



Data and visibility were key enablers of resilience

Stress-tested supply chains during the pandemic



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In 2020 the levels of disruption experienced were greater and occurred more quickly than ever before. What have we learnt?

Supply chain disruption is not new. Consider the impact of 9/11, the flight chaos in 2010 due to Icelandic volcanic ash, the Japanese earthquake and ensuing tsunami in 2011, the flooding of large areas of Thailand the same year, or the supply chain uncertainties around Brexit. If these events teach us anything it is that disruption is a regular occurrence.

However, 2020 saw something exceptional: the Covid-19 global pandemic, which triggered extensive supply chain disruption as economies around the world went into various degrees of lockdown. Manufacturing was disrupted; transportation was disrupted; logistics infrastructure such as ports and airports was disrupted; and normal patterns of supply and demand were disrupted.

In short, the levels of disruption experienced were too much and occurring too quickly for any business or supply chain's contingency planning to cope.

Nor is the impact of all this solely of academic interest. In the case of foodstuffs and medical products, which due to their perishability and impact on human wellbeing are of strategic interest to governments, lessons have undoubtedly been learned. It is no exaggeration to say that around the world sourcing and inventory-holding practices regarding foodstuffs and medical products are being examined and rethought.

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disruptions that are being experienced. Following the Japanese earthquake and ensuing tsunami of 2011, for instance, managers made exceptional endeavours to maintain production, or at the very least minimise, the time to taken to return to normal operations. Inevitably, however, during such a crisis their focus is on the day-to-day operation of the supply chains; lessons learned are not always captured or actions fully recorded.

6 Supply chain resilience is not given sufficient prominence. Resilience needs to be baked in, not bolted on as an afterthought. 9

In the case of foodstuffs and medical products, a special research project undertaken at Cranfield University School of Management scoured an extensive range of sources for the period January–May 2020 in order to identify these actions and the lesson learned. Embracing industry and market analyses, news and databases, the principal challenges in product supply and demand management were explored and identified, and then examined in the context of a variety of supply chain resilience strategies.

An overarching lesson was that data and visibility were key enablers of resilience. Whether one is talking supply-side or demand-side disruption or disruption to logistics flows and infrastructure, information is what underpins a modern-day resilient supply chain.

Supply chainwide visibility into product and information flows, smart inventory management, flexible capacities, demand-side and supply-side market intelligence, omnichannel ecosystems and integrated logistics services: to engender



^ There were many lessons to be learnt for supply chain professionals

resilience, these are crucial. Interestingly, too, what might be called Industry 4.0 tools and technologies were also found to build resilience. Capabilities such as the Internet of Things, blockchain, big data analytics and cloud-based services can considerably enhance the linear material and information flows of conventional hierarchically structured supply chains.

Yet questions remain. The inescapable conclusion to draw from observing the functioning of supply chains during the Covid-19 pandemic is that supply chain resilience is still not given sufficient

prominence. Foodstuff and medical supply chains are critical assets at national and global level. Resilience needs to be baked in, not bolted on as an afterthought.

The Covid-19 pandemic stress-tested today's global interconnected supply chains to an almost unique extent, and supply chain analysts can now trace their vulnerabilities and break points across multiple tiers of suppliers and customers. The opportunities for research on procurement performance, logistics network arrangements, supply chain infrastructure, new business models, combined supply chain strategies and new technology applications are obvious. ☹

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^ The Covid 19 global pandemic triggered extensive supply chain disruption for supermarkets