



Book Waging War on Complexity Costs

Reshape Your Cost Structure, Free Up Cash Flows, and Boost Productivity by Attacking Process, Product, and Organizational Complexity

Stephen A. Wilson and Andrei Perumal
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Recommendation

A company's complexity directly affects its cost structure, the biggest determinant of its capacity to compete. Businesses can gain enormous advantages by minimizing or eliminating complexity. For example, offering a wide variety of products and services may be inefficient, while a condensed product line could improve a company's profitability. Not all complexity is counterproductive, so distinguishing "good complexity" from "bad complexity" is critical to simplifying a business. Consultants Stephen A. Wilson and Andrei Perumal promote a thorough – though sometimes, ironically, complex – approach to complexity control that unearths "non-value added" spending you can target for reduction. While the authors' systematic prescriptions clearly apply to large companies with extensive product and service lines, *BooksInShort* believes this book can also be useful to small and midsize businesses as a tool for weeding out wasteful complexity.

Take-Aways

- Companies extend their product lines – and thereby increase their costs – to satisfy client demand and increase revenues.
- But too many products usually lead to too much complexity, which harms profitability.
- Complexity affects a firm's cost structure, which determines its capacity to compete.
- Distinguish between "good complexity" and "bad complexity." Product variety that fails to translate into customer-perceived value is bad.
- Business complexity arises from three different sources: "products, processes and organizational structures."
- These three interact, so reducing just one aspect of complexity may be ineffective.
- Overanalysis can become an "activity trap" that derails simplification initiatives.
- Estimate the size of your potential complexity-cost savings by gauging your "non-value-added" spending.
- Rationalize the number of items you sell, the components you use for your products and the projects you assign.
- The "Lean Operating Model" helps you retain product variety while taming complexity.

Summary

Variety at Any Cost?

Familiar all over the world for its characteristic three-sided shape, the Toblerone chocolate bar nonetheless morphed over the past century into various sizes and versions, depending on geographic market. Food giant Kraft took over Toblerone and made it part of a corporate "decomplexity effort." The manufacturer cut product expenses by standardizing the chocolate bar's size and reducing the number of plants that produced the brand from nine to one. Kraft also slashed process costs in marketing, packaging and supply chains. All told, Kraft realized pretax savings of \$400 million annually, just by simplifying a chocolate bar.

"Taking out complexity costs does not and should not be a long, academic exercise."

Companies introduce complexity into their business by extending their product lines – along with the procedural and organizational costs that entails – to provide customers with as many choices as possible and to promote revenue growth. Some organizations continue to offer older goods after introducing new ones. By doing so, they hope to avert a revenue decline. Other businesses sell certain products in small volumes and at low prices that barely cover production costs, let alone

administrative expenses. But offering too much variety can be as problematic as offering too little. Too many products usually mean too much complexity.

“Product variety affects process performance, and, conversely, process performance affects product profitability.”

Reducing complexity may cut revenue, but a simplified product line can boost the bottom line by saving money in processing and organizational efforts that support products. Simplification benefits service providers, too, though profit-draining complexity is easier to detect in products. When a product inventory holds too many widgets, the impact is obvious, but a service company can easily overlook its unnecessarily complex, costly variety of features, add-ons and amenities.

“Good Complexity” versus “Bad Complexity”

Not all forms of business complexity are harmful. Product diversity that customers want and buy is good complexity, but product variety that fails to translate into customer-perceived value is bad complexity. “Products, processes and organizations” all can incubate bad complexities that do not help build a company’s market share. Consider the plight of a leading industrial firm that stuffed its database with two million products, in part by storing information on the same products under different numbers. This duplicative database is an example of “the hidden costs of complexity.”

“All variety adds costs to a business, but not all of it is sufficiently valued by customers.”

When a company can identify and quantify its various types of complexity, simplification’s benefits become easier to measure and achieve. Holistic thinking is at the heart of complexity analysis. A manufacturer that resists a reduction in the size of its product line may do so to preserve revenue, but close analysis could reveal that the revenue at risk is small compared to the potential savings that decreased factory downtime and reduced inventory cost could generate.

“Complexity costs grow geometrically with complexity. Complexity costs don’t just rise in proportion to the amount of complexity in the business...they rise exponentially with greater levels of complexity.”

Factory downtime and inventory are examples of complexity costs that deliver no value to customers, so less is better. In fact, usually only 20% of a company’s products account for the bulk of its income, but cutting the profit-sapping 80% is no simple task. Jostens, whose offerings include caps and gowns for graduating students, learned this when it began to suffer quality, production and inventory complications. The company halved its inventory cost by slashing its number of SKUs [stock-keeping units] by 85%. While “keeping customers happy,” Jostens found that its thinner product offerings ultimately helped fatten its profit margin.

Facets of Complexity

“Product complexity” stems from variety and product-line extensions. “Process complexity” bespeaks the procedures, steps, handoffs, and the like necessary to build product offerings. “Organizational complexity” deals with the physical locations, facilities and decision-making structures that support processes. Complexity costs reside at their intersections where these three aspects interact. Companies will find it difficult to limit one type of complexity if they fail to address the others. The best approach is to analyze and act on three particular intersections of complexity: “product-process, process-organization” and “product-organization.”

“Product complexity increases inventory levels, lengthens lead times and reduces production volumes.”

One or more of these three interactions may be adding excess complexity, depending on the firm’s particular product line, procedures and structure. Product-process complexity is easier to detect than the other two sets. For example, offering an item in three designs instead of two will increase the complexity of the product line and its manufacturing process. Pushing different products through the same production process will reduce total capacity by increasing total set-up time for assembly changeovers from one product to another. Symptoms of the need for a product-process solution include unprofitable sales, high inventory costs, reduced production capacity and long lead times for order deliveries.

“The fear of impacting revenues is one of the biggest reasons that companies don’t reduce complexity.”

A lack of coherence among teams, divisions, goals and projects is a manifestation of process-organization complexity. In this situation, lots of people are busy working but have little knowledge of what others are doing or how it all fits into the firm’s main mission. Process-organization issues are the least obvious complexity issues, but they’re also the most frequent and the most difficult for firms to manage. These problems result in overstaffing, lax accountability, slow decision making, poorly implemented technology and badly managed customer service.

“The biggest pitfall in trying to quantify complexity costs is overengineering and overcomplicating the effort.”

Capital-intensive product-organization complexity “takes root” in the links between a company’s organizational structure and its product line. Signals indicating a product-organization issue include surplus factories and other facilities, unfocused marketing, a fragmented supply chain, and internal resistance from sales staff who oppose shrinking the product line.

Starting to Simplify

Efforts to eliminate complexity costs falter for several common reasons – for example, failing to take a multidimensional look at product, process and organization. Other hazards include setting cost-reduction goals too low or, conversely, making budget cuts in strategic sources of strength and revenue growth, such as research and development. Overanalysis of complexity can become an “activity trap” that generates lots of work but brings no tangible benefits.

“Although complexity seems visible in aggregate, in pieces it is fleeting. Like fog, complexity seems to disappear the closer we get to it.”

The first step toward successful business simplification is roughly estimating the cost of expendable complexity. Companies that “quickly identify the ballpark size of the prize” will have a better chance of eliminating costs than firms that substitute analysis for action. Complexity costs encompass quantifiable items like excess inventory as well as outlays that are harder to calculate, like opportunity costs and reduced productivity. Tallying all the expenditures that provide no direct customer benefits (“non-

value-added” spending) is difficult. So, since “value-added” spending is easier to identify and count, subtract that sum from your total costs to get an estimate of the non-value-added expenses you could eliminate by reducing complexity.

“That product complexity strains processes is true whether changing over a production line or requiring salespeople to recall information across a wide range of offerings.”

Assessing your “revenue substitutability” is another initial step toward business simplification. Comparable products that serve as alternatives for each other present likely candidates for culling, because customers who buy the product you cut are likely to purchase the replacement from you.

Financial statements provide imperfect guidance in complexity control. In the US, generally accepted accounting principles (GAAP) allot marketing, administrative and other nonoperating costs evenly, like “peanut butter spread,” to all products. In making business-simplification decisions, firms should assign more overhead to slower selling products and less to bestsellers.

Different Types of Complexity Reduction

A reduction in complexity can unfold on multiple fronts. One example is “SKU rationalization.” This process shrinks a product line to its most profitable items, but it entails more than just an analysis of incremental revenue and cost. Consider the position of each SKU in the product’s life cycle. Older products that peaked in sales long ago are good candidates for elimination.

“For many companies, the need to right size will be much clearer than the best approach to rightsizing.”

Companies also can cut process complexity by striving for shorter set-up times and reduced maintenance-related work stoppages. In 2007, Cadbury began to implement a strategy to simplify its confectionary business while maintaining its global presence in the candy market. Cadbury concentrated on its UK operations, where it downsized its network of 18 distribution centers to only five locations and eliminated layers of regional management to create central product managers for chocolate, candy and gum. Cadbury eliminated 10% of its 1,000-plus SKUs in one year, and dropped up to 75% of SKUs in one product category.

“Companies cannot successfully complete a component rationalization without also assessing the organizational elements it touches.”

“Component rationalization” is another potent way to simplify a business. Customers are unlikely to make purchase decisions based on how many parts a company uses to make its products. Symptoms of the need for component rationalization include oversized databases, increasingly inefficient warehouses and a constant need to design products anew rather than reconfigure existing designs. Reducing the number of parts used also reduces the number of vendors, further streamlining your operations.

“Nearly every company...has too many projects – strategic initiatives, continuous improvement projects, new product development efforts – and overburdened resources, which practically guarantees poor results.”

Another drop in complexity happens when companies identify and amend processes for certain products or services through “process segmentation.” For instance, the medical insurance division of a financial services company used well-compensated underwriters to handle routine requests for increased coverage before it started channeling such ordinary requests to lower-paid staffers who could perform the same task. The move halved the division’s processing costs.

“It is better to standardize portions of a process than nothing at all.”

“Project rationalization” helps companies focus on fewer plans with greater potential benefits. Firms tend to assign too many projects at the same time, which can strain company resources and prolong completion times. For example, a big chemical company found that its roster of active projects at one time exceeded 60,000. Projects also take too long to complete when firms delegate too many employees to work on them. Having a person work full-time on a project accomplishes more – and more quickly – than setting four people to work part-time on four different projects. Increasing employee accountability allows organizations to wrap up projects faster with fewer but more dedicated resources.

Getting Lean

Japanese automaker Toyota developed the lean philosophy, an excellent tool for managing complexity. In fact, “lean makes complexity less expensive.” The “Lean Operating Model” emphasizes constant process improvement, cuts down on waste and minimizes costs that fail to translate into customer satisfaction. The lean model is particularly useful for companies that want to shorten set-up time or the time required to switch a production process from one product to another. And lean calls for holding less inventory which lets firms cut delivery lead times.

“While the mantra of ‘more is better’ used to summarize most companies’ approach to product and service variety, that is changing.”

Shorter time frames, faster deliveries and less waste allow a company to maintain the product variety that customers demand. Setting up a Lean Operating Model is a seven-stage process: 1) identify your competitive advantage, 2) focus on “core processes,” 3) use metrics throughout, 4) install lean procedures where they matter most, 5) “standardize ways of working,” 6) foster employee accountability, and 7) create a culture of continuous learning and improvement.

International supermarket retailer Tesco adapted lean techniques to create “the Tesco Operating Model.” It realized sustainable savings by standardizing such processes as ordering and price setting at stores throughout Europe, Asia and the United States. Now Tesco enters new markets with a stock set of operating procedures instead of “reinventing the wheel” with each geographic expansion.

About the Authors

