How Consumer Goods Companies Compete on Analytics to Achieve High Performance

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You have only to walk the aisles of your local supermarket or big-box retailer to get a sense of what business-to-consumer companies are up against. They're pinched from both sides—supply and demand.

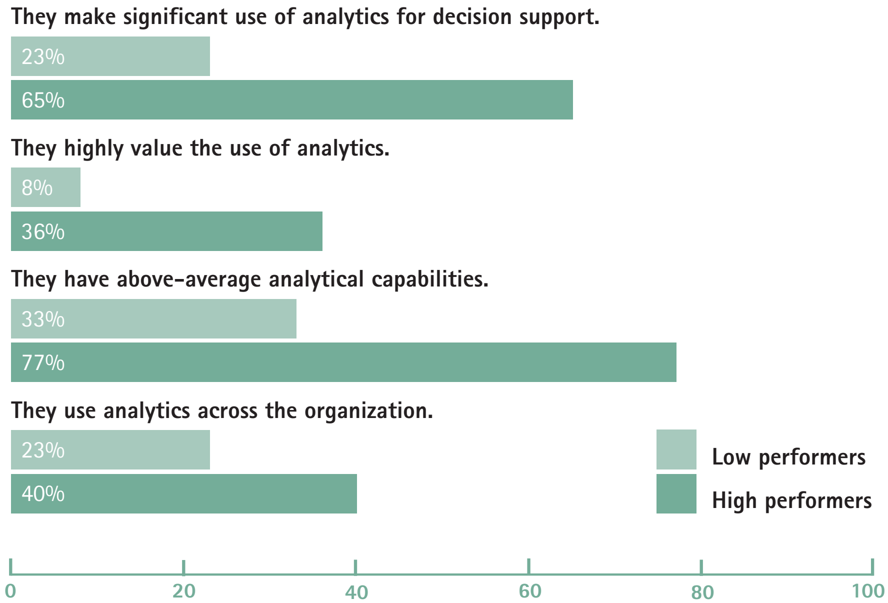
On the supply side, store brands offer challenge as well as opportunity in milk, moisturizer and motor oil alike. New channels add complication—consumers buying new products on the Web or watching movies on mobile phones. And the explosion in the number of brands squeezes available shelf space and margins in a broad range of product categories. A few years ago, who had heard of the Haier appliance brand from China? On the demand side, buyers' tastes are more volatile than ever. Unswerving brand allegiance is a thing of the past. The Internet makes it easier to compare prices—and to know the costs behind the price.

So with their traditional bases of competitive advantage evaporating, what's the best outlook for companies that make and sell consumer products? There's a solid basis for competition: flawless, efficient execution and decision making that outsmarts rivals. The key to both aspects is found in the sophisticated use of analytics—making extensive use of data, statistical and quantitative analysis, predictive models, and fact-based management to drive decisions and actions.

As part of Accenture's research into high-performance businesses, we've found that a growing number of far-sighted providers of consumer products recognize the power of analytics and are rapidly building their competitive strategies around data-driven insights. Using analytics to make better decisions and extract maximum value from their business processes, companies such as Procter & Gamble, Honda and Samsung can readily identify their most profitable customers, speed up product innovation, optimize supply chains and pricing, and identify the true drivers of financial performance.

These high performers are distinguished not just by their business processes, but because their analytical skills and capabilities allow them to achieve lasting competitive differentiation. For many exemplars of high performance, their competitive advantage **is** their analytical capability. These companies demonstrate not only the concept of competing on analytics, but also the connection between the extensive use of analytics and business performance.

Figure 1: Analytical orientations of high and low performers



Analytics and high performance

Accenture's research into High Performance Business found a powerful link between organizations with notable analytical orientations and superior market performance. (See Figure 1.) High performers are much more likely to value fact-based decision making and to have the skills and capabilities in place to effectively use analytics across their organizations.

Few consumer businesses are neophytes in the use of data analysis, of course. Twenty years ago, Procter & Gamble was helping to drive the use of analytical software and databases to analyze sales and determine the parameters of product promotions. A few years ago, P&G won the top prize from the Institute for Operations Research and the Management Sciences for its use of operations research techniques that deliver pronounced cost savings. Today, the company applies IT-assisted analytic techniques in three areas: optimization models that determine how best to allocate supply chain resources, most often on the basis of net present value; simulation models that allow quick "what if" experiments; and decision analysis, which involves the use of techniques such as decision trees that combine the probabilities of various outcomes and their financial results.[1]

Such systematic use of analytics is what helps companies achieve lasting competitive advantage. In the consumer products sectors, much of the analytics emphasis has been on marketing segmentation – understanding the value of pricing promotions for household cleaning products, for instance. But the high performers also see how much they can gain by applying analytics outside of marketing and sales. For example, in the automotive market, Honda is using analytics to assess manufactured quality. Long known for its product quality, Honda has instituted an analytical "early warning" program to identify major potential quality issues that it gleans from warranty service records, customer calls and calls from mechanics.

Top consumer products competitors don't confine their absorption of best practices to their own industries. They find valuable ideas in what works best in a variety of other sectors. For example, global cement manufacturer CEMEX employs predictive analytics to improve its delivery processes, boosting logistics productivity by 35 percent and garnering substantial brand loyalty from its customers. And agricultural equipment maker John Deere used analytics expertise to trim the number of configurations on two product lines by at least a third, boosting profits on those products by 15 percent.

The analytics exemplars have the foresight and the patience to understand that theirs is a long-term game; they know it can take years after investment in the right technology to gather enough data to conduct meaningful analyses. For example, in the consumer electronics sector, it took Dell Computer seven years to create a database that includes 1.5 million records of all its print, radio, broadcast TV, and cable ads. Dell couples the database with data on sales for each region in which the ads appeared (before and after their appearance). The information enables Dell to fine-tune its promotions for every medium in every region where its products are sold.

The consumer products companies that can be described as true analytical competitors are very clear that analytics expertise is central to their strategic and competitive advantage. They achieve large-scale results by:

- Focusing their analytics practices on leveraging their distinctive capabilities—the sum of the integrated business processes and capabilities that allow them to serve their customers in differentiated ways and that create new formulae for business success.

- Having senior leadership teams that are consistently wholehearted about analytical competition. Their executives recognize that they must keep building processes to continually monitor the external environment for signs of change. And they know how to recognize when changing market conditions require them to modify their assumptions, analytical models and rules.

- Strategically managing and applying analytics across the entire enterprise.

- Using the right technology. When Canadian Tire set out to create a structure for its data, the company found that its data warehouse could yield as many as six different numbers for inventory levels. Other data was not available at all, such as comparison sales figures for certain products sold in the company's 450-plus stores throughout Canada. Over several years, the company created a plan to collect new data that fit the company's analytical needs.[2]

While the consumer products sector as a whole is making good progress toward the creation of robust analytical capabilities in the service of strategic capabilities, relatively few businesses can be described as truly analytical competitors. A few stand out. They include consumer goods and consumer electronics players such as:

- **Samsung**. The Korean electronics giant uses analytics to maximize returns on its marketing investments. Its analytics system, M-Net, houses reams of data as well as the analytic tools needed to make sense of it. Samsung managers can assess primary marketing objectives, analyze the results of recent marketing investments around the globe, and build predictive models and what-if scenarios to test future investments. M-Net has saved Samsung millions of dollars by revealing mismatches between some of its marketing investments and the maximum returns those investments could ever yield.

- **Procter & Gamble**. P&G's central analytics team – called Global Analytics – has used operations research to contribute substantially to P&G's bottom line over the last 10 years. P&G's analytics experts tackle issues such as manufacturing site location, inventory management, supply chain design, and strategic decision making.

- **E&J Gallo**. Operating in a business built on using intuition to divine unpredictable consumer preferences, the well-known wine maker now quantitatively analyzes and predicts the appeal of its products.

- **Mars**. The confectionery maker has its own think tank – the Catalyst Research Group – which develops and brings in unique analytic methods and technologies that are not available elsewhere within the company. The unit places a premium on leading edge analytics and data mining modeling to gain competitive advantage in business decision making.[3]

Analytics leaders such as P&G, E.J. Gallo and Mars are rapidly benefiting from their moves up the analytics experience curve to drive high performance. They know they now have the means—and the mindset—to generate many more benefits, and to maintain a durable competitive edge. In doing so, they are sending a very strong message across many consumer products sectors. Their competitors will ignore that message at their peril.

About the author

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To learn more about the impact of analytics on consumer goods companies, see **Competing on Analytics: The New Science of Winning** (Harvard Business School Press) by Thomas H. Davenport and Jeanne G. Harris. In this ground-breaking work, Davenport and Harris demonstrate that the frontier for using data has shifted dramatically as leading companies are learning to do more than just collect and store it in large quantities. They show how leading companies – including organizations as diverse as the Boston Red Sox, Netflix, Amazon.com, Cemex, Capital One, Harrah's Entertainment, Procter & Gamble, and Best Buy – use analytics to trump rivals. A timely, much-needed resource, **Competing on Analytics** promises to rewrite the rules on competition.

Notes

1 Modeling Magic, **Computerworld**, Feb 7, 2005, http://www.computerworld.com/printthis/2005/0,4814,99484,00.html

2 Nicole Haggerty and Darren Meister, "Business Intelligence Strategy at Canadian Tire," Ivey School of Business case study # 903E19, 2003.

3 http://www.kdnuggets.com/jobs/2007-02-12_mars_2_analytic.html

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