Five ways to simplify your supply chain

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Abstract

Purpose – To provide five ways of simplifying the supply chain.
Design/methodology/approach – Uses the Complexity Reduction Framework to break down supply chain complexity into its component parts.
Findings – Reveals that ongoing globalisation brings increased complexity to virtually every aspect of the business world, and supply chains are the latest to be affected; thus adaptability has never been more crucial. Many company failures can be traced back to an inability to adapt rapidly to changing market expectations; overly complex supply chains are not adaptable. It is best to take some of the complexity out of the supply chain.
Originality/value – By simplifying the supply chain process overall performance will usually be enhanced, leading to more consistent quality, lower operation costs, and inherently greater responsiveness; and this will most certainly yield more satisfied customers.

Keywords Supply chain management, Quality improvement

With the acceleration of global competition in the past decade, supply chain performance has become a critical source of sustainable advantage in many industries. Total supply chain costs can vary by as much as 5 per cent to 6 per cent of annual revenues between companies in the same industry sector, based on PRTM’s benchmarking of more than 500 supply chains. Our research also shows that companies with more mature supply chain practices are reducing costs faster than their less mature peers and achieving higher profit margins. Industry leaders are using this advantage to increase market share and drive out their competition. Through supply chain innovation, companies like Dell, Wal-Mart, and Zara are transforming the industries in which they compete.

To a large degree, the success of these companies stems from their ability to reduce the complexity of their supply chain architecture. All aspects of the supply chain contribute to the problem: physical breadth and configuration, management, relationships with suppliers and customers, organisational structure, and information technology capabilities.

The overly complex state of supply chains stems from a number of causes. Competitive pressures that constantly drive businesses to expand their capabilities are partly responsible. In addition, most people in large organisations continue to wear functional hats and, as one might expect, strive for functional excellence: As each function does what is in the best interests of its customers or internal stakeholders, it places demands on other functions. This lack of an integrated approach can introduce greater complexity. Finally, complexity simply evolves over time from the cumulative outcome of many seemingly unrelated functional decisions. These decisions are driven by business needs that evolve over time, leaving in their wake supply chain artefacts that service a need that may no longer exist. Just as the hard drive on your computer needs to be de-fragmented from time to time, so your supply chain needs to be simplified.

The case for simplification

It is often the case that one compelling insight can lead to the development of a multitude of best practices. Simplification is one such insight that can impact the entire supply chain. It is only common sense that if a business process can be simplified, it will usually enhance overall performance, leading to more consistent quality, lower operation costs, and inherently greater responsiveness. That powerful combination will most certainly yield more satisfied customers (see Figure 1).

Approach to analysing simplification opportunities

The Complexity Reduction Framework breaks down supply chain complexity into its component parts. Since the supply chain is a “process view” of a company’s logistical activities, it is appropriate that we break the supply chain first into its process elements. The process elements, in turn, can be defined by a number of other attributes, or “performance levers” that can be modified to increase supply chain performance. The framework of supply chain process elements and performance levers is illustrated in Figure 2.
companies of the Supply-Chain Council, breaks the outbound supply chain into four process elements:

1. plan;
2. source;
3. make; and
4. deliver.

“Plan” includes all the supply chain activities related to demand management, sales and operations planning (S&OP), and overall supply chain strategy planning. “Source” covers the identification of supply sources and the execution of material and services sourcing on an ongoing basis. “Make” covers all the conversion activities performed internally. Finally, “deliver” includes the taking of customer orders and their fulfilment, including the management of the distribution infrastructure and outbound transportation.

Five critical performance levers have the greatest impact on supply chain performance:

1. configuration;
2. management practices;
3. external relationships;
4. organisation; and
5. systems.

A number of specific simplification techniques can be applied to the supply chain. The key is to identify those that will improve the different performance levers for each supply chain process element. By creating a matrix, we can begin to develop a comprehensive toolkit of simplification techniques, as illustrated in Figure 3.

**Complexity reduction techniques**

Starting with the plan process element and the configuration performance lever, one’s first thought might be that there are no physical assets related to planning processes. So what do we plan? Products. And are products not physical assets? It is possible to simplify planning by changing the configuration of what is planned. First, look for ways to reduce the number of shippable products that must be forecasted. Consolidating product and packaging configurations will further reduce the complexity of the planning process.

Moving to the next performance lever, management practices, we can simplify the planning process by making more products to customer orders, thus eliminating the need to forecast specific product configurations. One important technique employed is postponement, which involves delaying the completion of end products to the last possible point in the supply chain.
the supply chain. Dell has done this with PCs and, as a result, has greatly simplified its forecasting process while better catering to the needs of different consumers and reducing inventory costs.

When it comes to simplifying external relationships, it is important to recognize that not all relationships are created equal. Some customers generate greater profits and are easier to service than others. By segmenting our customer base either by market or by strategic value, we can develop distinct, effective policies for each. This strategy could, at the extreme, even involve reducing the number of customers dealt with directly; for example, by encouraging low-volume customers to use indirect distribution channels.

The first step in simplifying the organisational elements of the planning process is to develop a structured S&OP process. Next, reduce the number of people involved by combining functions such as forecasting, production planning, and master production scheduling. The appropriate flattened structure varies with the company. Regardless of the final structure, make sure the S&OP process and schedule are very clear and tight, without extraneous cycle time.

The information system’s performance lever can also be leveraged to simplify planning. Use technology to capture your customers’ sell-through data and get visibility and control of their inventory. The more visibility you can get to true end-user demand and your customers’ inventory, the simpler it will be for you to plan your own inventory and production needs. These examples provide a general idea of supply chain simplification techniques. A total of 15 more are listed in Figure 3, although even this list is far from exhaustive.

The concept of using the relationships lever to reduce complexity is to share tasks with your trading partners. This can be done in a way that benefits both parties. The organisational lever is similar, except it usually refers to the simplification possible as a result of outsourcing work to a more expert third party. To realize the full benefits of outsourcing, however, it is important to have a very clear plan for reducing the internal resources that previously performed that work. The IT lever is also useful for exporting work (e.g. e-commerce portals) to trading partners. Another example is the utilization of simplifying features provided by enterprise resource planning (ERP) software, such as repetitive manufacturing logic.

The process and performance levers matrix can prove a useful tool in compartmentalising a complex supply chain and developing many different simplification techniques.

Choosing your targets – developing a plan for reducing complexity

Like any other methodology, supply chain simplification has to be properly applied to the specific situation to be most effective. It is important to choose the appropriate techniques with the greatest leverage. If a particular technique has proved successful in the past, see if it can be applied to another process or performance lever. The framework provided can both help structure your approach and challenge your organization to identify and apply effective simplification techniques. You can also use competitive benchmarking to help establish priorities. The Performance Measurement Group, LLC (PMG) offers two types of benchmarking that can be used in this manner. Quantitative benchmarking uses the SCOR Level One metrics with a balanced scorecard that can help identify performance gaps in each of the major processes.

### Figure 3 Complexity reduction techniques

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<thead>
<tr>
<th>Performance Levers</th>
<th>Supply Chain Processes</th>
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<td>Product/Configuration</td>
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supply chain processes. You can then focus your efforts where the greatest opportunities exist. The second type of benchmarking, also organised by the SCOR process elements, evaluates an organisation’s process maturity against other companies in the same industry. In many cases, immature processes are the most complex and therefore are the best candidates for simplification. Once benchmarking has identified the priority process areas, the framework can provide ideas on which simplification techniques to try first.

Ongoing globalisation brings increased complexity to virtually every aspect of the business world, and supply chains are the latest to be effected. Adaptability has never been more crucial. Many company failures can be traced back to an inability to adapt rapidly to changing market expectations. The truth is that overly complex supply chains are not adaptable. Instead of attempting to master complexity with the latest optimisation software, take some of the complexity out of your supply chain first. It is that simple.