# Complexity in Products and Services: Good or Bad, Depending on How You Manage It

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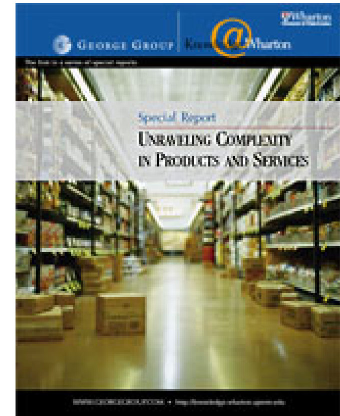


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Imagine dropping by your neighborhood Baskin-Robbins for ice cream with your kids in tow. After 15 minutes of frantic finger pointing, negotiating, and weighing options, you decide on the Espresso 'N Cream Lowfat Ice Cream, Pink Bubblegum, Wild 'N Reckless and Very Berry Strawberry. Hopefully, you'll feel the visit --and the drawn-out decision process -- was worth it. Clearly, it was also worthwhile for Baskin-Robbins and its 1,000-plus flavors of ice cream, sherbet, sorbets and ices, because you paid a premium over plain vanilla for your impulses.

Others are equally interested in scrutinizing those flavors, to see which of them ring up not just revenue, but also profits. In mid-December, U.S. private equity firms Thomas H. Lee Partners, The Carlyle Group and Bain Capital bought Dunkin Brands (which owns Baskin-Robbins and Dunkin Donuts) for $2.4 billion from wine and spirits major Pernod Ricard, four months after Pernod Ricard paid $14.2 billion for Dunkin Brands' former owner, Allied Domecq, of Randolph, Mass. Pernod Ricard owns top liquor brands such as Chivas Regal, Malibu, Stolichnaya and Glenlivet, and didn't want donuts and ice cream to distract it from its focus on spirits.

The company's decision might be wise: As businesses rapidly increase their portfolios of products and services -- either in response to consumer demand or through mergers and acquisitions -- they run the risk of adding too much complexity, which can eat away at scarce resources and ultimately harm returns. While Pernod Ricard divested itself of needless complexity, hundreds of other companies are grappling with their portfolios of businesses, products, services and delivery channels to see which of them need to stay, be restructured, or be dropped. Knowledge@Wharton and George Group Consulting, an operations and strategy consultancy, examined this issue in an online survey of Knowledge@Wharton readers completed last fall. The survey covered 424 executives drawn from more than 30 industry groups including financial services, business services, information technology, foods, industrial manufacturing and healthcare. Nearly 30% of the respondents were from companies with annual revenues of between $1 billion and $10 billion, and close to 25% were from those with revenues between $200 million and $1 billion.

Roughly half of the respondents indicated that portfolio complexity had a "negative or a somewhat negative impact" on cost competitiveness and lead time at their companies. In addition, between a quarter and a third of all those surveyed said complexity similarly hurt their product quality, sales effectiveness, customer service and satisfaction. A key finding of the survey was that, for a majority of the respondents -- 64% -- a small portion of products and/or services account for all the operating profit at their companies. But even among those who claim complexity boosted profits at their companies, a fairly large number -- 38% -- said the drivers were still a small portion of their products or services.

### A Drag on Profits and Growth

Those numbers reveal that managers have their work cut out for them when it comes to dealing effectively with complexity in their organizations. Half the respondents from companies where

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complexity hurt profits agreed that they could release "considerable levels of fixed costs" if they pruned their portfolios substantially. One respondent from a financial services company wrote, "The boutique that tries to do more than it can handle in terms of complexity will fail, as will the giant that offers all things to all comers, but at the cost of one-offs and operational inefficiency."

Complexity can be understood and tamed, says Stephen Wilson, director at George Group's Conquering Complexity Practice. "More and more companies are trying to see how proliferation affects them. Very few realize the full impact of this as a lever to improving profitability and growth, because there hasn't been a way of quantifying the relationship between complexity and profitability, process efficiency and growth."

Wilson is co-author along with George Group chairman and CEO Michael George of a book titled, *Conquering Complexity in Your Business* (McGraw-Hill, 2004), which draws extensively from real-world cases of companies that have successfully gotten their arms around complexity. George and Wilson say in their book that portfolio and process complexity is often a larger drag on profits and growth than any other single factor in a business. "Every business has too much or too little of something...too many service offerings that can be reasonably sustained, too few product lines to be competitive, or too many different ways of doing the same kind of work." They say companies that have conquered complexity either have a "very low level" of complexity in the marketplace, or targeted customers who are willing to pay an adequate premium for higher complexity delivered at a low cost. The authors cite the strategies at Southwest Airlines, Capital One, Dell Computer, Toyota and Wal-Mart as examples of successfully conquering complexity.

Corporate awareness of what can be gained by dealing effectively with complexity has picked up only in the past three or four years, Wilson notes. The boom years of the 1990s encouraged many companies to proliferate unfettered into new business lines, and add new customers and markets with expanded product lines and the attendant processes. Growth occurred both organically and through acquisitions, with the added challenges of overlaps and clashes in products and services, processes, organizational cultures and customer franchises. But the economic slowdown that followed after 2001 is compelling many companies to recognize that all the complexity they had built could also be a silent killer.

"Complexity accumulates over time," notes Eric Clemons, Wharton professor of operations and information management. "The problem is that clutter is not free. It interferes with operational efficiency, with production efficiency, with a clear image, and with distribution. It can strangle a company."

## The Good and the Bad

The first hurdle in dealing with complexity is tackling corporate inertia, as the Knowledge@Wharton-George Group survey highlights. About 85% of the respondents indicated the number of offerings at their companies has grown by at least 10% over the last five years. Of these, almost half reported a more than 50% growth in offerings. The motivations are clear: Proliferation is a must to participate in their industry segments, according to 55% of those surveyed. "Our industry is driven by 'what's new,' so we are constantly creating new products," wrote an executive at a consumer goods company. An executive at a financial services company noted: "Each customer's 'I want' differs considerably and forces the bank to proliferate its offerings (services, channels and products) more and more."

"To not proliferate is not the right answer, because it goes against market realities," Wilson says. "What is required, then, is to understand how to manage complexity, manage the impact of it on your costs and profitability, and then tell the good from the bad."

Not everybody is sure how much of that proliferation is good or bad. In fact, 40% of those surveyed feel proliferation gives their companies a competitive advantage. One respondent from an automobile

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manufacturer wrote, "The age of product in showrooms significantly impacts market share. Therefore we must continuously launch more and more product offerings at an increasing rate." Another executive from an industrial manufacturer said new products help his company enter upscale markets that offer premium pricing, while another executive from a baked-goods company indicated that introducing new products is the only way to survive in his industry.

But proliferation could have unintended consequences, too. Besides hurting a company's cost competitiveness and its lead time, respondents also reported that complexity has "a negative or somewhat negative" impact on capital efficiency (45%), profitability (35%) product quality (32%), sales effectiveness (29%) and customer service and satisfaction (24%). They also feel it distracts management: About 65% of the respondents said management attention is a casualty, while 58% narrow down the impact to the quality and timeliness of management decisions. An executive from a food service industrial manufacturer said increased complexity has "diluted market knowledge" and made decision making "slower and less effective."

**Capturing the Up-side**

To be sure, complexity, like cholesterol, can be both good and bad, and sorting that out is the first challenge. The customer is where the process begins, and also the final arbiter of how much is too much. "Complexity management isn't the same as cost management," says Clemons. "It's about giving every customer exactly what he wants without your cost structure killing you."

More than half the survey respondents from companies with a positive profit from complexity indicated that they have "a formal process for deeply understanding customer needs." One respondent from an industrial manufacturer noted that "complexity is our friend" and that the company would differentiate itself in the marketplace by going after the complexity that "others have trouble with." An executive from an electronics company wrote that the biggest challenge is a "lack of in-depth market analysis and reliance on anecdotal 'evidence' in product planning."

Companies that have successfully reined in complexity are also likely to have formal portfolio management processes for adding or deleting offerings. One executive from a telecommunications company noted that new technologies and products are rapidly creating obsolescence, which calls for a brutal survival policy. "We have to . . . apply a strict policy of 'do not resuscitate' to [failing] products in order to have a natural selection in place," the executive said.

As Wilson and Clemons note, companies that conquer complexity are also less likely to make changes to gain an incremental sale regardless of the downstream impact. In fact, they are more likely to ensure that the incremental value of a change offsets the incremental costs of complexity before every new product or service offering. Chances are they will also have robust cost accounting systems that capture the full costs of complexity and employ probability metrics to forecast the economic value added from new offerings.

What differentiates the early winners in this game from the rest is a culture of continuous improvement and process efficiency, the survey finds. About 64% of those who have emerged from complexity in good shape said they have deployed process improvement strategies such as Six Sigma, Lean Management or Total Quality Management. Also, making the most of resources is vital: 74% reported that their product or service plans "greatly leverage common underlying platforms and components."

So are corporations at the threshold of a complexity offensive? Clemons believes customer demands will sooner or later force companies to fall in line, if they want to survive, and complexity will remain a pressing concern. "The customer is not yet king but is increasingly becoming one," he says. "Customers are going to get exactly what they want."

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