfolios; customer profitability; and sales forces and channels. How does a company measure the effectiveness of the various components of its marketing strategy? What metrics are most effective, and how can these help maximize profits? In an interview with *Knowledge@ Wharton*, Marketing Professor David Reibstein, coauthor (with Paul Farris, Neil Bendle, and Phillip Pfeifer) of the book *Marketing Metrics: 50+ Metrics Every Executive Should Master* (Wharton School Publishing), talks about the pros, cons, and tradeoffs associated with metrics.

KNOWLEDGE@WHARTON: *First of all, who is this book written for?*

DAVE REIBSTEIN: It's written first and foremost for marketing managers. But the reality is that almost every executive in a company needs to be aware of these particular measures.... We need to make sure that we have a good understanding of these measures that we're gathering, including some of the flaws in how they might be measured and some of the alternate interpretations. This is relevant for others in the organization who aren't in marketing, because we may find marketing says something about what our market share is, or what our margins are, and we're communicating in those marketing terms, [so] we need to make sure we understand what it is that is really being said about the status of the firm.

KNOWLEDGE@WHARTON: *You referred to the way in which companies use these metrics. Could you give us any examples of the way in which companies might sometimes misuse these metrics, or they get the metrics wrong, or use them to draw their own conclusions?*

DAVE REIBSTEIN: Well, one example, and perhaps the most commonly used marketing metric, is that of market share. In fact, we see often companies looking closely at their market share, evaluating how they are performing, and in some cases looking at market share more than profitability, because the profitability may be affected by things exogenous to the company, such as what's going on in the economy. But we often look at market share based on how we are doing relative to our competitors. The way it's sometimes misused is, on the surface it seems that market share is very clearly defined. But we may be talking about dollar market share, our share of the revenue from the industry, and someone else might be talking about unit market share, our share of the units being sold.

Secondly, when you think about market share, there's a numerator, which is our sales, and the denominator being industry sales. But the question is, what are we defining as the industry? If you're in the printer business, the computer printer business, you might think of "my market share of all printers," but you may be dealing with a competitor that is looking at your market share of the inkjet or laserjet printer business. So not all market shares are the same. It's interesting. One would think that market share, by definition, must add to 100 percent. And the answer is, they do if we all have the same denominator. When I say "must add to 100," I mean, "must add to 100 across all competitors." But, again, it depends: Are we talking about the same overall market? So, for example, Coca-Cola might want to look at their market share of the carbonated soft drink market, or they might want to look at their market share of the liquid consumer market. And those are going to give you entirely different numbers. And while they're looking at, say, total liquids consumed, it may be that Pepsi is looking at the carbonated soft drink market, and so [they are] comparing different things.

KNOWLEDGE@WHARTON: *The title of your book is* 50+ Metrics Every Executive Should Master. *But what exactly qualifies as a metric, and what*

are, say, the top five metrics that you've found are most important?

DAVE REIBSTEIN: When we came up with "50+," part of our objective was that we didn't want to make it too overwhelming and say *5,000 Metrics Everybody Should Master.* There are going to be some key metrics that are really important. And we set out with the objective of 50. When we got down to itemizing them and looking at what specific measures companies are gathering, it turned out that it was a number more than 50. What we ended up doing is saying: Here are the key metrics, and here are some sub-metrics of these that we might want [to look at].

Like the market share example that I just mentioned—market share in units, market share in dollars—do we call those two different measures, or do we call them one measure? It actually became a little bit fuzzy as to what the number was. As for what constitutes a metric: It is a measure that is gathered by a firm that they use for evaluating the performance of the company. It could be in the customer's mind, it could be in terms of our financials, it could be in terms of our overall performance in the marketplace.

> "We need to make sure that we have a good understanding of these measures, including some of the flaws in how they might be measured and some of the alternate interpretations."

KNOWLEDGE@WHARTON: *How difficult is it to collect these numbers?*

DAVE REIBSTEIN: The answer is that it varies dramatically from one environment to another. Collecting some of them is relatively straightforward in some environments. In the United States, for example, for supermarket sales we have AC Nielsen, which regularly collects this information and measures your sales, measures your competitor's sales. It turns out that we now don't have that data for Wal-Mart, because Wal-Mart refuses to cooperate with AC Nielsen. So in the United States, it's become a little bit more difficult, and as Wal-Mart grows as a percent of overall annual volume, the supermarket sales…well, we've gotten non-Wal-Mart market share.

Then we go to China. And AC Nielsen is set up in China. But the amount of coverage that they have of total sales that are going on, and because there are a few supermarkets and a lot of other food markets, the measurement is much, much more difficult. That's for something as straightforward as sales divided by industry sales. When we start looking at things like customers' attitudes and perceptions, in some cultures people are very willing to provide this information, and it's simple to run the survey and collect such measures. In other environments, it's harder to get people to respond to some of those particular questions.

KNOWLEDGE@WHARTON: *I wonder if I could ask a very basic question. Why should marketing managers be looking at metrics? And does that have an impact on the financial performance of the company as a whole? Is this something that CEOs should be looking at also?*

DAVE REIBSTEIN: Both marketing managers and CEOs should be looking at these metrics, and the reason is because we're making budget allocation decisions; and the question is, are our decisions really working? So, for example, last week in class, I had the president of Diageo marketing in my class. He has a marketing budget in excess of $2.2 billion. He would like to know, as I spend this money, is it really deriving anything for me? Are people aware of all the different brands that I have? I want to follow it all the way through the pipeline of going from awareness down to consideration to preference and gaining distribution and trial and purchase; where I am in the status of all that? Ultimately, I want to know that when I spend $2.2 billion, there's some return. Clearly, that head of marketing is concerned about spending wisely around alternative considerations—and certainly the CEO would like to know if [he puts] this $2.2 billion plus over here, should [he] have been spending it somewhere else in the organization? So it's important for both.

KNOWLEDGE@WHARTON: *For someone to read this book, how fluent do they have to be in mathematics, for example? Is the subject really meant for people who have a background in calculus or that kind of thing?*

DAVE REIBSTEIN: It's not meant for people who have calculus, and I should say it's not really meant as a book that you would pick up and read cover to cover. It's much more

of a reference book. And [its goal] is to make it really clear, in simple language, what each of these measures means, how to collect each of these measures, and how to apply the knowledge that you gain by having these measures. There are occasions when we go through some of the math, short of calculus, but we go through some of the math that sort of talks about how some of these things are derived. But it really is intended for the operating manager.

Now, you did ask a question earlier that I didn't get to answering. The question was, what would be the five key measures? That's a hard to question to answer, and the reason it's a hard question to answer is that it probably differs by firm. When I'm at a stage of early growth, there might be different measures that I have versus when I am at later stages and at a mature stage, when I'm trying to retain some of my particular customers. But let me name what some of those measures might be. Market share is one we've already mentioned. And most people know the concept of market share and think they know how that's measured.

> "Ultimately, I want to know that when I spend $2.2 billion, there's some return."

Another one that I think is really important is share of requirements, often referred to as "share of wallet." Not everybody knows what that particular measure is, and it's really important to have a sense of how that's measured and what exactly it means. And very quickly, it is, of the customers that I have, what percent of their involvement in this category do I own, do I have? And that becomes very important, because if my share requirement is really high, the best way for me to grow is to get new customers. If my share of requirements is really low, then I don't have to go out and get new customers—I can take my existing customers and sell them more so they're buying a greater portion of their overall purchases from me. So strategically, it leads us in radically different directions; and, hence, it's a really important measure.

If I had to pick a third metric that happens to be important, I would think about customer satisfaction. And that's important because I want to know how well I am currently serving my existing customers and how loyal my customers are likely to be in the future. And so loyalty happens to be a fourth measure that I might want to be looking at. You could think about loyalty, customer satisfaction, and retention as all interrelated measures, but measuring things a little bit different, so one wants to know what those nuances are. So, I don't know if I should count those as three separate measures—when listing the main five—or if I should count those all as one. I might want to know what the lifetime value of my customers is—that is, how much am I going to be generating in profit from having a particular customer—because that gives me some direction [in terms of] how much I should be willing to pay in order to acquire a customer. And already I've exceeded my list of five. So those are all important measures.

KNOWLEDGE@WHARTON: *You mentioned consumer satisfaction. Of course, that's notoriously difficult to measure, isn't it?*

DAVE REIBSTEIN: It is only difficult to measure if one is not very clear about what it is one's trying to measure. To a large degree, it is this: I talk to my existing customers, and I ask, on some continuous scale, generally one to five, or perhaps one to ten, how satisfied are you, from "not at all satisfied" to "very satisfied." And I could ask it about particular components of what it is I'm doing, as well as overall [satisfaction]. And people tend to be very good in responding. The trick to that is, who are we asking? Are we asking our existing customers, or are we asking our previous set of customers? And it may be that I've got some very dissatisfied customers who are so dissatisfied they're no longer buying from me, and therefore they drop out of my pool of existing customers—and it might look like things are going great, because my customer satisfaction levels went up because the dissatisfied ones just left. Therefore, it could be a little bit tricky if we don't know exactly what we're measuring and from whom.

KNOWLEDGE@WHARTON: *Are there companies that you think are doing a particular good job at using metrics? And the flip side is, what should companies be looking at in terms of metrics that they aren't looking at right now?*

DAVE REIBSTEIN: Not surprisingly, some of the companies that are doing the best job of looking at metrics are a lot of the dot-coms. First of all, they started with a clean slate, so they didn't have this legacy of what it is that we were naturally gathering. And because they can trace so much of what happens with each specific customer, they've got really good individual-level data. Banks, and some financial services, particularly credit cards, have got some really fantastic measures, because they've got everything on an individual customer basis and know about what transactions are going on. And they can take any one individual and know, in a whole set, what their particular activities are, and they can look across various types of accounts and relate those to each other. If you're a company that sells things through a supplier, you may not have any direct connection with your end customer. And, therefore, it may be more difficult to have some very good measures there.

KNOWLEDGE@WHARTON: *One final question: You teach a lot of executives about marketing metrics. Have you seen an astronomical increase in interest in this topic over the past few years, maybe because the Internet has made this a more attainable goal for some? And, if you have seen a lot of interest, why?*

DAVE REIBSTEIN: It's a great question, and I think you hit on one of the answers. We see some people really powerfully using some of this information through the Internet. Therefore, those that haven't had that level of information are wanting to jump on board and capitalize on some of the power of metrics. A second aspect is that computer systems are able to handle and store massive amounts of data, and they are able to analyze massive amounts of data. But I think there's been a different force that has led people to look much more at this particular topic—the downturn of the economy at the beginning of this decade. We [enter] 2001, 2002, the economy turns down, and suddenly there is pressure put on companies to justify every particular expenditure. And with that pressure on marketing managers, there's been this real push towards coming up with some specific measures that [are] very precise and [clearly] linked to the financial performance of the firm. If you talk to senior marketing executives, they have felt a tremendous squeeze on their budgets, and the pressure to justify every dollar that they spend. ■

“Influentials” and “Imitators”: How To Better Forecast the Sale of New Products

TWO WHARTON RESEARCHERS have developed a mathematical model that they say will allow companies, for the first time, to predict at what pace new products will gain acceptance in markets where purchasing decisions by knowledgeable, influential customers sway the buying habits of others.

Wharton Marketing Professor Christophe Van den Bulte and doctoral student Yogesh V. Joshi say their model can be put to use in industries as diverse as movies, music, pharmaceuticals, and high technology. It is possible the model may also be a way to identify directors and actors who are ready to make the leap from small films to the Hollywood mainstream, they add.

According to Van den Bulte, chief marketing officers do not need to be math whizzes to use the model. He and Joshi have developed a handy spreadsheet that incorporates a close approximation of the equations and does the forecasting for executives. Also, the model can easily be estimated employing SAS, a commercial software package popular with market research providers.

Marketers have long tried to deepen their understanding of how new products gain acceptance among customers, a process known as product diffusion. Companies are especially interested in diffusion in markets that consist of two segments: “influentials” (knowledgeable people who keep abreast of product innovations and readily accept them) and “imitators” (people whose purchasing decisions are swayed by their savvier counterparts). Targeting influential prospects who are more in touch with new developments than most people and converting them into customers, the thinking goes, allows companies to benefit from a “social multiplier” or “social contagion” effect in marketing campaigns.

In the 1990s, for example, consultant Geoffrey Moore gained attention with books like *Crossing the Chasm* and *Inside the Tornado*, which described how new high-tech products first gain popularity among technology enthusiasts

and later among more risk-averse, mainstream customers. Moore’s idea of a “chasm”—that high-tech products often enjoy high sales, then suffer a sales decline, or chasm, before catching fire with customers and rising again—made him a guru in Silicon Valley.

Researchers have developed other theories in an attempt to get a handle on product diffusion. One is the “two-step flow” hypothesis, which was originally posited in the 1950s to explain the outcomes of elections. This theory suggests that ideas often flow from the news media to opinion leaders and then from the opinion leaders to the electorate at large. This old theory still influences how marketers think about opinion leadership today.

Another theory, dating from the same time, was developed by the noted sociologist David Riesman. He found that people generally fall into two categories: “inner-directed” individuals (who care little about what other people say

and do) and "other-directed" individuals (who care very much, and are influenced by, what other people think).

In the early 21st century, companies have rediscovered the importance of social contagion and have developed "viral" or "network" marketing strategies to sell products. These buzzwords have entered the lexicons of business people and consumers.

For all these years, however, no mathematical model existed that could help managers quantitatively represent and predict sales evolution in two-segment markets where opinion leaders influence customers who are followers. But Van den Bulte and Joshi say they have now solved that problem, which they discuss in a paper entitled "New Product Diffusion with Influentials and Imitators."

"Our idea was to have a mathematical model that was consistent with how managers think about their markets and that they could use to support marketing analysis and strategic decision making," says Van den Bulte. "With our model, managers can see what will happen to sales depending on the size and behavior of each segment. Also, managers do not need to guess these unknown parameters; marketing analysts can estimate them from data about older but similar products using standard statistical software."

Applying the Data to Movies

Van den Bulte and Joshi confirm Moore's findings that there can indeed be a drop in sales of a new product between the time it is introduced and bought by influentials to its diffusion among imitators. But in contrast to what Moore claims, the Wharton paper says that "it need not always be necessary for firms to change their product to gain traction among later adopters and [for] the adoption curve to swing up again."

Another important insight is that the proportion of adoptions stemming from influentials need not decrease at a steady pace but may first decrease and then increase. The management implication is that, while it may make sense for a company to shift the focus of its marketing efforts from independent-minded influentials to imitators shortly after launch, it may want to revert its focus back to independents later in the process. "Frankly, we were surprised by this mathematical result. It seems counterintuitive at first and flies in the face of the current consensus taught in most business schools," says Van den Bulte. However, the paper not only explains why this can happen but also backs up the claim with actual data on adoptions of a new drug from a study originally sponsored by Pfizer.

That insight has important implications for targeting and resource allocation. "Managers who confuse the distinction between influentials and imitators with that between early and late adopters—and ignore our results and others' empirical evidence that the bulk of the late adoptions may stem from people not subject to social contagion—may end up wasting money by poor targeting," the Wharton researchers write.

The current consensus is that movies typically exhibit one of two sales patterns over time. The first is that of a "sleeper," where only a few film aficionados go and see the movie in the first week but then start developing buzz about it among more casual mainstream movie goers. This leads to a bell curve with low sales at first, then increasing sales, and finally declining sales as the movie reaches the end of its life in movie theaters. The second type of pattern is that of a "blockbuster" that has immediate mass appeal and opens very strongly, after which sales start declining immediately.

When applying their model to data on music CDs and movies, Van den Bulte and Joshi stumbled on a surprise—a third sales pattern in which sales first decline, but then swing up again before ultimately setting in a final decline. Intriguingly, it seems like this third pattern occurs for movies with actors or directors that are transitioning from "indie" to "mainstream." Actress Christina Ricci and director Ang Lee exhibit this pattern. Early in her career, Ricci played in several independent movies that won critical acclaim and earned her the label "Indie Queen". These early movies—such as *The Ice Storm* (1997), *The Opposite of Sex* (1998), and *Buffalo 66* (1998)—exhibited the bell curve typical of successful "sleepers." These were followed by a movie exhibiting a dip in ticket sales—*Desert Blue* (1998)—while Ricci's recent movies are more standard Hollywood fare exhibiting the usual steady, exponential sales decline such as *The Man Who Cried*

(2001). The same pattern holds true for movies directed by Lee: bell-shaped for *The Ice Storm* (1997), a temporary dip for *Ride with the Devil* (1999), and steady decline for his more recent Hollywood production, *The Hulk* (2003).

No mathematical model existed that could help managers predict sales in two-segment markets where opinion leaders influence customers who are followers.

The model explains this pattern as the result of the change in segment sizes. This suggests that the model may help Hollywood studios identify actors, directors, and writers who already have a small but strong following among film aficionados and are about ready to break through into the mainstream. "Entertainment companies could easily mine their historical sales data to see if our model's 'transition' prediction pans out or not," Joshi says. "If true, then this could assist producers and studios in identifying who the safer bets are with a better chance of making it big with their next movie. That, of course, is critical for casting and resource allocation decisions. The same idea applies to book publishers."

Naming the Opinion Leaders

The Wharton model should prove useful in five areas where influentials and imitators are likely to exist. The first two are high technology and healthcare products, including pharmaceuticals. "In these two areas, innovations are often perceived to be complex or risky, and mainstream imitators refuse to be on the 'bleeding edge,' unlike opinion leaders and lead users," Van den Bulte and Joshi write. So, the two-segment structure of the model should be particularly useful there, an expectation borne out by their data.

The third area is that of entertainment and mass-culture products, such as gaming software, music, books, and movies, where the distinction between aficionados and the casual mainstream audience can be large.

Teen marketing is the fourth area where the distinction between influentials and imitators may be critical in the new-product diffusion process. Several years ago, Procter & Gamble launched a marketing effort called Tremor as a way to connect with highly involved and influential teens, foster adoption among them, and through them reach out to the larger teen population. Categories in which Tremor and similar services have been used include not only fashion-oriented apparel and entertainment, but also more mundane, fast-moving consumer goods such as beauty aids and food.

The fifth area consists of situations where a segment of enthusiasts has pent-up demand. For instance, when Internet-access providers started operating in France in 1996, a rather large number of people adopted their services. "New adoptions dipped in 1997, only to increase again from 1998 onwards," according to the Wharton study. "The deviation from the standard bell shape was not the low number in 1997 but the high initial number in 1996, when many university users who had been accessing the Internet exclusively through the university RENATER network were finally able to start using the Internet at home as well."

Van den Bulte and Joshi have already extended their model to cases where the enthusiasts can place advance orders that the marketing analyst can observe. The two hope to apply this new model to CD sales data to see if pre-launch orders can provide a good forecast of total sales.

The research by Van den Bulte and Joshi also has important implications for how managers can develop more effective network marketing efforts. Several firms in the pharmaceuticals industry, longtime leaders in applying marketing analytics, are now conducting surveys in which they ask physicians to name the opinion leaders in their social network. Typically, firms use this information to guide their sales representatives to the physicians deemed most influential. "That's a good idea. However, we used our model to forecast how increasing the impact that influentials have on followers changes the diffusion process, and the results were rather dramatic," says Van den Bulte. Hence, rather than focusing only on identifying and converting influentials, firms should also identify ways to increase their impact on other physicians." ■