

How to Make Supply Chains Resilient

McKinsey Survey: What Companies Planned and Actually Did to Cope with Covid-19 Supply Chain Shocks

When the pandemic was pounding at their doors, many industries were rattled. Healthcare and chemicals were adapting rather successfully to the new normal, as a McKinsey & Company survey reveals. Even though, in some cases they fell behind their initial plans. Supply chain leaders in these sectors managed to avoid a complete breakdown. But the predicament caused issues both around planning processes, the fulfillment including delays and cost increases.

The Covid-19 pandemic has delivered the biggest and broadest value chain shock in recent memory. But it is only the latest in a series of disruptions. Statistically, supply chain disruptions lasting a month or longer occur every 3.7 years, on average. Changes in the environment and in the global economy are increasing the frequency and magnitude of shocks. Forty weather events in 2019 caused damages exceeding \$1 billion each. McKinsey research shows that at least one month of disruption can eliminate 45% of one year's EBITDA over a decade.

Regional Approach instead of Increased Inventories

Consequently, it is imperative for companies to prepare for events that may affect their supply chains tomorrow. In 2020, according to the McKinsey survey, 93% of the respondents across industries and regions intended to make their supply chains far more

flexible, agile, and resilient. But in the 2021 survey, many companies had yet to execute their original plans.

Healthcare and chemicals performed, on the whole, better than many other industries. Healthcare applied the broadest range of measures, 60% of the respondents saying they had regionalized their supply chains and 33% having moved production closer to end markets. In chemicals, it was 20% and 5% respectively. By contrast, only 22% of automotive, aerospace, and defence players had regionalized production, even though more than three-quarters of them prioritized this approach in their answers to the 2020 survey by McKinsey.

Healthcare was also the only industry not increasing inventories more than planned, and the only one which did much more than planned broadening their options for action by regionalization. This was likely driven by multiple developments, as the massive increase in demand globally for many products, resulting in the

need to an overall ramp up of production and supply chain.

In 2021, all managers in healthcare and 80% in chemicals believed regionalization still to be relevant or at least partially relevant in the next three years (fig. 1). And they're right to continue investing: Even in value chains that are more geographically diversified, production of certain key products may be disproportionately concentrated. Many low-value or basic ingredients in pharmaceuticals for instance are predominantly produced in China and India. In total, we find 180 products across value chains for which one country accounts for 70% or more of exports, creating the potential for bottlenecks. The chemicals value chain has a particularly large number of such highly concentrated products.

Restore Transparency

Analysis of Covid-19 crisis management, demonstrates the weaknesses as if observed under a magnifying glass. The chemical industry, specifically further upstream, has limits when making changes in their assets, in a short timeframe and, also, making them or ensuring they are economically reasonable. To give an example, it would take a company 10 to 20 years to recoup the investment required to move an ethylene production plant from Europe to China. And



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these plants are not set up within a few months.

So, it was inevitable to subject the operating processes to an audit. But it turned out that some companies had planning processes, which were not built to deal with the high number of constraints, were also facing sudden requirements to accommodate or to replan. For instance, they had to cope with incredible fluctuations in delivery of raw materials, but also—specifically in healthcare—unprecedented demand increases.

Particularly in the early phase of crisis management, this led to a total loss of transparency. No one knew any longer when a certain product could be produced and be delivered to the customer. Or maybe it had already been delivered? In most cases, this could be addressed by setting up a supply chain control tower within a few weeks, while systems were step by step adapted and new tools introduced.

Analytics and Digital Tools Are Key

What did successful companies do better than others? Their planning process was strongly linked to its use of modern digital tools, especially advanced analytics. They were 2.5 times more often to report they had pre-existing advanced-analytics capabilities. That was the case for 20% in the chemical industry, where another 53% already had analytics to a certain degree and were planning to implement more. In healthcare, the level of preparation and planning was less, with 7% and 33% respectively (fig. 2).

The healthcare industry traditionally tends to have high margins and high service levels, and to invest into high inventories, modern systems and tools as well as in talent. However,



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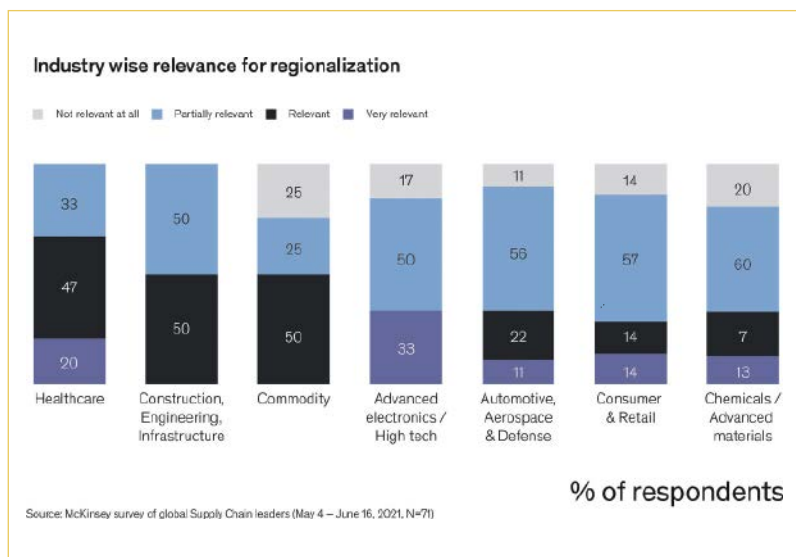


Fig. 1: Regionalization is relevant in the next 3 years, especially for healthcare.

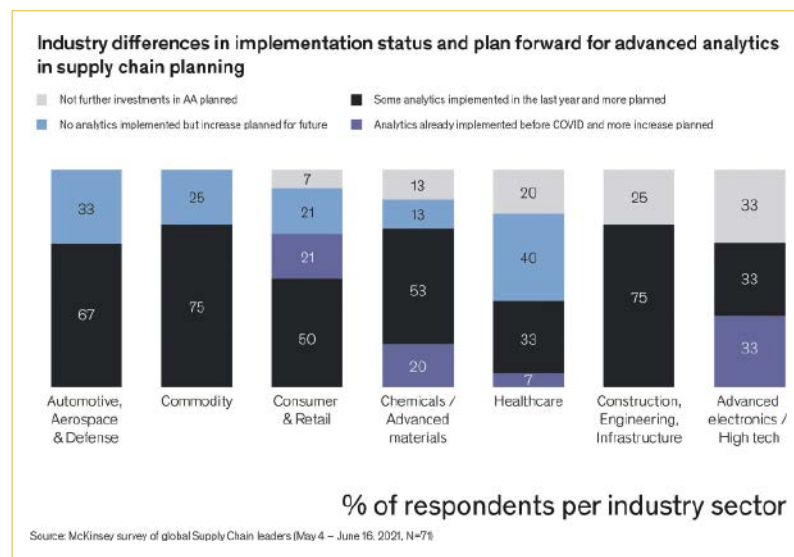


Fig. 2: All industries have invested in advanced analytics during Covid-19 pandemic.

many companies have still a lot of room for improvement regarding the use of digital and advanced analytics —across functions, not only supply chain but also commercial or manufacturing.

To make progress in the digital journey, companies that successfully implement digital start with a strong vision and aspiration. Key questions to ask in the early stages include: How can tools advance the strategic goals? How can analytics help transform core processes or generate new business opportunities? And what is the value and feasibility of each of these solutions? As a next step, they assess their capabilities concerning data, technology, and culture as well as the support or partnerships needed. Based on this, companies can create a roadmap and business plan for the next one to three years.

Talent Gap Threatening Supply Chains

Any implementation of digital technologies requires skilled talent to use the tools. However, the skills gap that existed before the pandemic, only widened during it. While 80% of supply chain leaders surveyed invested in supply-chain technologies in 2021, only 1% report having sufficient talent in-house to support their increased digitization, down from 10% in 2020. The skills gap is being felt across industries: in 2021, 71% in chemicals and 40% in healthcare reported to be affected, as the McKinsey survey shows. Companies have tried to gain ground by reskilling and hiring.

Although higher wages reached up to three times the level of pre-

Covid times in some areas, the increases still have not led to filling of positions, as the shortage has been driven by fundamental shifts in the labor supply and demand curves. There are several underlying factors for this imbalance, and many of them are not Covid related, such as school closures and health concerns, and hence will remain.

Build upon the Momentum — for the next Big Challenge

The one-billion-dollar question for supply chain managers is what kind of challenge they need to prepare for next. What might a future pandemic or other dilemma look like? The most severe effects we currently see come from the energy price wave affecting specifically the European process industry at a magnitude never seen before, with future monthly prices at energy levels that are five times higher than the average in 2021, resulting in significant production cost increases for energy intense industries such as the chemical industry.

The main challenges of decarbonization lie indeed within the supply chain: For most chemical companies, 60 to 80% of the emissions stem from suppliers and need to be addressed, in healthcare about 90%.

The coming months could turn out to be critical. Some companies may slip back, reverting to old ways of working that leave them struggling to compete with their more agile competitors on cost or service, and still vulnerable to shocks and disruptions. Others will build on the momentum they gained during the pandemic, with decisive action to adapt

their supply chain footprint, modernize their technologies, and increase their capabilities. There is no doubt, the latter will be better prepared for the next big challenge ahead.

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