

6 steps to handle supply chain disruption

by Sara Brown | Mar 17, 2020

Why It Matters

Events like the COVID-19 pandemic upend global supply chains and leave companies scrambling. From internal decisions to how to work with suppliers and customers, here's what to do now.

The rapid spread of the novel coronavirus is crippling supply chains around the world, with companies from Apple to Nintendo announcing shipping and manufacturing delays. Other unanticipated events have caused supply chain upheaval in the last few decades, including the Fukushima nuclear meltdown, 2011 floods in Thailand, SARS and MERS pandemics, and Hurricane Katrina.

But it is inaccurate to compare the coronavirus to these other events, said MIT professor Yossi Sheffi, director of the MIT Center for Transportation and Logistics, during a March 16 webinar. COVID-19 is affecting both supply and demand. And today China, where the pandemic started and factories have been affected for weeks, plays a much bigger part in the global economy than it did during past disasters. Businesses are also seeing a reduction in global demand because of fear and online distancing, he said, which could bring about a severe recession.

This is a so-called black swan event, Sheffi said: a rare, unpredictable disruption that causes lasting damage.

Global supply chain effects are spreading slowly but will affect U.S. factories within weeks, Sheffi said, as shipments from China fail to arrive. Supply chain disruptions often have a "bullwhip effect," he said: They start with retailers and spiral out in greater magnitude to distributors, producers, and then suppliers in the first, second, and third tiers. Upstream suppliers are likely to be severely damaged.

"The second and third tier of the supply chain are usually small and cannot withstand the initial downdraft in orders," he said. "This could be a death blow for small manufacturers."

No two disruptions are the same, Sheffi said. But every company should take action to prepare for supply chain disruptions of any kind. Here are six ways to get started.

Establish an emergency management center

During times of crisis companies should centralize information and decision-making functions, Sheffi said. All information should come to one place so decision-makers can talk to each other and take action. In the case of the coronavirus, most of this will be done virtually, he added. While one team focuses on the business ecosystem, taking care of customers and suppliers, another team should focus on taking care of employee concerns — continuing operations, dealing with family matters, and other issues often handled by human resources.

Speak with one voice

Crisis communication is key during disruptions, Sheffi said, and companies should be prepared to communicate with all stakeholders: employees, customers, suppliers, media, shareholders, analysts, and the community.

The key is to speak with one voice, he said, and appoint one person who will share accurate information about the crisis and what the company is doing. “The one voice has to tell everybody exactly what is going on. Don’t try to spin it or blame other people,” he said.

Swim in your lane

Decisions should be made by the appropriate people in the company, Sheffi said, suggesting the mantra “swim in your lane.” During the height of the Fukushima earthquake and nuclear meltdown in 2011, he said, General Motors in Japan did not have access to modules needed to make heated car seats. A company vice president decided to build vehicles without heated seats, which resulted in several problems, including leather components stranded in the supply chain.

With the variety of parts and suppliers that can make up a supply chain, decisions like the one General Motors faced need to be made by people who know what they are doing. “If you are an engineer that deals with seats, you know what can and cannot be done,” Sheffi said. “One of the most important issues in this case is actually to keep the C-suite, the CEO and others, away from making decisions. They should talk to the media, be fully informed all the time, but they should not make the little decisions.”

Map your supply chain and keep an eye on products

Surviving a supply chain disruption means making sure you still have suppliers and a steady flow of parts and materials. Sheffi recommends finding out how your supply chain works through supplier mapping. This includes plant locations (the headquarters may be elsewhere), what each plant makes, and the criticality of different parts — can you build your product without it, or do you have other suppliers of this part elsewhere? Other things to know include each plant’s operational status and inventory level. All of this requires supply chain visibility.

As suppliers feel pressure, look out for quality degradation and late deliveries. Fakes are also a big problem when supplies are scarce, Sheffi said, as companies look for alternative suppliers. You should also know the financial health of suppliers you depend on, and be prepared to support them if needed. “Invest in them, extend their credit terms,” he said. “Make sure that critical suppliers don’t go out of business, because then you go out of business.”

Prepare to manage customer demand

Companies should plan ahead how they will handle customer demand during supply chain disruption. There are several options:

- **Allocation or product triage.** If multiple products use the same part, which product gets the part? Considerations include financial contributions, customer importance, fairness, and need — which customers could go out of business, Sheffi said. Companies should decide on a plan ahead of time, he said, instead of during a crisis.
- **Auction.** Some companies have auctioned products to the highest bidder. While this seems like a fair method — whoever wants it most gets it — Sheffi said this can be seen as profiteering and drive away customers.
- **Dilution.** In an attempt to meet demand, some companies stretch supply by diluting products. Facing increased product demand in 2013, Maker’s Mark diluted its bourbon from 90 proof to 84 proof, resulting in customer revolt. The CEO later apologized.
- **Substitution, or demand shaping.** If a company has some products in short supply and sufficient stock of other similar products, they can raise the price of the scarcer product and lower the price of others to shape customer demand.

Plan for recovery

Companies should think beyond short-term disruption to the long-term company survival. Be sure to keep expertise in house, Sheffi said, through continuity of pay, taking care of families, and allowing for part time work.

Disruption is also an opportunity for tough business decisions, like a long-desired reorganization or cutting non-performing products and customers. “A crisis is a terrible thing to waste,” Sheffi said.