

Covid-19 and the Reshaping of Supply Chain Crisis Management

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Presented March 9, 2022



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The Covid-19 pandemic changed the way companies respond to global disruptions. Nowhere is this more evident than in the supply chain field which was—and still is—on the front lines of the battle to manage the pandemic's fallout.

An MIT Global SCALE Network webinar explored supply chain responses to the crises from two important perspectives: the influence of cultural differences on approaches to managing the pandemic and how it challenged established practices.

Cultural subtleties shape responses

The MIT Global SCALE Network is in a unique position to offer insights into the cultural dimension of pandemic responses because its five centers span five continents, suggested webinar moderator Benny Mantin, Professor and Director at the Luxembourg Centre for Logistics and Supply Chain Management (LCL).

Pascal Wolff, Assistant Professor at the Ningbo China Institute for Supply Chain Innovation (NISCI), Ningbo, China, said the willingness of Chinese companies to take risks colored their approach to the pandemic. In general, firms in China are disposed to trying new ideas in pilot projects and moving on quickly if such projects do not succeed.

This affinity for risk-taking is apparent in their adoption of digital technology such as warehouse automation, Wolff said. During the pandemic, this was especially evident in e-commerce markets, that have consistently achieved exceptionally high growth rates over recent years.

Another example of their open attitude to trying new things is how Chinese companies were quick to embrace rail as a mode of transportation for moving freight. NISCI conducted research in China to find out how companies leveraged rail, and discovered they made strategic investments in the mode that paid off during the pandemic. Rail transportation gave firms in China another transportation option when distribution networks were disrupted by the crisis.

Cesar Becerra, Executive Manager at the Center for Latin-American Logistics Innovation (CLI) in Bogota, Colombia, pointed to Latin American firms' inbuilt resilience as a key factor in their ability to manage pandemic-related volatility. In a region

where business disruptions occur daily, companies are accustomed to managing uncertainty. The pandemic reinforced this ability in areas such as improving supply chain visibility and flexibility.

However, to some extent, globalization has eroded cultural differences in supply chains, maintained Susana Val, Director, of the Zaragoza Logistics Center (ZLC) in Zaragoza, Spain. For example, many European multinationals have headquarters in Asia, and they faced similar challenges associated with the pandemic across the countries in which they compete.

Chris Caplice, Executive Director, MIT Center for Transportation & Logistics (CTL), Cambridge, USA, agreed and suggested that there were more similarities between how companies reacted to the pandemic than differences. For instance, supply chain practitioners—regardless of their cultural identities—were already used to working in teams virtually across time zones when the pandemic spurred an increase in remote work via online communications channels.

Challenging ingrained ideas

The pandemic also raised questions about certain well-established practices in the supply chain domain.

An example is just-in-time/lean manufacturing, which was blamed for many of the product shortages that caused so much consternation during the pandemic, said Mantin. Does this mean that just-in-time/lean methods have fallen out of favor?

The answer is a definite no, said Caplice. He maintained that the backlash was a knee-jerk reaction to pandemic-induced product shortages. Just-in-time/lean manufacturing methods are just as relevant today as they were before Covid-19 threw

supply chains into disarray. In practice, companies will continue to deploy JIT in combination with other manufacturing methods as necessary.

Reshoring is another established supply chain practice that came under scrutiny at the height of the pandemic. The disruptions that rippled through supply chains prompted many companies to revisit their global footprints.

Europe was heavily dependent on imports from China, pointed out Val, and the crises forced Europeans to question this dependence and look at supply options closer to home. For example, some companies looked to open distribution centers in Eastern European countries such as Romania and Serbia, where both land and skilled labor are available at relatively low cost.

A transformational change brought by the pandemic in the Latin America region is a greater emphasis on collaboration, said Becerra. Exploring ways to share views of inventories and visibility into truck movements suddenly became more urgent. Improving the consolidation of cargo and working with government to improve the quality of supply chain information also gained currency in the region as the pandemic upended supply chains.

Caplice highlighted the pandemic's impact on decision-making. Companies had to make decisions more quickly as the crisis gained momentum and the pace of change accelerated. Also, The emphasis shifted away from developing perfect, fine-tuned operational plans to making execution smarter. In a fast-changing crisis even best-laid plans can fall apart quickly, so companies learned how to become more responsive to shifting market conditions.

Wolff described how pandemic-related disruptions triggered increased interest in automation, especially in the Ningbo area where NISCI is based. Lockdowns and labor shortages caused the closure of many inland warehouses, creating import and export bottlenecks. Investing in automation was one approach to overcoming these problems.

But in some cases, the pandemic leant more weight to existing practices. Wolff said that in China there was increased interest in optimizing the cargo space in freight containers. As ocean freight rates soared, companies needed to maximize the amount of cargo carried in each container.

Learning to cope

The Covid-19 pandemic still has important lessons to teach us about how companies can respond to global-scale disruptions. One of the most important lessons is that the while transformational change can be traumatic, it can also improve our ability to manage future crises. No one knows how or when the war in Ukraine will end, so forecasting the conflict's future impact on supply chains is fraught with uncertainty.

However, the lessons learned from dealing with the fallout can help companies guard against future conflicts and better understand the implications of building resilient supply chains.



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