

Supply Chain Analytics: How Hard Should You Squeeze?



Can advanced analytics extract additional value from your supply chain, or do approaches based on traditional metrics deliver the best ROI?

Every company with a supply chain devotes a fair amount of energy to making sure it adds value. But new tools and disciplines now make it possible to drill deeper into supply chain data in search of savings. Is more analysis better?

Here's the debate.

	Point	Counterpoint
It's a gold mine. <i>Investing in advanced analytics will save money and solve problems you didn't know you had.</i>	You have plenty of data, but you need a different way of looking at it – one that can turn historical data captured in transactional systems into predictive insights.	Our company doesn't have the capabilities to do these kinds of analyses – and the resources aren't available to build them. This is nice to have, but not necessary.
	Supply chain cost is often the largest component of my cost structure and ultimately determines profits. It's the biggest opportunity to extract value.	It's also one of the most transparent inputs to my balance sheet and P&L. If I were overpaying, I'd know it already.
	The supply chain merits the same analysis as other parts of your business. You manage pricing to the fourth decimal point, but you're winging it on this?	Supply chain categories are not as sensitive or finely tuned as pricing. Why should we apply the same approach across the entire enterprise?

	Point	Counterpoint
It's a rabbit hole.	Analytics may generate savings, but the cost of getting there may be too high. The low-hanging fruit has a better ROI.	Going the extra mile differentiates winners from losers. That's what competitive advantage is all about.
<i>Beware of any plan that has you spending money just to save other money.</i>	I'm in the _____ business, not the analytics business. Every time I stray from my core competency, it ends up costing me.	You're not in the floor sweeping business either, but you make sure that it's taken care of. If something outside your bull's-eye is a potential problem – or a potential source of profit – all the more reason to take action.
	Benchmarking to peers is enough to keep from losing competitive advantage.	Benchmarking is a valuable starting point, but in many cases it only identifies the gaps. Analysis helps you close them.
	Fads come and go, but operations management is operations management. Every element of supply chain management uses disciplines honed over many years.	New volumes of data and new abilities to mine value from it are an advancement, not a fad.

My take

Jerry O'Dwyer, Principal, Deloitte Consulting LLP; U.S. Sourcing and Procurement Service Offering Leader

Organizations with ERP platforms have found it easy to amass large stores of data about their operations. Companies with leading supply chain capabilities have typically made significant shifts in their use of advanced analytics to transform historical data captured in ERP systems into predictive insights. These companies are using advanced analytics on every aspect of their supply chain to improve forecasts, demand planning, sourcing, production and distribution.

This shift requires two important capabilities – analytic tools and the knowledge to apply them. Today, those tools and that knowledge are catching up with one another.

The supply chain is a rich place to look for this analytic advantage, partly because of its complexity, and partly because of the prominent role supply chain plays in a company's cost structure and, ultimately, its profits. Unfortunately, supply chains can appear deceptively simple compared to other parts of a business. A "done-it-this-way-for-years" attitude can mask opportunities to do better by digging deeper into data and also by adopting a predictive (rather than retrospective) orientation to the data.

That doesn't mean every organization is ready to dive deeper. Whether or not you already have data waiting to be used, investing in new analytical tools does have a cost. Ideally, you'd recoup that cost and more, but that doesn't help if you can't afford the initial plunge.

What about companies that have already invested in supply chain analytics? Is there another frontier? In many cases, the answer lies in comprehensiveness. If you're performing analytics in different areas of the supply chain – for example, spend analytics or demand planning – you may be missing opportunities that a comprehensive approach can yield. For example, some companies have adopted the use of advanced analytics to develop a predictive asset maintenance strategy or to improve manufacturing operational performance.

It's fair to observe that advanced supply chain analytics can feel like a fad. But almost every legacy approach started out that way. The deciding factor may lie not in what you choose to do, but in what your competitors are already doing

A retail perspective

Brian Umbenhauer, Principal, Deloitte Consulting LLP

In working with retailers of different sizes, I've been surprised to see how many supply chain issues large and small companies have in common. When they work to solve these inefficiencies, they also share a tendency to go after low-hanging fruit. In one form or another, most organizations have the data available to take the analysis to the next level and drive incremental value for the enterprise.

Sometimes an enterprise-wide analysis can even reveal solutions that should have been transparent, but weren't because no one was looking. In one case, different retail stores that were only miles apart and part of the same retail chain used completely separate processes to procure everything from landscape maintenance services to large capital equipment – and they were paying two significantly different prices for building materials from the same supplier.

Since retailers are in the retail business, not the analytics business, they may be reluctant to step outside that core competency. But investing in analytics can actually free them to focus on what they do best, because it can identify more efficient ways to handle peripheral activities. Every procurement decision has a total cost of ownership that can benefit from a closer look, whether it's part of merchandise planning or an indirect cost of doing business.

Some companies can measure these savings in the hundreds of millions of dollars. Of course, most will realize only a fraction of that at best. But isn't it still best?

An manufacturing perspective

Sanjay Agarwal, Principal, Deloitte Consulting LLP

Supply chain analysis is an untapped opportunity for many organizations that have data at their disposal but lack either the tools or the knowledge to exploit it. Our experience shows that manufacturing companies can realize a margin improvement of 2 to 4 percent by applying more analysis to the data they already have.

In this sector, there are a variety of ways to find these savings.

- **Parametric pricing** On average, up to one-third of the parts a manufacturer procures will be “new” each year, but they differ only in small, specific ways from earlier versions. A company with good modeling ability can identify these discrete parameters of change and use them to determine what the net price change should be. That expedites the negotiating process, and helps a company avoid overpayment. Because parametric pricing focuses on reducing the number of data points under consideration, it's a good example of how supply chain analysis can be an exercise in less work, not always more.
- **Commodities volatility** Raw materials fluctuate in price – more so in recent years than in the more stable 1990s. This makes business planning difficult, and unexpected price jumps can damage margin and share price. When a company uses analytics to develop macroeconomic models, it can do a more effective job predicting where prices will go – and use options, futures and contract provisions to help insulate against those changes. This calculus can affect not only raw materials but also downstream items such as packaging that are themselves influenced by raw materials prices.
- **M&A integration** When two companies in the same industry come together, they may be acquiring the same parts/materials, but may have different material numbers and most likely different prices. If each legacy company continues to use its own internal part numbers, that disparity can persist long after a merger. Analytics can use OEM product codes to unmask redundancies so that buyers can rationalize their procurement and save money.

For further information, please visit: <http://www.deloitte.com/us/debates/supplychain>.

For further information about this debate, please contact:

Jerry O'Dwyer

Principal
Deloitte Consulting LLP
U.S. Sourcing and Procurement
Service Offering Leader
jodwyer@deloitte.com

Brian Umbenhauer

Principal
Deloitte Consulting LLP
bumbenhauer@deloitte.com

Sanjay Agarwal

Principal
Deloitte Consulting LLP
s1agarwal@deloitte.com

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