How should companies manage their supply chains in today’s uncertain environment?

Conventional approaches such as demand forecasting and production planning rely on historical data, but recent supply chain disruptions such as the 2003 outbreak of SARS in Asia or the 2011 Thailand floods were very different from our current pandemic. Those events were much more localized, lasted a relatively short time, and they mostly impacted supply, not demand.

The impact of Covid-19 is much bigger, affecting consumer demand as well as supply chains all over the world, and likely to last quite a bit longer.

“Given these constraints,” wrote MIT professor Yossi Sheffi, “the words of General Dwight Eisenhower ring true: Plans are useless, but planning is indispensable.”

Mr. Sheffi is Director of the MIT Center for Transportation and Logistics. He’s written extensively on the critical need for resilience in global enterprises and their supply chains, -
including The Power of Resilience and The Resilient Enterprise, so they can better react to major unexpected events. Covid-19 is the kind of massively disruptive event he had in mind when he wrote those books.

“As the number of infections, hospital admissions, and deaths cycles up and down, chaotic cycles of economic rebirth and relapse will plague businesses and their supply chains,” he wrote. “Businesses face a game of global whack-a-mole, as the Covid-19 virus rears its head or subsides in the cities, states, and countries that host the far-flung supply chains on which companies rely.”

Planning in such highly uncertain times must focus on the ability to quickly and flexibly react to fast changing circumstances. Doing so effectively, requires that the company has thoroughly mapped its supply chain, including the physical locations of its suppliers’ plants and warehouses, so it can quickly identify which of its products might be affected by a shutdown at any of the suppliers’ locations. Such a mapping cannot be done on-the-fly. Instead, it should have been done as part of the company’s resilience planning, especially for large, complex enterprises that typically have thousands of suppliers all around the world.

In a recent Wall Street Journal article, Mr. Sheffi recommended that given the many unknowns accompanying major supply chain disruptions, companies should adopt several sensible just-in-case steps, including:

- Set up a central emergency management center with clear decision-making rules;
- Establish key priorities for which products should be built and which customers should be supplied first if capacity is significantly reduced;
- Determine which of the company’s suppliers make critical parts, track their inventories, and establish potential alternate sources;
- In the near term, plan operations that will maximize cash flow rather than profits;
- Maintain close communications with national and local authorities as well as with colleagues and partners on the ground.

Let me now turn to the long term impact of the pandemic on supply chains. In the longer term, the pandemic will generally accelerate existing trends -- the rate and pace of digitization, AI adoption, robotics and automation.

The pandemic will likely accelerate a number of ongoing supply chain efforts. These include bringing production closer to home, a diverse supplier base, and spare manufacturing capacity and inventories. Let me briefly discuss.

A number of far-flung supply chains will be replaced by national and regional ones, especially for critical supplies like those in the medical and pharmaceutical sectors, and for complex production where assemblies have to cross borders repeatedly. The Economist cites the example of automotive supply chains, 59% of which are already intraregional. Over the past
three years, China’s share of car parts imported by the US fell by 2.2%, while the share coming from elsewhere in North America increased by 2.8%.

Over time, it’s quite possible that companies in developed economies will attempt to set up new clusters of national and regional production, relying on technology and automation instead of labor cost arbitrage. Zara, the Spanish apparel retailer, is an example of a company that has set up a diverse regional supplier base, not only to help avoid the pain of disruptions but to also help them react faster to changing tastes in fashion. Zara’s different apparel lines reach their shops independently, rather than being part of a highly integrated supply chain.

Another way to reduce the pain of disruptions is by maintaining spare manufacturing. “Though companies may pride themselves on their lean manufacturing, the world’s factories do not typically run at full tilt,” said The Economist. “Across the world the proportion of their potential capacity which industrial firms actually use has been flat or falling over the past two decades.”

Finally, there’s inventory on hand. “It is widely assumed that modern supply chains relentlessly eat away at this source of resilience, but that is not entirely true. Investors can punish firms if they start piling up stock, especially if there are other signs of trouble. But they also look askance at firms that cut too close to the bone,” The Economist said.

It’s hard to predict the long term impact of the pandemic on efficiency-resilience trade-offs while still in the middle of the storm. Will there be a significant shift in the balance toward resilience? Or, will a company which invests on resilience end up at a competitive disadvantage if others in their industry survive without making such provisions? Time will tell.

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