

# **“What are the major impacts that Covid-19 will have on the global supply chain and which businesses or sectors will be the biggest winners and losers? (UK, Europe, North America focus)”**

## **Part I:**

### **The Major Impacts COVID-19 will have on the Global Supply Chain**

#### **Chapter 1**

##### **Globalisation**

Globalised supply chains have meant dependence on the economic and social wellbeing of multiple different states. China’s lockdown due to the virus outbreak earlier this year affected the international network of supply chains. Roadblocks and factory closures in one region, Wuhan, meant empty shipping containers in Chinese ports and shortages of containers in other parts of the world. There were disruptions in logistic hubs and delivery routes because of lockdowns and curfews in place. For example, a car manufacturer shut down seven of its factories in Korea because qualified vendors couldn’t deliver the components to produce wire harnesses for their vehicles as the suppliers were located in a province, Hubei, that was in lockdown. This affected 40% of the global car manufacturer’s total network output. Looking for alternative vendors with qualifications meant the factories in Korea couldn’t open<sup>3</sup>. This is what can be referred to as the domino effect.

Manufacturers in China reported operating at 50% capacity with 56% of normal staff. Apple found themselves shipping 5-10%<sup>4</sup> fewer iPhones in Q1 crippling any plans to increase production of their AirPods. Moreover, a large share of the world’s supply of antibiotics depends on a handful of Chinese factories. More than 44% of respondents of the ISM survey do not have a plan in place to address supply disruption from China<sup>5</sup>. We don’t need to look far back in history to find other major disruptions to global supply chains such as the earthquake in 2011 that hit Japan that saw many automotive manufacturers who relied heavily on Japanese factories affected.

The pandemic’s impact on supply chains has questioned the world’s affair with China but the breakup is proving difficult. The general consensus of Western governments is the desire to

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<sup>3</sup> [https://www.ey.com/en\\_gl/advisory/how-to-build-a-supply-chain-thats-resilient-to-global-disruption](https://www.ey.com/en_gl/advisory/how-to-build-a-supply-chain-thats-resilient-to-global-disruption)

<sup>4</sup> <https://www.economist.com/international/2020/02/15/the-new-coronavirus-could-have-a-lasting-impact-on-global-supply-chains>

<sup>5</sup> [http://ism.files.cms-plus.com/ISMReport/ISM\\_Coronavirus%20Survey%20Release\\_3.11.20\\_FINAL.pdf](http://ism.files.cms-plus.com/ISMReport/ISM_Coronavirus%20Survey%20Release_3.11.20_FINAL.pdf)

shift manufacturing back home or at least build supply chains on the foundations of friendly diplomacy. Sino-US ties are unrepairable, and China no longer deems the USA important anymore, as they trade more with ASEAN than the USA as a result of trade wars that began in 2017. The 10 members of ASEAN have rapidly growing economies and account for more of China's exports than the USA for the first time.<sup>6</sup> "We're seeing that organizations who diversified their supplier base after experiencing tariff impacts, are potentially more equipped to address the effects of COVID-19 on their supply chains," said Derry, CEO of ISM.

Furthermore, China has become the largest lender to poorer economies, but these economies are now facing a recession because of the outbreak. Should we anticipate China to treat these loans as commercial and not development or relief finance for these poorer economies? We will have to wait and watch how they manage relations African countries that have borrowed. This will set a tone for the future geopolitical climate and ultimately globalisation.

## Chapter 2

### Supply Chain 2.0

Today the problems with supply chains include poor visibility, uncertainty, mistrust among functions and stakeholders, biased behaviours, misaligned incentives, and slow decision making. Only 6% of American companies are confident in their systems and capabilities for end-to-end supply chain visibility.<sup>7</sup> The pandemic has resurfaced all the problems that have existed for generations. The solution? Adding technology to the equation. This includes more data combined with new insights from existing data taken from POS, forecasting and automating manual tasks like robotic warehouse automation. Technology can help companies face the more human problems involved in the process such as trust, collaboration and clearer communication.

Our reliance on China and the lack of visibility means 53% of companies in the USA are having difficulty getting supply chain information from China.<sup>8</sup> Some manufacturers are temporarily reducing the number of SKUs they make, devoting their factories and warehouses to products with the highest-demand - thus allowing for greater visibility into the supply chain.

Nevertheless, there needs to be a sustainable solution to achieve visibility. This can be achieved where data is available in real time allowing for better decisions to be made, delivering 20% to 25% cost savings and reductions in inventory.<sup>9</sup> By implementing a supply chain control tower—a cross-functional team reviewing real-time data to make decisions quickly with the help of artificial intelligence and machine learning. To assemble such a team, you must have an executive, high-performing supply chain planner, managers from customer service, supplier management, manufacturing operations, warehousing, and transportation present. Centralising data from internal and external sources can help with

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<sup>6</sup> <https://qz.com/1861047/asean-is-now-a-bigger-trading-partner-for-china-than-the-us/>

<sup>7</sup> [https://www.ey.com/en\\_gl/advisory/covid-19-why-real-time-visibility-is-a-game-changer-for-supply-chains](https://www.ey.com/en_gl/advisory/covid-19-why-real-time-visibility-is-a-game-changer-for-supply-chains)

<sup>8</sup> [http://ism.files.cms-plus.com/ISMReport/ISM\\_Coronavirus%20Survey%20Release\\_3.11.20\\_FINAL.pdf](http://ism.files.cms-plus.com/ISMReport/ISM_Coronavirus%20Survey%20Release_3.11.20_FINAL.pdf)

<sup>9</sup> [https://www.ey.com/en\\_gl/advisory/covid-19-why-real-time-visibility-is-a-game-changer-for-supply-chains](https://www.ey.com/en_gl/advisory/covid-19-why-real-time-visibility-is-a-game-changer-for-supply-chains)

decision making. With this data the team can conduct scenario planning regularly. In minutes or hours instead of days or weeks, they can develop a range of scenarios and models resulting in optimised solutions. Eventually the technological infrastructure would self-correct workflow and assess alternative actions when a disruption has been identified; making recommendations so the analysis isn't required by a human. The impact of a control tower can be seen where a consumer health company were able to reduce their SKU range by 50 to 70%<sup>10</sup>. P&G have also implemented these technologies and have used it to adjust transport across borders in Europe to meet the surge of demand of cleaning and hygiene needs.

The pandemic has accelerated the need of such automation and nearshoring. The technology exists for an autonomous supply chain – moving goods without human intervention- but companies need the courage and determination to implement it. Nike has discussed automating its supply chain for a while, suggesting if they were to introduce 1200 automated machines along with near shoring in the USA their lead time would go from 60 to 10 days meaning 30% less fewer steps in the process, a more resilient supply chain and a reduction in shipping expenses but it doesn't come without social implications as this will mean a loss of 500,000 job losses in Asia.<sup>11</sup>

On a global perspective, different stages of the supply chain are at different maturity levels towards becoming automated. Warehouses are becoming increasingly autonomous with AMRs (Autonomous Mobile Robot) causing a boom in the robot market. The use of drones for inventory management combines computer vision technology, artificial intelligence and RFID sensors to perform inventory management tasks faster and accurately than the human eye. Coca-Cola uses IOT and visual recognition technology to sense demand in coolers installed in convenience stores, restaurants and supermarkets as a result this increases visibility so, if distributors can't provide on demand forecast, they have the data already. Autonomous trucks and freight trains are being used to move iron or in Australia.<sup>12</sup> As much as this is a logistical dream there are still lots of regulatory obstacles to overcome. Ultimately bringing supply chains closer to home and introducing automation even to some degree will mean a more resilient supply chain.

### ***COVID resilience Checklist<sup>13</sup>***

#### ***The following needs to be asked of every company.:***

1. Do you have end to end supply chain transparency?
2. Have you analysed data to match supply to demand?
3. Have you made simplifications of SKUs and furloughed where needed?
4. Have you quantified the disruption and measured the repercussions, including that of your human resources?

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<sup>10</sup> <https://www.mckinsey.com/business-functions/operations/our-insights/is-your-supply-chain-risk-blind-or-risk-resilient>

<sup>11</sup> <https://www.brinknews.com/coronavirus-is-changing-global-supply-chains-in-unexpected-ways/>

<sup>12</sup> <https://www.forbes.com/sites/stevebanker/2020/04/02/robots-and-the-autonomous-supply-chain/#2526a160787a>

<sup>13</sup> [https://www.ey.com/en\\_gl/covid-19/supply-chain-global-trade](https://www.ey.com/en_gl/covid-19/supply-chain-global-trade)

5. Have you stressed-test your supply chain?
6. Have you built in resilience into your supply chain?
7. Have you improved transparency with increased technological application?

## Chapter 3

### Survival of the Fittest

#### Big Giants vs SMEs

The narrative for multinational retailers is very different to those of local brick and mortar. Not all retailers are able to withstand the demand shocks COVID-19 has imposed. Facebook carried out a survey with 86,000 SMEs and the results were humbling: 31% of SMEs have stopped operating in the last three months, while 52% of personal businesses have shut down. Demand has increased in some sectors whilst others see a decrease for their products and services. SME's are unable to absorb demand shocks as they do not have the flexibility to maintain reasonable level of product availability. Whilst the Costco's of the world have a centralised procurement strategy. Another very different example, where LVMH, L'Oréal, and Coty were able to quickly diversify and produce hand sanitizers to meet the shortages whilst some larger automotive manufacturers are making respirators instead of cars.

#### *COVID-19 unleashed the M&A beast?*

One goes by the name of Boohoo, that has bought out the online businesses of Oasis and Warehouse so far. This will surface an opportunity for private equity groups to effectively bail out distressed companies for cheap. Causing the tear between the winners and the losers in retail to grow. In an unusual climate, big retailers may look to merge with competitors to increase SKU's at a time of shortages and streamline costs. History repeats itself as companies such as GAP bought out Athleta. "Fund managers with massive stockpiles of dry powder to use up will be in a good position to generate strong returns,"<sup>14</sup> as PE sit on record cash in June 2019. The company's coming out stronger such as Amazon, Costco may also use their position of power to vacuum up failing retailers in the coming months.

## Chapter 4

### Consumer Behaviour

Erratic consumer behaviour has inflicted demand shocks in different sectors derailing supply chains. For example, retailers have responded by rationing items, prioritising and reducing the number of SKUs. An increase in toilet paper, canned food, household cleaning, home fitness and a decline in outdoor sport equipment, swimwear, luggage, formal wear such as bridal wear can be observed.

This change of consumer behaviour will be sustained post COVID as psychologically consumers will associate current habits with convenience and safety. Although this does not

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<sup>14</sup> <https://qz.com/1846425/covid-19-could-unleash-a-wave-of-corporate-mergers-and-acquisitions/>

mean it will be received well by businesses. Currently businesses are providing deliveries for free or at low cost, but this will not be sustainable after.

## **Part II: Micro**

### **The Winners and Losers**

#### **Winners**

##### **Chapter 1**

##### **Technology**

The obvious. The technology sector has enjoyed exponential growth. Whether that's gaming or the on-demand fitness company Pelotone. Virtual doctor visits jumped from 12,000/week to more than 1 million/week during the pandemic<sup>15</sup> and Houseparty, an app that has first released in 2016 saw 17 million downloads in March.<sup>16</sup> With 350 million registered Fortnite players logging 3.2 billion hours in one month<sup>17</sup> we may just be entering a sci-fi universe where widespread use of virtual shared spaces is the new reality we didn't expect to come so soon.

##### ***Investing Decisions made in a Zoom:***

Interestingly investors bought the wrong Zoom stocks causing the share price of the 'wrong' Zoom to rocket. And this isn't the first time this has happened in investment history...

##### **Chapter 2**

##### **Cleaning Products**

Change in consumer behaviour means a rise in cleaning products and so an obvious winner would be P&G who has enjoyed a revenue spike. P&G's CFO believes 'our newfound appreciation for hygiene will outlast the pandemic'. Along with surface cleaners and disinfectants, self-medication could be a long-term trend as consumers become more hygiene conscious.

##### ***Case Study: Reckitt Benckiser***

Reckitt Benckiser, manufacturer of the leading disinfectant brand Dettol, now produces one million hand sanitisers a day as opposed to making one million a month prior to the outbreak.<sup>18</sup>

The UK Consumer Goods group fought to keep Dettol plant open during the Chinese imposed lockdown in Hubei when the pandemic hit in January. The second largest Dettol plant is in city of Jinzhou over 200km from Wuhan, the worst hit City in China. The largest

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<sup>15</sup> <https://www.morningbrew.com/daily/stories/2020/06/12/telemedicine-soars-pandemic-restrictions>

<sup>16</sup> <https://www.morningbrew.com/daily/stories/2020/04/13/brands-enjoy-renaissance-coronavirus-quarantines>

<sup>17</sup> <https://www.morningbrew.com/daily/stories/2020/05/08/covid19-speeds-formation-metaverse>

<sup>18</sup> <https://www.business-live.co.uk/manufacturing/rb-chiefs-fascinating-insight-covids-18371712>

plant being in Hubei increased daily capacity from 40 tonnes to 400+ during the pandemic to meet demand.

The first problem was with human resources. Employees at the Hubei plant were told they could keep working voluntarily. With a lockdown Li Weimin, production supervisor, drove 300km to pick up 30 workers. At first only 50 of the plant's 560 staff were able to return, with one Chen Ying, walking 105km to get back. RB even went as far as arranging hotels for employees, introduced temperature checks and kept a doctor and nurse on hand to ensure avoiding a breakout, thankfully there hasn't been one yet. In the Philippines, where lockdowns were stricter, RB converted their offices overnight into accommodation for more than 200 factory staff. Another unconventional act by the company was to strike a deal with a mask manufacturer where they would trade the manufacturers masks for their hand sanitiser.

RB's procurement to cut SKU's by 80% also helped. Nevertheless, ingredients for the products became scarce as many suppliers couldn't deliver them – a break in the chain. One of these ingredients goes by the name of Isopropanol, an alcohol in high demand during the pandemic. This could not be flown in as it is classed as a hazard. Instead, a truck drove 900km from Guangdong province after working through many logistical challenges such as finding a driver prepared to travel during lockdown.

RB's quick thinking and flexibility has come to fruition as the group's share price has since reached its highest level in 18 months. A comparable Unilever hasn't performed as well as RB but that could also be due to product offering as well as their response.<sup>19</sup>

This case study shows how a flexible and prompt response to a demand spike due to erratic consumer behaviour and ultimately the global pandemic saw Reckitt Benckiser a winner in a world in turmoil.

## Losers

### Chapter 3

#### Travel

An obvious loser is the travel industry to a lot of people's dismay. Travel industry losses will far exceed that of any other sector. The loss will be of seven times greater than that of 9/11. This includes a 78% drop in revenue over the next two months and continued losses over the rest of the year reaching \$400 billion along with the US economy only to lose 5.9 million jobs by the end of April as a result of travel declines in 2020.<sup>20</sup> A knock on effect of the blow to the aviation industry is the oil sector.

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<sup>19</sup> <https://www.ft.com/content/0e4ca436-8bde-47f7-ba1c-74f5ff642fa5>

<sup>20</sup> [https://www.ustravel.org/sites/default/files/media\\_root/document/Coronavirus2020Impacts-3.24-WEB.pdf](https://www.ustravel.org/sites/default/files/media_root/document/Coronavirus2020Impacts-3.24-WEB.pdf)

## Chapter 4

### Oil

For the first time in history suppliers will pay the consumers to take the oil off them. Oil in the United States sold at \$60/barrel but in April it sold at \$12 a barrel. For the sake of comparison, a latte-sized cup of oil would cost less than five cents. About 60% of the world's oil storage is occupied. Trump suggested taking advantage of low oil prices to get the SPR filled up – a network of massive salt caverns in Texas and Louisiana – the world's largest emergency oil supply. Trump was unable to receive the green light by congress to buy the oil outright, so they decided to allow companies lease ¼ of the space.

The obvious solution is to either stop extracting oil or store it. Storage level in Cushing – plays a central role in US oil distribution - is watched by traders worldwide to gauge the market but now this leased storage is completely sold out.

Oil idling in ships offshore globally is at a 40% high since the beginning of April. The winners in this sector of losers are the Tanker ships. These ships transport oil between ports, but now they are offering their services to hold oil as a storage unit offshore but at a premium. Other unconventional filling up spots include train cars, tiny river barges and Swedish salt caverns.

The other option to stop is the worst option for producers, because the cost of turning off a well is usually greater than production costs and they may never produce the same volume. If some of the smaller oil companies stop producing, they may never start again. However, as storage fills up around the world more oil companies will have to close. <sup>21</sup>

## Chapter 5

### Retail

A recession threatening disposable income and a supply chain at breaking point has given the luxury fashion industry a nudge. Consumer expenditure habits will change, with a social awakening across the world consumers are becoming increasingly conscious about their actions.

China stands as the world's largest garment producer and is responsible for 38% of global textile exported.<sup>22</sup> China's extensive network of fashion manufacturing infrastructure left company's depending on China even if they considered diversifying prior to COVID-19. Although, some retailers already began the transition to diversify their suppliers as trade wars caused costs to rise but still the dependency of China has proven too high as manufacturing disruptions in China still sent shock waves through the industry. This will force the retailers to consider a more resilient supply chain forcing the industry to finally implement and invest in autonomous systems.

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<sup>21</sup> <https://qz.com/1847924/with-prices-this-low-where-can-you-store-a-barrel-of-oil/>

<sup>22</sup> <https://qz.com/1801630/coronavirus-is-throwing-fashions-supply-chain-into-disarray/>

However, rethinking globalised supply chains could be at the cost of derailing another economy across the globe – and that’s without the pressure of a global pandemic. Garments make up 84% of Bangladesh’s exports and so a suspension from March till July will cost them \$3 Billion and cancelled orders will likely force more factories to close. These factories support more than 4.1 million jobs in Bangladesh.<sup>23</sup>

Without stating the obvious e-commerce will continue to grow but now at an unimaginable speed. With the likes of Etsy and Instagram, direct-to-consumer sales are becoming a comfortable concept for consumers. “We are over-retailed and over-stored, so part of this is a natural survival of the fittest,” said Deborah Weinswig founder of Coresight Research. Department stores and middle market retailers might survive by the skins of their teeth and if they do, they will shrink examples such as Debenhams that were already in trouble.

## Chapter 9

### Food

Failing supply chains have also resulted in food shortages. Short supplies are a by-product of supply chain disruption and stockpiling caused by erratic consumer behaviour. The fear of shortages meant a spike in prices of US wholesale pork of up to 30% last week and wholesale beef hit a record high. A leading meat producer, Tyson, closed a plant because workers were falling ill, as their CEO commented “millions of pounds of meat will disappear from the supply chain.” There are also supply-side issues: to understand the sheer scale, just two California farms supply about 85%<sup>24</sup> of US carrots and half of laborers on US farms are undocumented immigrants that rake in billions of dollars into taxes and economy but aren’t eligible for the government relief plan if they fall ill or lose jobs. Unknowingly farmers helped spread the disease into the rural areas causing workers to spread it across the supply chain and the country as the very nature of farming requires laborers to gather into small spaces.

Overall, some 1/3 of US pork capacity has been lost somewhere in the supply chain and farmers have nowhere to sell livestock so most farmers are having to euthanise their pigs.<sup>25</sup> Fishery sales have inverted by as much as 95%.<sup>26</sup> On the other hand, some farmers are sending more harvest to stores because there is a string of cancelled orders from places like restaurants however the logistical hiccups of reorganising the supply chain is difficult and slow. This invites the idea for direct to consumer sales of food.

One more example is of a processing plant in Cleveland that used to send Starbucks three loads of milk every day. Now, Starbucks needs just one load every three days. The Dairy Farmers of America estimates farmers are dumping up to 3.7 million gallons of milk each day.<sup>27</sup> However not all are losers in this category; Walmart Grocery's average daily

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<sup>23</sup> <https://www.morningbrew.com/daily/stories/2020/03/31/chinas-factories-back-buyers>

<sup>24</sup> <https://qz.com/1829558/covid-19-is-about-to-reach-us-farms/>

<sup>25</sup> <https://www.morningbrew.com/daily/stories/2020/04/27/tyson-foods-chairman-warns-food-supply-chain-breaking>

<sup>26</sup> <https://www.morningbrew.com/daily/stories/2020/04/13/plant-closures-threaten-us-meat-supplies>

<sup>27</sup> <https://www.morningbrew.com/daily/stories/2020/04/12/coronavirus-throws-supply-chains-balance>

downloads were up 460% over January, as of April 5 and was the most downloaded shopping app in the US, topping Amazon by 20%.<sup>28</sup>

This has also invited the opportunity for cultured meat start-ups to take advantage of a broken US meat supply chain, but can these newcomers learn from the current food supply chain? With the high prices and meat shortages because of workers falling ill at meatpacking plants, a method where less labour is required with the exception of a handful of workers to oversee cleanliness of each plant. This is perhaps how cultured meat may be less vulnerable to pandemics. Not to forget saving on shipping if meat is built in several smaller plants locally and so the final product is made closer to their end distributor the restaurant and consumer, who can enjoy their fresh food.

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<sup>28</sup> <https://www.morningbrew.com/daily/stories/2020/04/09/walmarts-grocery-app-surges-past-amazon>