

MEETING THE AUTO INDUSTRY'S CAPACITY MANAGEMENT CRISIS

The auto industry has operated for a century with extra supply capacity to cover the ups and downs of market swings. But that ended six years ago during the global economic downturn. The resulting shrinkage cut top-tier production capacity about 30% among top-tier suppliers and even more in the sub-tier supply group.



Sven Dharmani

Today the automotive supply chain is operating above optimal capacity and straining to keep pace with growing demands from carmakers. Yet manufacturers still can't provide a clear forecast of the parts they need. A new report from EY, *Shifting gear: Capacity management in the automotive industry*, affirms that original equipment manufacturers (OEMs) must improve their capacity planning and management skills to avoid supply disruptions and eroding profit margins in the future. Co-author Sven Dharmani, a Principal with EY's Advisory Services, discusses the report's main findings.

What are the primary differences in today's supply chain landscape?

Market volatility in terms of volume and consumer tastes has never been greater. As volatility goes up, you need greater forecasting accuracy and better responsiveness from the supply chain. All this is complicated by the lack of a buffer, a situation that is not likely to change.

This is the new normal for the auto industry. Suppliers have learned in the post-downturn era to be more efficient. They simply lack the excess capacity that allows inefficiency, and they have been very reluctant to expand without a guarantee their investment will be worthwhile. Many of the top-tier suppliers are owned by private equity firms, which are very financially driven. Further pressure on the system comes from the increasing complexity of today's vehicles and the greater reliance of OEMs on their suppliers to co-develop components. These demands are coming as many suppliers are less able to accommodate them.

Why aren't advances coming faster?

OEMs today follow a surprisingly labor-intensive forecasting process that typically relies upon spreadsheets. The procedure makes trustworthy forecasting very difficult and exposes carmakers to expensive mistakes. Similarly, the systems to handle inevitable changes in capacity are complex and cumbersome. Often they are bypassed by informal requests that produce faster results but add problems of tracking, outcome analysis and accountability.

This is an enterprise-wide problem. Addressing it effectively is extremely difficult because car companies operate in functional silos. Many groups are involved, yet none "owns" the issue. OEMs also tend to use the same management process to determine pricing, capacity planning, production and testing for dramatically different types of parts. Components with highly volatile demand need distinctly different capacity management processes and tools from parts with relatively stable demand.

What improvements are most needed?

Carmakers do well in six-month planning for sales and operations. Now they need to extend this to the medium term, meaning 12 to 24 months ahead of regular production. This is the amount of time a supplier would need to add a new line to meet additional volume. One of the key goals for improvement would be to gain the ability to forecast the impact of a change before actually making it.

What are the cost implications?

Suppliers typically build in an extra 3%–5% in their pricing to cover the risk due to lack of accuracy in today's planning system. This is a non-value-added part of the process. If an OEM could improve midterm planning 20%, it could have a very significant impact on per-piece prices.

Poor forecasting has a similar impact on tooling costs. The world's top five carmakers each spend between \$3 billion and \$5 billion per year on tooling they buy and give to their suppliers. Yet OEMs still run out of parts during production and have unused tooling on other parts. A 20% improvement in their predictions—possible through the use of statistical modeling tools by resources with special analytical and quantitative skills—could mean a \$1 billion improvement in the value of such investments.



What are the consequences of inaction?

Carmakers that don't address this issue may see their margins shrink. OEMs around the world have been setting aggressive targets for return on sales. Some are making headway, but for many, the necessary building blocks haven't been put in place to achieve their goals.

What is the solution?

Initiatives must be driven by senior management, with cross-functional participation. This is a formidable undertaking that will require patience and an effort that is broad, deep and sustained. Smaller carmakers among the global top 10 may have an advantage here, because their silos aren't large and complex. This would enable them to be more agile. Fortunately, this is not an all-or-nothing proposition. There are several off-the-shelf, exception-based management tools available that could immediately help OEMs focus on the short list of truly major mid-term supply planning issues.

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