



Consulting Group

Supply Chain as a Catalyst

Are organisations facing up to the true value that re-thinking their supply chain strategy can offer post Covid-19?





Increasing volatility leading to greater uncertainty

Even as China began sending workers home and shuttering businesses in January 2020, few, if any, companies could envisage how significant Covid-19's impact would be. Huge demand swings, both up and down, with unpredictable peaks and troughs became the norm within weeks. Massive changes which 6-9 months before may have taken days or weeks to unfold happened almost immediately and simultaneously. Previously predictable flows of goods through global supply chains ceased, leaving an erratic landscape where entire channels would mutate or even disappear.

While Covid-19 is an unprecedented health, as well as economic, crisis, it is not an isolated event. Disruptions are increasing in frequency and magnitude. The global economy is increasingly impacted by trade wars, high-cost natural disasters and longer-term transitions. Global political turmoil, including anti-globalisation trends, rising nationalism, and localised issues, such as the protests in Hong Kong, are heightening insecurity for traditional supply chains.

Increasing complexity leading to greater vulnerability

Over the past few decades, procurement and supply chain ecosystems have become increasingly complex. This complexity was accepted in supply chain development given the associated benefits. Several underlying contributing factors emerged, including multi-layer supply chain models, long distance and multi-channel movement of physical goods, and built-in buffers for efficiency:

1

Transparency decreased as supply chain layers multiply

2

Geopolitical risk increased as goods cross longer distances

3

Built-in buffers against disruptions removed for efficiency gains

The multi-faceted disruption caused by Covid-19 came on top of already complex and highly interdependent supply chains. This has made some supply chains more vulnerable as the complexity makes it more difficult to adjust and respond at speed to such major disruption. Many of the approaches that have made supply chains efficient – such as an emphasis on highly optimised strategies for sourcing, inventory planning, production scheduling and order fulfilment – may now be potential liabilities.

Businesses should take this opportunity to re-evaluate and restructure their practices with an increased focus on building resilience and agility. That is not to say existing approaches should be discarded in the process. Rather organisations should improve capabilities to manage complexity and their approach to disruption to reduce vulnerability.

Rethinking assumptions post Covid-19

As the acute stage of the current pandemic appears to subside, companies should examine their fundamental assumptions underpinning demand and supply. Using refined understandings in light of Covid-19, companies can test different contingencies to help them adapt the supply chain into a strategic tool to drive competitive advantage, seize opportunities through proactive actions as well as weather disruptions when they occur.



Demand



Supply



Strategic scenario planning

Demand Covid-19 has fundamentally changed demand predictability and volatility in terms of volumes, specifications, channels, and consumer bases. As a result traditional forecasting and planning models relying on historical data and seasonal trends, while helpful, are unlikely to be sufficient for accuracy going forwards. Demand planning must now ensure it addresses a broader set of key risks and considerations:

- Enhanced sensitivity to better account for socioeconomic and geopolitical factors in demand planning
- Expanded data analysis to model impacts for specific distribution channels in forecasting
- Inclusion of both product and category substitutions in modeling to better understand and address demand risks

Case Study

Demand for home baking supplies typically declines in the US, UK and Europe as winter shifts to spring. However, in March, with large segments of the populations under stay-at-home orders, looking to save money and with time on their hands, sales of flour, yeast, and baking powder were up 155, 178 and 457% respectively. Despite no shortage in wheat supply, the surge in demand left both traditional grocery stores and online retailers out-of-stock for weeks. As of May, bags of premium flour were on sale on eBay at five times the standard retail price.

Supply Companies must think beyond typical day-to-day supply disruptions and planning assumptions. They should consider the risk of and impact of major disturbances along the supply chain:

- Total runouts or lost access to key components or precursor materials
- Distribution route shutdowns, the loss of traditional logistics routes and increased costs amidst diminished channel capacity
- Suppliers going out of business or unable to fulfill orders

It is necessary to evaluate the impact of these or other disruptions on the supply chain, and what alternative strategies could be deployed.

Supply Chain Challenges during Covid-19 Crisis

“Chinese suppliers in over 30 industries made 4,811 force majeure declarations in March on contracts worth over USD 53.79 billion”

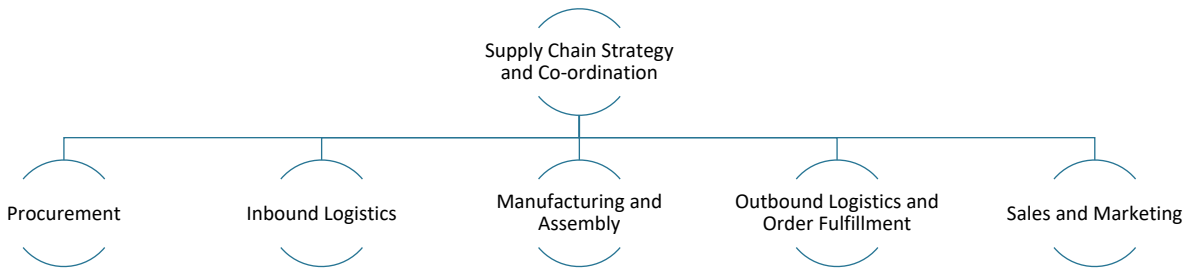
“Air freight prices for routes out of China to Europe and the United States have increased by more than 100% while routes to South East Asian destinations, where factories are attempting to source components amid fears of further lockdowns, have increased over 200%”

“Early in the crisis, the Indian pharmaceutical industry struggled amidst constrained access to Chinese advanced pharmaceutical ingredients (API) production, which accounts for 70% of the Indian industry’s supply”



Strategic Scenario Planning With such heightened uncertainty and volatility in demand and supply, it is critical for businesses to run supply chain stress tests for different scenarios based on key triggers and risks. The key is to think strategically – have we really considered the scale of demand volatility and supply disruption? Scenario planning can ensure that the company has the right mix of proactive mitigation strategies and reactive disruption management infrastructure. It can be a key factor in generating a clearer understanding of the drivers that can trigger supply chain volatility and be the basis for strategic as well as operational decision making. Critically, it can also help cultivate a risk-based and solutions-focused mentality in employees.

Leading organisations have dedicated supply chain risk management teams with clear interfaces with each function, ensuring a holistic understanding of the entire supply chain.



A structured approach is needed to evaluate potential options, which may result in major shifts in physical supply chain, or to more appropriately mitigate risks in existing supply chain models. An example on shifting production:

1		<p>Critical Issue <i>What is the critical risk or opportunity to be addressed?</i></p>	<p>A Hong Kong-based trader in plastic resins and supplier of finished bottles to global beverage companies with manufacturing facilities in China is considering changing its focus given increasing demand for plastic PPE</p>
2		<p>Scenarios <i>How might the future unfold and how might that drive changes in demand from today?</i></p>	<ul style="list-style-type: none"> • Recurring outbreaks could result in further quarantine and plant closures in China • A vaccine could reduce or eliminate demand for PPE • Volatility in global oil markets could cause unpredictable spikes in plastic precursor prices • Hygiene requirements could cause a re-pivot to single-use plastic in food and beverage
3		<p>Actions <i>What steps can we take to address and prepare for potential future scenarios?</i></p>	<ul style="list-style-type: none"> • Retool manufacturing facilities in China to focus either partially or solely on PPE • Acquire additional facilities outside of China to focus on PPE production • Sell manufacturing facilities and focus solely on sale of plastic resins • Strategic partnership with current PPE manufacturers to provide dedicated supply of plastic resins • Invest in plastic resin manufacturing facilities to strengthen supply control
4		<p>Implications <i>How do these actions impact us financially, operationally and with customers?</i></p>	<ul style="list-style-type: none"> • Is access to the capital required to retrofit manufacturing facilities or make new acquisitions sufficient? • Are the capabilities to oversee PPE manufacture available internally or would outside resources be needed? • Is there a sufficient value proposition to allow successful competition against incumbent players? • Can existing supply chains and customers for new products or focus solely on precursors be leveraged?

From resilience to competitive advantage

In light of Covid-19, many companies are considering significant changes to operating models and practices. While adjustments are necessary to adapt to the new environment, it is critical to ensure all actions support the overall strategy and bolster competitive advantage beyond the current crisis.



Strategic
Decisions



Organisational
Decisions



Technology
Considerations

Strategic Decisions – What actions we need to take

- **Capacity investments:** One possible solution to the challenges posed by Covid-19 and similar disruptors is to build in contingency and redundancy through capacity investments, including manufacturing, logistics, etc. This may be appropriate for businesses where supply gaps result in brand loyalty loss or product substitution. For other circumstances, it may be an expensive over-reaction which could be difficult to undo. Building or contracting capacities to meet disruptive demands may erode profitability or otherwise make products economically unviable.
- **Acquisitions and sell-offs:** Covid-19 has prompted a period of economic decline not seen since the Great Depression, with the United Nations predicting USD 2 trillion in global income losses. The shake-up will result in significant opportunities for acquisitions and sell-offs. Opportunities to increase supply chain competitiveness exist through acquisitions of adjacencies (to further control/integrate), new channel access (to secure supply chains or distribution networks) or technology (such as probability forecasting and analytics capabilities).
- **Relocation:** De-globalisation, re-shoring and a shift of supply chains from China towards other locations in Asia, due to trade wars and a decreasing cost gap, were ongoing trends prior to Covid-19. However, shifts should not only be based on opportunistic reaction to trade wars (what if the tariffs change again?) and up-front cost reduction but must support competitive advantage. To avoid expensive changes which may not generate the value anticipated, key risks and consequences must be considered. Thorough evaluation may be appropriate for the supply chain ecosystem, (including how and where components and raw materials come from), local capability and labour base (including if it could lead to increased management oversight requirements), infrastructure and technology support etc.
- **Reconfiguring and production flexibility:** Covid-19 has highlighted the success of companies with flexible production lines. Perfume maker LVMH converted three factories to manufacture unbranded hand sanitizer in 72 hours for public donation. Others shifted to meet anticipated demand when there was a very limited supply in the market; paper coffee filter maker Melitta has made over 10 million masks using a special medical-grade fibre manufactured at the company's vacuum cleaner bag factory. Companies should evaluate their capabilities, including how quickly shifts can be made, and the consequences; whether the business can return to the earlier operations once original demand rebounds, and if any customers might be lost in the meantime.

Case Study

The garment industry, which is less capital intensive and easier to relocate than others, was among the first to begin shifting production from China amidst rising costs and tariffs. However, even as China's share of global clothing exports dropped from 37% in 2010 to 31% in 2018, over the same period its share of textile exports increased from 30% to 38%. Even companies that moved operations out of China reported significant delays in production during the Covid-19 crisis due to dependence on raw and intermediary materials from China.

Organisational Decisions – Organising how we work across the supply chain



- **Organisational structure:** Thoughtful organisational design promotes maximum agility in responding to both crises and emerging opportunities. Success will depend upon having a deliberate approach fully integrating management and oversight of the supply chain with clear processes and ways of working together across functions. It is crucial that each function understands its interconnected role and how it contributes to the overall strategy. It is also important to work out how and who has the visibility and breadth of role to drive proactive supply chain strategies and co-ordination.

- **Disruption management:** Designs for responsive disruption management, such as “crisis teams,” “war rooms,” etc., vary across organisations. Regardless of the approach, companies must ensure that response teams are fully enabled to execute their function. This includes authority to take the required steps to resolve disruptions; access to executive decision makers based on an escalation protocol; transparency across the supply chain; and processes for real-time issue identification, solution development and reporting.



- **Skill development:** Companies must ensure employees have the skills needed to meet the needs of this volatile environment. While discrete training sessions, such as on new processes, software solutions, etc., are necessary, it is equally important to think on a company culture level. Many successful companies cultivate a risk-based and solutions-focused mentality in all employees, enabling them to confidently address new challenges in creative and productive ways. Following Covid-19, devising contingencies for significant bandwidth variability, for example if quarantine measures disrupt staffing models (e.g. shipping and flight crews) or strategic issues render key decision makers unavailable to address local business needs.

Technology Considerations – How can we use technology to bolster our resilience and flexibility in the face of Covid-19 and other disruptors?



Big Data Analysis

Traditionally companies have struggled to obtain quality data spread out over a siloed supply chain or been overwhelmed by the sheer volume of information if they could get it. Advances in artificial intelligence such as machine learning, location intelligence technology, and the Internet of Things (IoT) are helping companies capture, store, and manage massive amounts of data. Refining this data into actionable insights is key to thriving in this volatile ecosystem. Predictive analysis, virtual 3D models and warehouse inventory management are only a few of the solutions offered through smart data analysis.



Emerging Digital Technologies

Emerging digital technologies such as 3D printing, robotics, automation and drone use are enabling new business models and increasing efficiency across the supply chain. For example, 3D printing can transform warehousing practices by allowing spare parts to be manufactured locally as needed, removing the need for shipping and longer-term storage. In one example, DHL experimented with using smart glasses and augmented reality in a warehouse. Over 3 weeks, 10 pickers fulfilled 9,000 orders, picking over 20,000 items with a 25% increase in efficiency and an overall drop in errors.



Digital Collaboration

Digital supply networks integrate data across the supply chain, provide collaborative platforms and enhance information sharing, ensuring that the right people have the right information at the right time. Digital networks are particularly useful in encouraging collaboration with trading partners. For example, Taobao, an e-commerce marketplace owned by Alibaba, recently made its consumer-to-manufacturer platform available to partner factories in China in order to share consumer distribution, preferences and behavioural data and to help drive digital transformation.

Considerations: Covid-19 has demonstrated that technology can be an incredibly powerful enabler, increasing transparency, responsiveness and efficiency across an organisation. However, in responding to Covid-19, organisations face the risk of implementing the wrong technology which can have the opposite effect, wasting time and resources while increasing complexity. Faced with an ever-expanding universe of possibilities, companies need to be deliberate about identifying precisely what value a solution will add. For example, data collection for data’s sake may only waste time. Automation may be a false economy if other solutions, such as relocation, are considered. The key is to selectively apply technology and data solutions based on value, to create a smarter, more collaborative and more resilient supply chain.

Going forwards

Covid-19 has demonstrated that what was previously considered a robust and agile supply chain may no longer be sufficiently resilient to withstand increasingly frequent and large-scale disruptions to the global economy. Coupled with other key global trends, it is a different business environment that needs to be managed, requiring rapid but well-thought through and well-implemented decisions. The ability to be able to strategically think through risks and opportunities quickly and devise an appropriate suite of solutions around supply chain strategy, organisation and technology is needed now more than ever.

To manage market volatility, companies need to ensure that they have key building blocks in place, including not only how the supply chain is managed overall, but how the supply chain links to the wider corporation. Organisations should base what they do on identifying value and have the right balance of robust organisation and processes together with streamlined decision making. If they are agile enough to mobilise and adapt rapidly, the future may be brighter than many would have us think.

Our accelerated four-step approach can go a long way to handle this in a structured and efficient way.



The supply chain can be the difference in an organisation's ability to successfully manage the post Covid-19 ecosystem, weathering disruptions as well as taking opportunities

A leading independent strategy and transformation consultancy. We provide end-to-end strategy and operations consulting services, turning well thought through plans into executable solutions

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