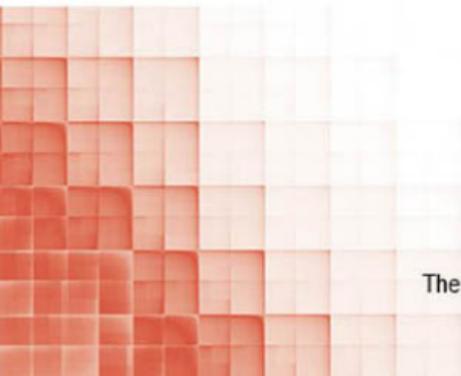


The End of Lean?: Automobile Manufacturers Are Rethinking Some Supply Chain Basics

Erika Marsillac, Old Dominion University;
Tom McNamara, ESC-Rennes

PEARSON CASES IN SUPPLY CHAIN MANAGEMENT AND ANALYTICS



The case is reprinted from The Supply Chain Management
Casebook by Chuck Munson

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The End of Lean?: Automobile Manufacturers Are Rethinking Some Supply Chain Basics

Erika Marsillac[†] and Tom McNamara[‡]

Minimum inventories, consolidated suppliers, and just-in-time deliveries—these basic tenets have been the mantra of lean supply chain management for decades. But recent events are causing many automobile manufacturers to rethink the way they design and manage their supply chains.

For years, manufacturers have been trying to make their operations as lean as possible, stretching their supply chains almost to their breaking point. But two recent events showed managers that there just might be such a thing as “too lean.” One was the devastating earthquake and subsequent tsunami that took place in Japan in March of 2011. This one-two punch natural disaster caused many Japanese automotive suppliers to go offline, sometimes for months, resulting in worldwide shortages for some key components. The other event was a devastating explosion in early 2012 at a key German chemical plant that produced a special type of resin used in fuel lines. Because many automotive companies had been studiously eliminating redundant suppliers from their supply chains to reduce complexity and costs, suddenly there was no backup plan. Tragedies such as these could negatively impact the operations of several car companies, resulting

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in model shortages and idle assembly lines if alternative suppliers cannot be found.

Another aggravating factor has been the downsizing and consolidation of several car component suppliers. Many of the smaller suppliers simply do not have the money, labor, and capacity to deal with last-minute orders or large fluctuations in demand. Other suppliers have gone out of business because of an inability to deal with the fast-changing competitive global landscape. To take just one example, according to the Original Equipment Suppliers Association, the U.S. has seen 57 manufacturers either close, get taken over by another company, or file for bankruptcy since 2008.

But the automobile industry is not alone in dealing with supply chains that may have been cut too lean. In November 2011, severe flooding in Thailand wreaked havoc with the supply chains of many high-tech companies. Although not all companies were directly affected by flooding in their production facilities, most found that the suppliers for their key components were. For example, Seagate, a provider of hard drives for PCs and servers, expects that disruptions to its operations might not get resolved until 2013. Apple, Hewlett-Packard, and Intel are just some of the other companies expecting negative earning impacts from the natural disaster.

Realizing the fragility of their lean supply chains and supply networks, some carmakers are thinking of implementing the unthinkable; that is, going back to the bad old days of stockpiling inventory and keeping large numbers of vital components on hand. This would overturn almost 30 years of industry practice and conventional wisdom.

With more extreme weather expected in the coming years, companies might need to rethink the balance between cost effectiveness and the potential for lost profits due to disruptions of their supply chains. But what actions are available to managers who want to increase the robustness of their facilities and their supply chains?

A possible course of action carmakers could consider would be judicious and well-thought-out increasing of inventory levels of some (but not all) critical components. They also might want to develop relationships with alternative suppliers or have several backup suppliers in place. Yes, this could increase the cost of inputs somewhat, but the possible benefits of increased customer satisfaction and reduction of

lost sales might well compensate for any increase in cost. Ultimately, some manufacturers might want to bring some fabrication work back in-house, or at least develop the capacity to do some in-house work. Of course, these suggestions might well be considered blasphemy in the world of supply chain management and lean operations, but some automakers are starting to feel desperate.

Another possible solution might be to avoid the common industry practice of “clustering,” whereby a group of similar industries and manufacturers locate their operations in a common geographical area. Clustering has its benefits, namely increased technological expertise, rapid learning effects, economies of scale, and economies of scope, all of which are important in today’s dynamic global environment. But, if a massive earthquake or storm hits a geographically centralized cluster, a large chunk of a company’s supply chain can be wiped out. Richard Little, Director of the Keston Institute for Public Finance and Infrastructure Policy at the University of Southern California, believes that “Companies need to rethink the clustering model. Yes, you get benefits but you also have common vulnerabilities for an entire industry or sector.”

As always, managers will need to weigh the pros and cons of having a lean and efficient supply chain against the consequences and costs of building in some supply chain redundancies and flexibility. In the end, in order to avoid shutdowns and disruptions, those costs might be worth incurring in order to provide higher levels of customer service.

Questions

1. Briefly explain the difference between a lean supply chain and a traditional supply chain.
2. What are some of the benefits and consequences of lean operations?
3. What is “clustering”? What are some pros and cons of clustering?

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