

Supply Chain Management: Looking at the Whole Picture

“You can’t manage it if you don’t measure it” is one of the oldest maxims around, yet is one that needs some significant new attention for companies involved with supply chain management programs.

While there are a number of different definitions for supply chain management, they all share a common characteristic: they are motivated by an effort to improve a company’s performance by looking beyond individual functional areas within the company and focusing instead on broader, cross-functional and even cross-company issues.

Without establishing the “right” performance measures both within and across purchasing, manufacturing, distribution, customer service, sales, finance, and a variety of other functional areas, supply chain management improvement efforts are not likely to yield significant benefits.

Over the last 20 years, a tremendous amount of effort in many companies has been devoted to developing Management By Objective (MBO) systems that tie compensation of functional managers to their performance on agreed upon measures. Overall, these systems have done what they were supposed to do: purchasing department staff meetings focus on achieved supplier unit cost reductions, manufacturing department meetings review plant downtime performance, sales reports on new customers acquired, finance looks at changes in inventory levels, and so forth ... and each works diligently to improve its performance on the key measures.

If each of these parts of the business has successfully been maximizing its own performance, why then is there so much interest in the concept of supply chain management? What companies have begun to realize is that performance measures that seem desirable for one part of the business may actually impede the performance of the business overall.

To paraphrase from Dragnet, “the stories you are about to hear are true ... the names have been changed to protect the guilty:”

- A major consumer building products manufacturer achieved a \$3 million *savings* in raw materials cost by leveraging its purchase volume, obtaining a marginally lower unit price for a commodity-type raw material, and changing suppliers. Three months later, a study of manufacturing efficiency found that the new supplier’s material reduced finished product yields and increased product rework rates that translated into reduced customer in-stock levels. The overall effect? About a \$5 million *cost* to the overall bottom line.

- A manufacturer of consumer electronics met its annual inventory goals by pushing to ship out all outstanding orders, and the initial future orders that were already in hand, in the last two days of the fiscal year. While inventory went down significantly, the distribution center had worked overtime, the product was shipped on any available trucks rather than solely with the core carriers with whom the company had negotiated superior rates, several customers had to rent short term overflow storage in order to receive the unanticipated product, and a number of shipments were later returned by customers at the company's expense in freight and additional handling. The overall effect? No net savings for the manufacturer, and higher costs for several customers -- who later reduced their order levels with the manufacturer.
- A professional services company implemented a new travel policy that included better negotiated discounts with a limited number of airlines and hotel chains. While the prices on paper were outstanding, employees needed to leave work in mid-afternoon in order to meet the earlier flight times of the new preferred carrier, and had to rent a car at their destination since the new hotels were no longer conveniently located. The overall effect? No real savings, as employees were dissatisfied, participation in the new program was understandably low and minimum volume requirements were not met.

In each case, the actions were in line with the performance measures that had been established for the purchasing, distribution, and travel departments, yet the company was worse off overall.

These situations are not limited to individual companies - entire industries can behave in ways that add cost, inventory, and waste to the overall supply chain. The recent major Efficient Consumer Response study of the dry grocery industry found that there was over \$10 billion in excess costs in the overall supply chain, from manufacturers through distributors and on to the grocery store shelves. By each player in the supply chain acting independently to meet its own performance measures, the result was duplicate inventories, ineffective promotions, excess handling, and poor new product introduction practices that add significant costs to consumers and reduce the profitability of everyone involved in the industry.

What changes in performance measurement systems are needed to support initiatives to improve the overall performance of the supply chain? While each company and functional area will have some unique requirements, there are some common characteristics of desirable new measurement systems:

Take the customer's point of view. Purchasing higher quantities of materials to obtain volume discounts and favorable purchase price variances does not help the supply chain if Purchasing's customer, the manufacturing arm of the company, has to pay for added handling and storage of the extra material. The customer wants lowest overall total cost, including unit price, logistics costs, defect rates, and overall product performance, and performance measures need to reflect this overall requirement.

Transcend individual functional areas. Leading companies have adopted new measures that look at the performance of the overall supply chain rather than individual department performance. For example, what is the total amount of finished goods, work in process, and dedicated raw material inventories in the entire pipeline, regardless of who owns them or where they are located? Someone, and probably everyone, eventually pays for this inventory so it needs to be measured so that improvement programs can be developed to help reduce it. Ideally, these measures should look at all the major components of the supply chain: purchasing, manufacturing, distribution, and transportation and their associated facilities, staff, systems, and financial requirements.

Include cycle times and not just dollar figures. Increasingly, the ability of a company to respond quickly and flexibly to changes in market demand is a key component of success. Leading companies pay particular attention to overall order fulfillment time and include specific measures such as the "cash-to-cash cycle" that identifies how long it takes from paying suppliers for materials to receiving payments from customers for finished products. Recent studies have found that this cycle can be 100 calendar days or more on average, while for leading companies it can be as low as 20-40 days.

Focus on the key drivers of supply chain performance. Many companies begin their supply chain management programs with a diagnostic assessment that identifies major performance problem areas. Performance measures need to be closely aligned with the areas in order to achieve improvements. In manufacturing, for example, one of the drivers of performance could be the ability to quickly meet changes in customer demand patterns. Since this requires changes in the supply of incoming materials, a key manufacturing performance measure would be the lead time and level of information sharing provided to the purchasing department, so that Purchasing can arrange for the required materials to be acquired in a timely way without creating a bottleneck in the overall supply chain.

In many companies, supply chain related activities represent up to 80% of total costs, so the impact of even minor improvements can be substantial. Across suppliers, manufacturers, distributors, and end customers combined there is often an opportunity to improve overall supply chain performance by 25% or more, with faster and better customer service at a lower level of cost and effort. Only by utilizing performance measures that are well aligned with the goals of supply chain management can these improvements be achieved. To refine the old maxim, “if you measure it, and measure it right ... you can manage it, and profit substantially from it.”

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A version of this article first appeared in the November 1997 issue of Purchasing Today