



The Effects of Covid-19 on Supply Chain Management

Suddenly, it seemed like the world had come to a stop. People, places, and things deemed “non-essential” had come to a halt as if someone had turned off the power. Covid-19 had brought the world to its knees, and it remains the world’s most significant threat to existence.

The continuous rise of COVID-19 cases and deaths has health experts racing to test, trace, and isolate the virus. The global response to the virus differed between countries. The response to COVID-19 has varied across countries and the positivity rate has been impacted.

How the United States responded to Covid-19

As most European countries are readdressing their re-opening plans the United States continues to face rising cases.

The US is among the countries that hesitantly reacted to the virus's capabilities. With the implementation of travel bans, social distance guidelines, and nationwide lockdowns, the United States tried to slow the spread. It didn't help that initial testing was restricted due to the lack of medical supplies, which resulted in testing delays.

The United States was not the only country in desperate need of Personal Protective Equipment. Many other countries around the world were in dire need of supplies. The lack of resources was a glimpse into how the spread of the virus was going to cripple the nation's economy.

United States citizens also felt the financial burden as the unemployment rate skyrocketed to unprecedented levels, unemployment benefits slowly staggered in, and the one-time stimulus check (for a restricted group of individuals) was quickly spent to pay rent and necessary bills. Compared to countries in Europe that had rents and mortgages waived for the pandemic, the United States, on a federal level has yet to provide its citizens similar help.

Supply Chain Management & COVID-19

COVID-19 exposed a major underlying problem facing all significant industries: supply chain management. Supply chain management consists of all stages which go into delivering a final product to a customer. Steps in this process include sourcing, warehousing, manufacturing, inventory, and distribution. For the most part, businesses focus their supply chain efforts on cost and efficiency, since supply chains can become very expensive and complicated. However, there is a tradeoff.¹

If a company puts too much emphasis on cost and efficiency, this could result in a lack of responsiveness. COVID-19 is undoubtedly not the first disaster that has disrupted supply chain management. Earthquakes, hurricanes, and floods can easily disrupt business access to necessary products, yet, companies still find themselves vulnerable in the wake of this virus. This disruption has led to the breakdown of supply chains since resiliency was not a factor in consideration.²



COVID-19 and the Manufacturing Industry

The emergence of the virus resulted in the collapse of supply chains in the manufacturing sector. The manufacturing industry was one of the most impacted industries by the virus. COVID-19 was unprecedented in more ways than one. "For the first time in modern manufacturing history, demand, supply, and workforce availability were all affected globally *at the same time*"³. Companies are experiencing shocks throughout their supply chains, whether it's due to consumer panic buying or the stalls in the shipment of raw materials from overseas.

1. Handfield, Robert. "What Is Supply Chain Management (SCM)?" Supply Chain Resource Cooperative, 19 Feb. 2020.

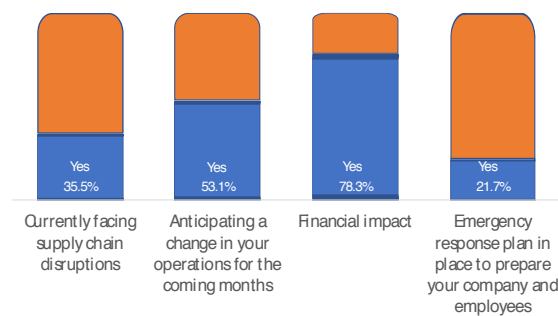
2. Thomas Y. Choi, Dale Roger and Bindiva Vakil. "Coronavirus Is a Wake-Up Call for Supply Chain Management." Harvard Business Review, 17 Apr. 2020.

3. Kroupeney, Artem. "What Will Manufacturing's New Normal Be After COVID-19?" Industry Week, 21 Apr. 2020

Additionally, manufacturing personnel don't have the liberty of working from home; their jobs on the front lines in the factory. Physical labor is needed to carry out the tasks in a manufacturing factory. The new safety protocols put in place limit the number of workers that can be in the factories, along with a factory's total output.

Early into the pandemic, The National Association of Manufacturers (NAM) surveyed its member companies to assess how COVID-19 impacted the manufacturers. This survey asked questions ranging from the effects on the company supply chain and operations, their financial expectations for the company, and if the company had an emergency response plan.⁴

The survey obtained 558 respondents, 78.3 percent of the companies surveyed expect to be negatively financially impacted by COVID-19, and 35.5 percent of the respondents claimed they had supply chain disruptions. The supply chain disruptions delay product distribution to manufacturers, resulting in a delay in delivering the final products to customers. A few of these respondents claimed the disruptions were manageable to a point, however, they were causing additional costs and forcing manufacturers to find alternative suppliers.⁴



⁵ COVID-19 caused the manufacturing industry to innovate quickly or get crippled by the disease. New strategies arose in the face of supply chain challenges in order to support the flexibility within the manufacturing industry. In the face of a crisis, it's common for companies to shift their production to meet the unprecedented demand of society. For instance, the pandemic brought about the critical demand of hand sanitizers and other cleaning supplies. As a result, many breweries

and distilleries shifter their production to meet this demand. While products like toilet paper and paper towels were quite literally flying off the shelves, paper product manufacturers had to ramp up production. Clothing manufacturers shifted their production to meet the need for PPE.

A prominent problem that has been illuminated by this pandemic is the dependency of outside countries like China and Japan to deliver everyday products. It's no secret that most US companies outsource their manufacturing capabilities overseas. This common practice to cut costs has led to an unhealthy dependency that has hurt the US during the pandemic. Therefore, there might be changes to international sourcing coming in the future.



COVID-19 & Other Industries

In addition to the manufacturing industry, other industries such as energy & resources, high-tech and telecommunications, retail, and travel & transportation also felt supply chain impacts due to COVID-19.⁶

Regarding energy and resources, a significant factor in the halt of this supply chain is due to the oil supply chain slowing because less oil and oil-based products are demanded. Early March 2020, the oil-producing countries of the Organization of the Petroleum Exporting Countries (OPEC) called for a deep production cut of 1.5 million barrels per day to support dropping oil prices.⁶ It is notable to mention Diamond Offshore Drilling filed for Chapter 11 bankruptcy on April 26, 2020, due to low oil demand amid the COVID-19 outbreak.⁷

The high-tech and telecommunications sector will feel a range of effects from COVID-19 as software vendors such as Zoom and Slack see

4. "Coronavirus Special Survey." *Economic and Operational Impacts of COVID-19 to Manufacturers*, National Association of Manufacturers, 2020.

5. Abel, Janice. "Impact Of COVID-19 On Industrial Manufacturers." ARC Advisory, www.arcweb.com, 14 May 2020

6. Wagner, Dave, et al. "Coronavirus Impact Index by Industry." *Computer Economics*, Avasant Research, 2020.

7. Wethe, David, and Jeremy Hill. "Diamond Offshore Files for Bankruptcy Amid Historic Crude Crash." *Bloomberg.com*, Bloomberg, 26 Apr. 2020.

increased demand as more companies resort to Work From home, while the manufacturing of computer hardware will be hard hit as a result of factory closures and quarantines. Major industry players such as Apple and Microsoft have warned of lower-than-expected earnings due to global supply chain issues and lower consumer demand.⁶

The impact of COVID-19 has affected the retail industry differently, depending on the company. Department stores such as J-Crew and Neiman Marcus filed for bankruptcy in Spring 2020, while Walmart, Target, and Amazon have seen increases in revenues as consumers stock up on household items.

However, there is one commonality across these different retailers; consumers avoiding brick-and-mortar stores and opting for online purchasing. While these online sales have increased, retailers could ultimately face issues delivering products to customers if manufacturing factories shut down again due to the increased spread of COVID-19.⁶

The final industry to cover is the travel and transportation industry. Thousands of planes have been grounded as governments worldwide partially (or wholly) ban travel into their countries as a measure to stop the spread of COVID-19. Corporate conferences, business, and personal trips and vacations have all been postponed or canceled due to the virus, so the travel and transportation industry is feeling the effects from these postponed trips.⁶

Conclusion

With the current threat of COVID-19 still looming, it's hard to see an end, let alone what the world will be like post-COVID-19. After every crisis or natural disaster, there is always a rebuilding phase. The question that still needs to be answered is if there a "normal" to go back to. Clearly, there are changes within supply management that need to be made.

Supply chain management leaders are now realizing that their focus on efficiency resulted in the lack of crisis management. There will now be a need to increase storage space, especially since e-commerce businesses have seen an increase in business. Additionally, companies will now start to put an emphasis on digital transformation⁶ now that most of the world has had to adjust to working at home. The use of AI and predictive analytics will be

sought out now that the coronavirus has caused all companies to take the necessary precautions to be prepared for the unknown. One thing is for certain, people are and will be adjusting to a new way of life after COVID-19.

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4. "Coronavirus Special Survey." *Economic and Operational Impacts of COVID-19 to Manufacturers*, National Association of Manufacturers, 2020.

5. Abel, Janice. "Impact Of COVID-19 On Industrial Manufacturers." ARC Advisory, www.arcweb.com, 14 May 2020

6. Wagner, Dave, et al. "Coronavirus Impact Index by Industry." *Computer Economics*, Avasant Research, 2020.

7. Wethe, David, and Jeremy Hill. "Diamond Offshore Files for Bankruptcy Amid Historic Crude Crash." *Bloomberg.com*, Bloomberg, 26 Apr. 2020.

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6. Wagner, Dave, et al. "Coronavirus Impact Index by Industry." *Computer Economics*, Avasant Research, 2020