Everybody has been challenged to adjust to the recent economic volatility. First we had to downsize, then add capacity back. Unfortunately for some, adding capacity back has been hard or even impossible, as the workers that were let go were unavailable or the plants that were shuttered or sold cannot be brought back online at a reasonable cost. Therefore, many companies are now trying to implement capacity strategies that allow them to flexibly adjust both upward and downward to changes in demand to ensure their viability through the next turbulent economic cycle.

Using Flexible Capacity Techniques to Thrive in a Volatile Economy

David Jacoby

Flexible capacity strategies are basically extensions of the supply chain strategy called Synchronization. Synchronization strategies as applied to capacity management involve a set of process and related IT tools. These are described at length in my book The Guide to Supply Chain Management, for The Economist, but here are seven things you can do to make your supply chain more flexible today:

1. Outsource peak load to a third party. This helps to keep capacity utilization steady and service levels reliable during troughs and also peaks in demand.

2. Increase temporary employees in proportion to the staff mix. This reduces the fixed cost base and therefore the breakeven point. Temporary employees are easier to hire and let go when demand shifts, and if managed carefully can eliminate expensive overtime.

3. Implement lean concepts including just-in-time, one-piece flow, level loading, and make to order (MTO).

4. Postpone disposition, dispatching, or finishing operations to as late as possible before the customer needs the product or service in order to reduce capacity requirements and inventory obsolescence.

5. Use demand planning techniques such as sales and operations planning (S&OP) and collaborative planning, forecasting and replenishment, to reduce inventory variances.

6. Reduce cycle time in order to retract production quicker once orders tail off, and also to be able to more responsive during periods of increasing demand.

7. Apply yield pricing to drain inventory before it becomes obsolete, and conversely to earn extra margin on tight resources during peak periods. Once customers adapt their buying behavior to yield pricing, it has the effect of leveling capacity.

One of the reasons flexible capacity strategies are so important is that they help not only companies, but in the aggregate they compress the length and severity of economic cycles by reducing lag time. In an imaginary world without any lags, the whole economy would be more recession-proof because it would be resilient to changes in demand. Imagine this sequence of events in which the traditional pathetic elements of a business cycle are notably missing due to the flexibilisation (I have mostly heard this word in French, but it is extremely useful) of capacity up and down the supply chain:

- An event such as the financial scandal makes consumers skittish, so demand drops.
- Retail sales fall, but because inventories are replenished on a just-in-time basis, all inventories except display samples instantly depletes.
- The drop in inventory is immediately visible to manufacturing plants up and down the supply chain, which decrease their production levels instantly.
- Producers immediately cut back on capacity in proportion to the decrease in sales. All capacity expansions that were underway stop.
- Manufacturers clear out work-in-process inventory instantly by pricing it so it sells without delay.
- There are no obsolete products and no excess inventory on store shelves, so prices stay constant instead of spiraling downward.
- There is no difference in availability of product, so consumers don't expect price cuts and continue to buy whatever they need at the same price as before.

In the case above, while the source of the cycle may remain, the supply chain did not perpetuate or exacerbate it through lags, as it usually does. Therefore, the economic damage was due solely to the exogenous event and not to production, inventory, and capacity lags that typically characterize a business cycle.

Considering the economic benefit that derives from lean manufacturing and flexible capacity management in particular, governments really ought to measure supply chain leanness and give companies tax breaks for operating lean supply chains because lean supply chains help make economies more resilient to recessions and countries more competitive due to increased responsiveness. Maybe this opportunity should be addressed by our ministerial "Departments of Supply Chain."

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