

Retail supply chains: Learning lessons from disruption



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Executive summary

At the start of the Covid-19 pandemic the images of empty supermarket shelves highlighted the limitations of just-in-time supply chains, but how did retailers really fare in the face of the crisis? Even before the arrival of the virus supply chains had been in transition, impacted by a range of factors such as changing consumer preferences, evolving trade conditions or increased pressure around sustainability requirements which have forced retailers to rethink their procurement strategy. However, general preparedness seems to be lacking. According to a global survey of supply chain executives conducted by The Economist Intelligence Unit, retail sector respondents are less likely to agree that their organisation reacts well to disruptions in the supply chain than their counterparts in the lifestyle and fast-moving consumer goods (FMCG) sectors. Other key findings include:

- **The main issues felt by supply chain executives in the retail sector are high fluctuation in customer demand, lack of flexibility allowing quick reaction to changes, and meeting customer expectations.** However, survey respondents also point to longer-term challenges that have been exacerbated by the pandemic, such as the increase of e-commerce/online sales and dealing with regulation and compliance across different jurisdictions.
- **The top strategic priority for retailers is simplifying their supply chain, while two in five respondents have been developing deep and long-term relationships with suppliers and customers to boost resilience.** This has led to initiatives such as the easing of payment terms, the widening of delivery-appointment windows and the relaxing of on-time, in-full (OTIF) requirements for suppliers, as well as range rationalisation and a reduction in the number of stock-keeping units (SKUs).
- **Implementing new tools is paramount in building resilience and improving flexibility.** As retail executives tackle the lack of flexibility within their supply chain by developing end-to-end information flows and boosting collaboration and information-sharing between departments, they are betting on new technologies such as blockchain, 5G and artificial intelligence (AI).
- **Nearly one-half of retailers concentrate their sustainability efforts on reducing the environmental impact of waste.** Looking to the future, respondents are most concerned about inefficient supplier integration and unexpected workforce disruptions when it comes to internal risks, and wage fluctuations in supply chain countries and commodity price fluctuations on the external front.

About this report:

To find out the main challenges affecting global supply chains, and what this might mean for the future of industries, The Economist Intelligence Unit, commissioned by Maersk, surveyed 450 supply-chain executives across three sector verticals (lifestyle, retail and fast-moving consumer goods) in seven countries—Australia, China, France, Germany, Japan, the UK and the US—spanning four continents. This report focuses on the retail industry, which spans supermarkets and homeware stores. We would like to thank the following experts for their time and insight:

- Rui Miguel Gonçalves, US supply chain director, Marley Spoon
- Susan Morris, EVP and chief operations officer, Albertsons
- Zhenhui Wang, CEO, JD Logistics

The report was written by Monica Woodley and edited by Candice de Monts-Petit.

Introduction: Supply and demand shocks

As the Covid-19 pandemic spread from China to Europe and the US, the globalised, just-in-time supply chains of food retailers were hit by disruptions to their suppliers, labour and distribution networks just as demand went through the roof as consumers stockpiled for lockdown. While supply chain disruptions due to demand fluctuations, capacity constraints and bottlenecks are not unusual, Covid has been the most dramatic stress test of the past 75 years, making procurement and logistics concerns top of mind for businesses.

“We have a network of fulfilment centres in the US and are prepared to deal with seasonal swings in demand, but we weren’t prepared for the impact of Covid. When people quarantined and went online, demand soared around 100%,” says Rui Miguel Gonçalves, US supply chain director of Marley Spoon, a meal delivery service. “Most of the supply-side impact for us was from labour issues – people unable to work in our centres but also with our suppliers, in meat-processing plants or picking fruit and vegetables. And there was also a shortage of packaging materials like aluminium.”

More than four in five retailers (82%) surveyed by The Economist Intelligence Unit say that Covid has had a significant disruptive impact on their supply chains. The impact was worst in the US, where 94% of retailers say they were significantly hit, compared with 75% in Europe and 78% in Asia Pacific.

The main challenges felt by supply chain executives in the retail sector have been high fluctuation in customer demand, lack of flexibility allowing quick reaction to changes, and meeting customer expectations. However, survey respondents also point to longer-term challenges that have been exacerbated by the pandemic, such as the increase of e-commerce/ online sales and dealing with regulation and compliance across different jurisdictions.

Part I. How prepared were companies for disruption?

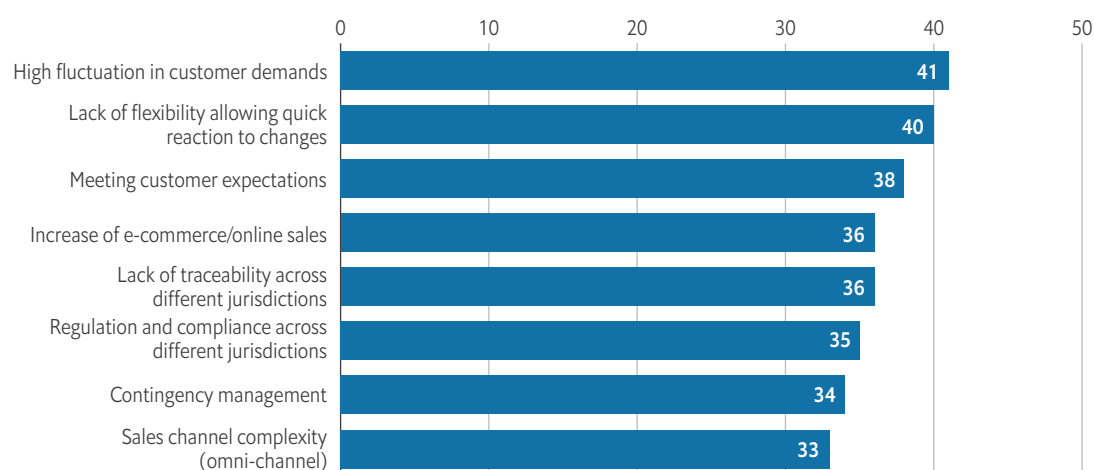
Even before the pandemic supply chains were in transition, with a range of factors forcing a re-examination. Changing consumer preferences, demographic and social changes, increasing volatility in supply, changing trade conditions, tightening rules and standards, including sustainability requirements, and rapid technological advances have forced retailers to rethink their supply chains.

The challenge from e-commerce, in particular, has accelerated with Covid. In the UK, online food shopping is predicted to rise by 33% in 2020, after growth of just 2.9% in 2019, according to market research firm Mintel.¹ Growth has been even more pronounced in markets where there was a low penetration of e-commerce, such as Germany, where

online food retail sales grew by 126.8% in April compared with the same time last year, according to the German e-commerce association BEVH.²

In China, the success of online players in rapidly adapting to the challenges of Covid has highlighted the need for all retailers to up their digital game. Since launching in 2016 Freshippo, Alibaba's mobile-first supermarket brand, has proved popular with Chinese consumers, offering a mobile shopping experience, free 30-minute delivery options and a vast selection of products. "The fact that we are able to offer this fast delivery and still run the operations profitably speaks to the efficiency of our delivery service," according to a Freshippo spokesperson. "Digitisation

Chart I. Main challenges that retail supply chains are facing
(%)



Source: The Economist Intelligence Unit.

¹ <https://www.retail-week.com/grocery/coronavirus-online-grocery-shopping-to-receive-huge-boost-this-year-due-to-lockdown/7034736.article?authent=1>

² <https://internetretailing.net/covid-19/covid-19/food-for-thought-covid-19-and-the-lessons-learned-by-the-grocery-industry-21847>



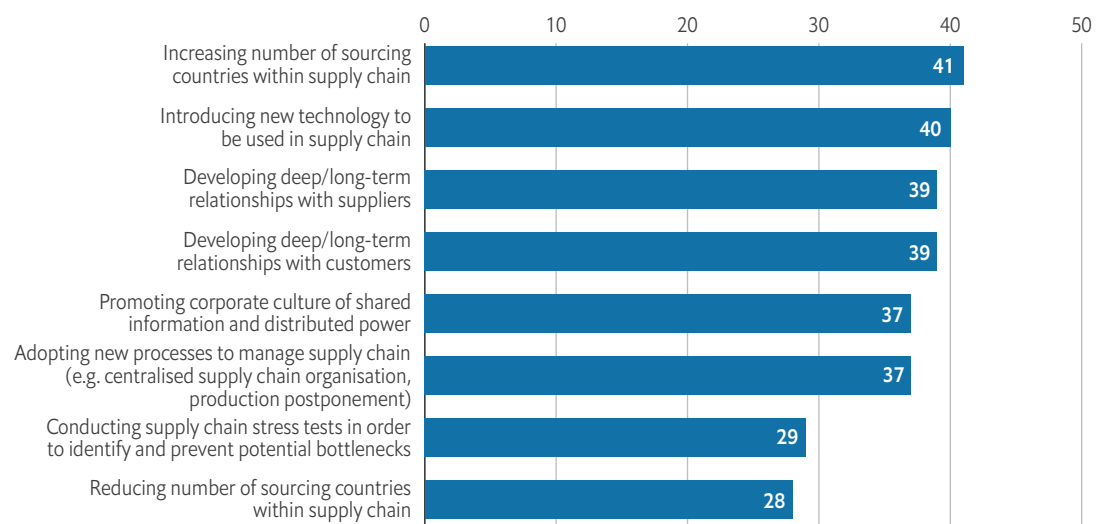
is the key to Freshippo’s overall operation—especially when it comes to maintaining flexibility in our supply chain.”

In the past three years retailers wanting to increase the resilience of their supply chains have focused on introducing new technology into their supply chains (cited by 40% of respondents) and better utilising the data that come from digitising systems, with over one-third (37%) saying they are promoting a corporate culture of shared information. That is also seen as necessary to build flexibility into supply chains, with almost half of retailers

(45%) saying they have developed an end-to-end information flow in the past three years, and 39% focusing on collaboration and information-sharing between departments.

However, retailers’ other efforts to build resilience and flexibility show that digital does not solve all problems and that human relationships are still important. Two in five (39%) say they have been developing deep and long-term relationships with suppliers and customers to boost resilience, while nearly one-third (32%) have been regularly reassessing supplier performance to improve flexibility.

Chart II. Measures implemented to build resilience in supply chains (%)



Source: The Economist Intelligence Unit.

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Part II. Managing the impact of Covid

Supplier and customer relationships proved vital when the pandemic hit. “As the impact of Covid went through our supply chain, we worked with our suppliers to help where they were experiencing problems – for instance, bringing parts of the process like packaging in-house or outsourcing them,” says Mr Gonçalves. “We weren’t able to quickly onboard new suppliers, so we worked with the current network, shifting between vendors as their capacity fluctuated. One way that we fostered vendor partnerships was by looking into payment terms with key suppliers to provide them with the needed security due to uncertain times.”

Many retailers have tried to address the financial impact of the pandemic on their suppliers by easing payment terms, widening delivery-appointment windows and relaxing on-time, in-full (OTIF) requirements for suppliers. They also simplified their needs to make it easier for suppliers to deliver. Reducing the number of stock-keeping units (SKUs) and range rationalisation, which

decreases the variety of products stocked to ensure adequate supplies of key items, were early strategies to deal with the impact of the pandemic.

Susan Morris, executive vice president and chief operations officer of US grocery company Albertsons, worked with current and new suppliers to ensure store shelves stayed stocked. “We leveraged our size and secured the supply we needed from our vendors, but we also took on new brands in high-demand areas like paper products, meat and frozen vegetables in order to maintain supply,” she says. “In other areas we cut down on the SKUs to improve efficiency. Our number one priority has always been in-stock position, and that has only been enhanced by Covid.”

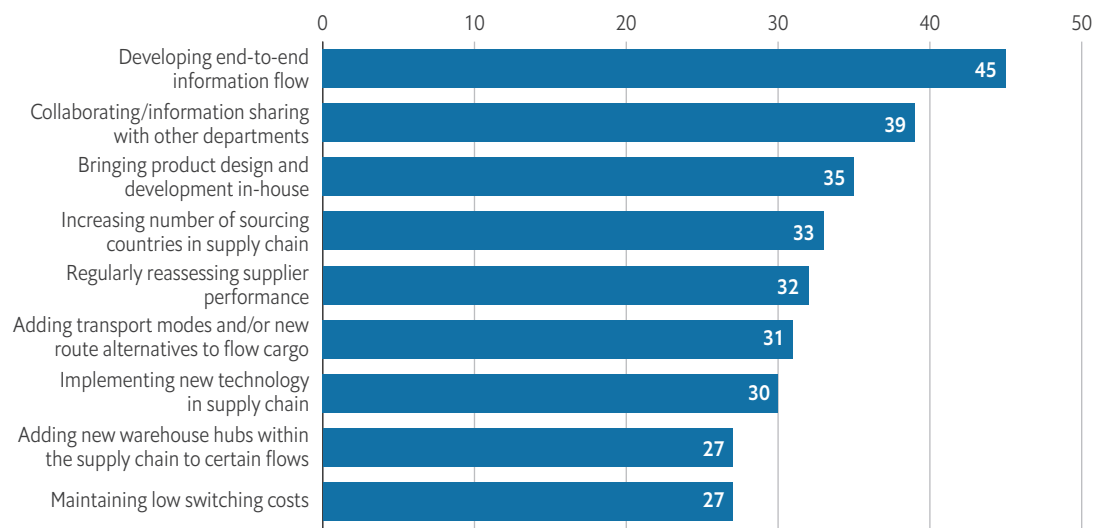
Simplifying assortments and packaging so that suppliers can make same-SKU, full-pallet shipments to hub stores or distributor-consolidation facilities, as well as allowing them to bypass distribution centres and ship goods directly to stores has also



Our use of satellite centres has made us ask if we need a stronger network of satellites, leading to a rethink of the supply chain, end-to-end, as we seek to optimise the network.

Susan Morris, Albertsons

Chart III. Measures implemented to improve flexibility of supply chains (%)



Source: The Economist Intelligence Unit.

helped to relieve pressure on suppliers. The crisis has led to more creative solutions to distribution problems, with some retailers of non-discretionary goods supplementing their transport capacity by partnering with discretionary-goods retailers with spare capacity.

"We really thought outside the box in many ways," says Ms Morris. "In some cases we switched to direct-to-store deliveries, which have proved to be more efficient for many of our vendors, so we are exploring utilising this more. And our use of satellite centres has made us ask if we need a stronger network of satellites – leading to a rethink of the supply chain, end-to-end, as we seek to optimise the network."

Converting some outlets to "dark stores", which are closed to consumers and used

essentially as a warehouse to fulfil online orders, was another strategy to meet the surge in demand. This required some firms to hire more full-service shoppers or temporarily shift in-store employees to delivery jobs.³

Freshippo's fulfilment model already had its stores doubling as warehouses, but it had to hire new staff to meet increased demand. "We introduced an innovative employee-sharing scheme that allowed those who work in hospitality, dining, movie theatres, department stores and various other sectors to find temporary jobs at Freshippo locations."

Bringing in new employees with similar skills from other industries meant that retailers only had to provide limited training. While this strategy was mainly used in distribution, some retailers also leveraged the skills of new employees to adapt their product

³ <https://www.mckinsey.com/industries/retail/our-insights/five-actions-retail-supply-chains-can-take-to-navigate-the-coronavirus-pandemic>.

range. 7Fresh, the grocery arm of Chinese e-tailer JD.com, was able to use the skills of its temporary workers from the catering industry to increase the production of semi-processed, ready-to-cook foods significantly.⁴

Mass hiring – Albertsons has hired over 60,000 people across its supply chain and retail outlets to meet the surge in demand – brings its own challenges, especially when operating during a public health crisis. Mr Gonçalves of Marley Spoon says: “Our workforce grew

exponentially, and we needed to invest in improving and speeding up the development of our employees to become leaders. The addition of extra shifts to support increased demand meant that many of our employees had their first experience as managers/team leads. And of course, we have had to introduce health and safety measures to protect our employees from Covid. The increasing demand for our product also drove us to increase capital expenditure on new equipment and infrastructure.”

⁴ <https://hbr.org/2020/04/in-the-face-of-lockdown-chinas-e-commerce-giants-deliver>

Part III. Fast-tracking technology solutions

The impact of the pandemic has accelerated the adoption of technology-driven solutions, but retailers do not point to one technology as the silver bullet. Zhenhui Wang, CEO of JD Logistics, the supply chain and logistics services of JD.com, believes that “the combination of big data application and AI algorithms makes all aspects of the supply chain, such as demand forecasting, inventory allocation and operations scheduling, more accurate, efficient and perceptive to change. And the advent of 5G plus the Internet of Things will enable us to accumulate more data, which can support the efficient automatic perception of logistics information and accurate data collection.”

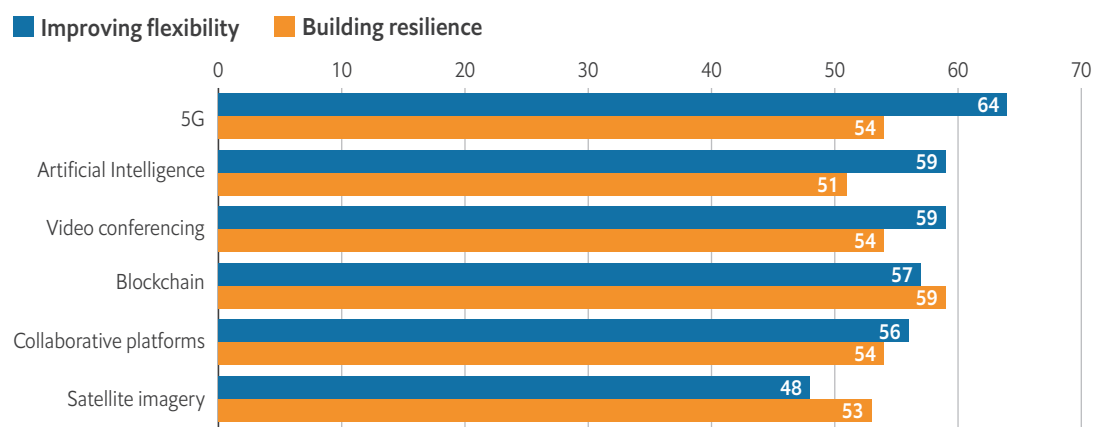
Ms Morris says Albertsons is also looking at a range of technologies. “We are going through the organisation to develop a supply chain-optimised flow from procurement through to distribution using blockchain and AI,” she says. “We are also speeding up the introduction of automation in our distribution centres, as

those were really hit by Covid. It adds security into the network.”

Survey respondents believe that 5G, AI and blockchain are the technologies that will improve flexibility in their supply chains, with 5G and AI also seen as builders of resilience. Blockchain is more popular with US and European retailers than their Asian counterparts, while Europeans and Asians are keener on 5G and AI. However, with many people still working remotely from home, they also point to technologies like video conferencing and collaborative platforms as necessary to keep their employees connected and productive.

Better, faster forecasting of demand has helped retailers predict where the next pinch point in the supply chain will be. “The implementation of technology has provided the most effective support to deal with the epidemic,” Mr Wang says. “JD Logistics’ ‘intelligent brain’ carries out consumption

Chart IV. New technologies for retail supply chains (%)



Source: The Economist Intelligence Unit.

forecasting and accurately dispatches the transport capacity of the whole network. Through big data analysis and forecasting technology JD looked at historical orders and the future orders in the epidemic area and gave priority to satisfy needs at key hospitals in Wuhan first and foremost.”

AI not only helps retailers to understand demand, but it can also help them shape it to

better match supply. “We have an advantage over grocers in that we have the ability to choose what we sell and influence what our customers select,” says Mr Gonçalves. “Our algorithm delivers recommendations to our customers that allow them to view and help them easily select recipes that will appeal to their taste preferences, ultimately improving our ability to better plan and build a more optimal supply chain.”

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The combination of big data application and AI algorithms makes all aspects of the supply chain, such as demand forecasting, inventory allocation and operations scheduling, more accurate and efficient.

Thomas O'Connor, Gartner



Part IV. Promoting sustainability

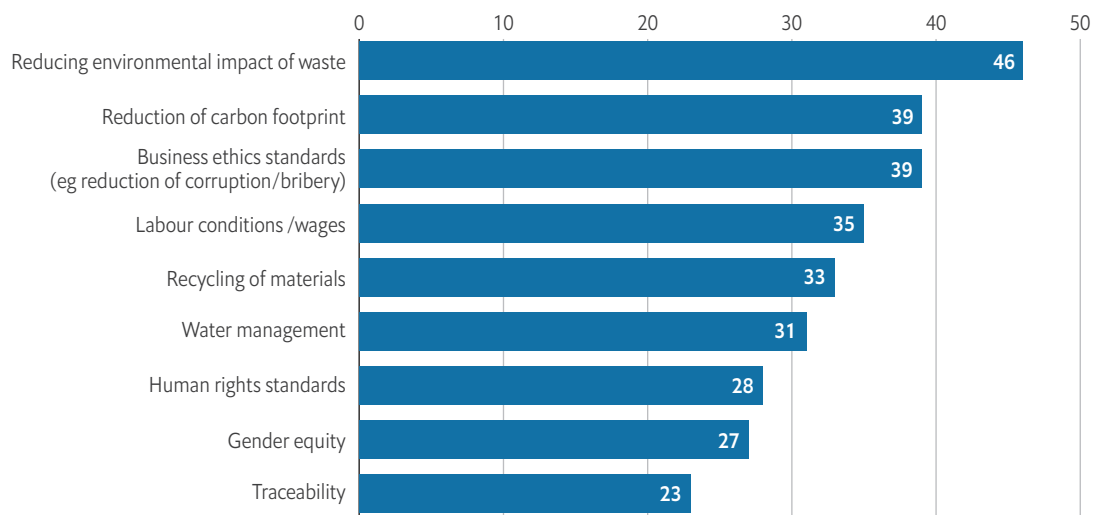
Retailers are using technology to increase the sustainability of their supply chains, both to improve efficiency and to meet growing consumer – and employee – concerns on the subject.

“Alibaba’s logistics and delivery arm, Cainiao, recently launched a comprehensive green campaign, Alibaba Green Logistics 2020, which aims to improve material recycling, packaging, route planning and delivery methods to reduce waste and promote sustainability,” according to Freshippo. “Its self-developed smart-packaging algorithm, which assesses purchased items by category, volume, weight and area and then matches the goods to the most space-efficient form of

packaging, helps improve packaging efficiency for about 290m parcels each year and cuts the amount of wasted materials due to overpacking by 15%. To save paper, Cainiao also expanded the use of e-shipping labels to replace traditional paper stickers, which in the last five years helped offset 1bn kilograms of carbon emissions.”

Environmental issues, such as reducing waste (cited by 46% of respondents) and recycling materials (33%) as well as the reduction of the supply chain’s carbon footprint (39%), are top concerns for survey respondents. They also influence sourcing decisions. There has been a growing consumer trend to “buy local”, which has been reinforced by the supply chain

Chart V. Priorities in improving sustainability of supply chains (%)



Source: The Economist Intelligence Unit.



Environmental issues, such as reducing waste and recycling materials as well as the reduction of the supply chain's carbon footprint are top concerns for retail respondents

disruptions caused by Covid. Nearly two in five retailers surveyed are more likely in the next three years to move to a near-sourcing model, where goods are manufactured locally

and/or sold in proximity to their consumption market, with around half citing improved flexibility (55%) and stronger relations with suppliers (49%) as the main advantages.

Part V. Future-proofing the supply chain

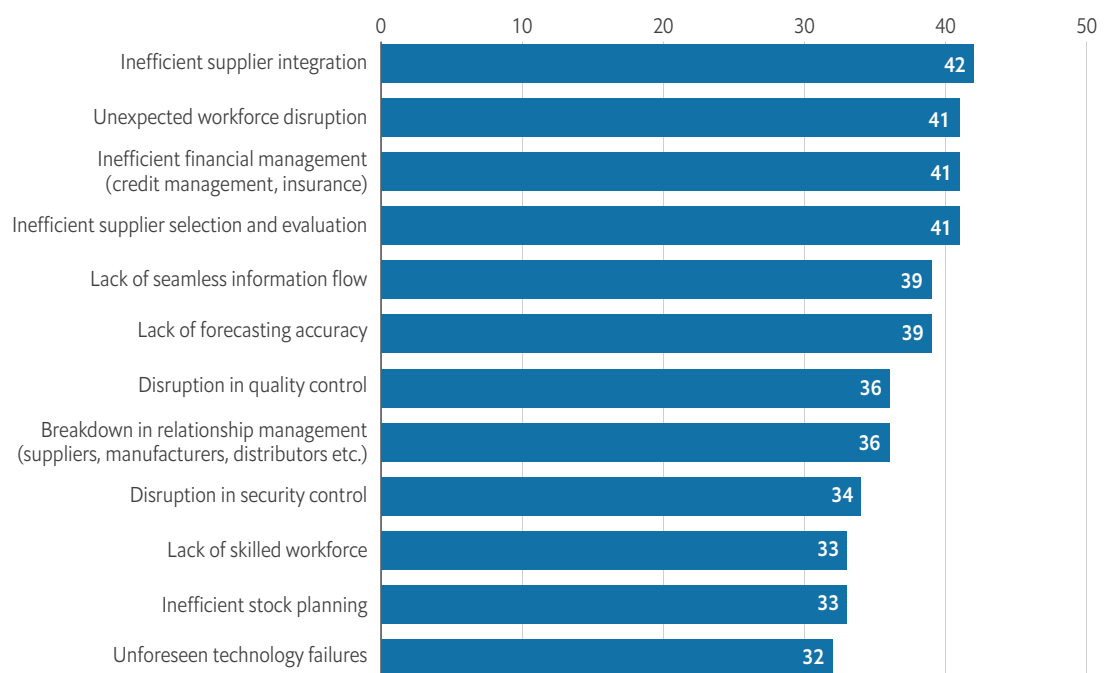
Marley Spoon has benefited from having its suppliers close to home. “I have been surprised at how resilient we were and how quickly things are getting back to normal, and I think this was helped by the fact that 99% of our suppliers are in the US,” says Mr Gonçalves. “Going forward, there might be a risk of a supply shortage or rising costs of input materials for our industry due to developing world trade tensions.”

Retailers are keeping an eye on the potential impact of external risk factors such as geopolitical risks, cited as a top concern by 41%. Survey respondents also point to wage fluctuations in supply chain countries and commodity price fluctuations (both 43%), as well as regulatory changes (39%) as significant

external threats to their supply chains over the next few years. Unstable taxation regimes and reputational risks were the least worrying risks cited respectively by 26% and 27% of respondents.

Encouragingly, while technology is driving improvements in the supply chain, its potential failure appears to be the lowest concern of retailers (cited by 32%) in terms of internal risk factors. Retailers worry mostly about inefficient supplier integration (42%), unexpected workforce disruption, inefficient financial management (relating to credit management or insurance, for instance) and inefficient supplier selection and evaluation (all three 41%).

Chart VI. Internal risks cited as top 5 risk to retail supply chains (%)



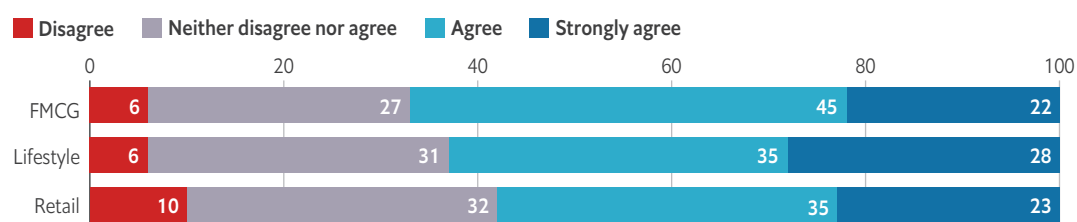
Source: The Economist Intelligence Unit.

Conclusion: Expect the unexpected

Despite the improvements to their supply chains, the experience of the pandemic has shown retailers that they may not be as prepared as they would like to be. They are less likely to agree that their organisation reacts well to disruptions to the supply chain than their counterparts in the lifestyle and FMCG sectors.

This may be due to the fact that it was the essential items that retailers provide, such as food and sanitary paper products, which saw the greatest spikes in demand. Those pictures of empty shelves and the rationing of essential products in many countries for the first time since the second world war – have had a lasting impact.

Chart VII. Respondent views on the statement: "My organisation reacts well to disruptions in our supply chain?"
(%)



Source: The Economist Intelligence Unit.

At the time the industry was already dealing with longer-term challenges, such as the increase of online sales and regulation and compliance issues across different jurisdictions. This was exacerbated by the pandemic. Adding issues such as large fluctuations in customer demand and a lack of flexibility that would have allowed a quick reaction to these changes created a perfect storm of supply- and demand-side challenges.

However, it is also due to the unexpected nature of the ongoing crisis. Companies tend

to focus on managing the types of shocks they encounter most often or on those that are making the headlines, such as trade disputes. But as the pandemic has shown, there are other shocks which occur less frequently but can inflict even bigger losses, and which companies will therefore have to keep on their radar. Retailers who are still learning the lessons from this crisis must ensure that their supply chains are ready for the next big disruption.

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