International Journal of Managerial Studies and Research (IJMSR)
Volume 11, Issue 7, July 2023, PP 01-06
ISSN 2349-0330 (Print) & ISSN 2349-0349 (Online)
https://doi.org/10.20431/2349-0349.1107001
www.arcjournals.org

The COVID-19 Disruption of Global Economy and Potential Solutions

Aryan Goel[1], Prof. Ajai Gaur (Mentor)[2]

[1]*Senior at St Albans School in Washington DC, USA*
[2]*Professor of Strategic Management and International Business, Vice-Chair in the Department of Management, Global Business at Rutgers Business School – Newark and New Brunswick, USA*

Corresponding Author: *Aryan Goel, *Senior at St Albans School in Washington DC, USA*

Abstract: *The coronavirus (Covid-19) first appeared in China in December of 2019. Since then, the disease has resulted in an ongoing pandemic and social and economic disruption globally. The coronavirus has caused volatile changes in the demand for consumer goods, causing logistics issues for many companies. After the pandemic, the rapid s-pike in consumer demand created many bottlenecks in the supply chains, creating shortages in the workforce and lowering the production level throughout different industries. As the economy has started to reopen, the rapid spike in business caused a shortage of workers. The reduced productivity forces businesses to reinvent their approach to satisfying consumer demand by increasing employee benefit and flexibility and incorporating more automation and analytics into their supply chains and logistics.*

Keywords: *Corona Virus, Global Economy, Covid, Supply Chain, Global Markets, Logistics, GDP Growth*

1. Introduction

The coronavirus (Covid-19) first appeared in China in December of 2019. Since then, the disease has resulted in an ongoing pandemic and social and economic disruption globally. The coronavirus has caused volatile changes in the demand for consumer goods, causing logistics issues for many companies. After the pandemic, the rapid spike in consumer demand created many bottlenecks in the supply chains, creating shortages in the workforce and lowering the production level throughout different industries. As the economy has started to reopen, the rapid spike in business caused a shortage of workers. The reduced productivity forces businesses to reinvent their approach to satisfying consumer demand by increasing employee benefit and flexibility and incorporating more automation and analytics into their supply chains and logistics.

2. The Consequences of Covid-19 on the Workforce

In early 2020, many businesses shrank their workforce because of the global pandemic. The travel industry laid off many workers during the early stages of the Covid-19 pandemic. Travel restrictions were put in place disrupting various airlines, restaurants, and other businesses that rely on tourism. According to ILO Monitor, about 114 million jobs were lost globally in 2020. (ILO) Furthermore, based on data from ESI (employer-sponsored health insurance), about 14.6 million of these jobs were lost in the U.S. With the reopening of the economy in 2021, a sharp pivot of growth has hit the global markets. As businesses try to reopen, they find it difficult to keep up with consumers' increasing demand in 2021. Consumers have stayed home, accumulating large savings during the pandemic. As restrictions on businesses are lifted, a vaccine is available, and it has become more socially acceptable to travel and return to everyday customs; consumers have been pouring all of their savings into the market, creating a huge spike in demand. These effects are displayed by the housing and automobile market hitting new highs in over a decade during the recovery of Covid-19.

Businesses have been trying to hire workers to fulfill demand needs, with a record 8.3 million job openings in April. During the pandemic, many workers lost their jobs, yet businesses have struggled to hire employees as the economy recovered in 2021. According to BLS (Bureau of Labor Statistics), approximately 4.3 million U.S. workers left their jobs as of August 2021, a 3 percent decrease in the U.S workforce. (*Commonwealth Fund*) The lack of interest in jobs results from a change in the mindset of the working population in America. Many workers have gotten accustomed to working from home and are looking for jobs with more flexibility. Other workers have seen the desperation of businesses as an advantage and will only work for better wages and benefits. In the U.S itself, the vaccine mandate and required covid testing have become political, leaving a significant burden on employers to comply with their employees' views. Without the basic necessity of a workforce, businesses can not sell, buy, or transport goods. The Great resignation is pressuring many businesses to make changes in their recruitment, so they can keep their establishment running.

3. LOGISTICS PROBLEMS

The lack of a workforce has created much disruption in global supply chains because companies do not have the personnel to transport and restock goods. Many countries such as the U.S, Germany, and the U.K suffer from a shortage of truck drivers. Unable to transport products across the country, many countries suffer from bottlenecks in their domestic supply chains. Some ports in the U.S face up to an 80% increase in congestion. To fight the domestic supply chain issues, the Port of Los Angeles has started to operate 24 hours a day, seven days a week, to help relieve the congestion in other ports around the U.S. (*CNBC)* The difficulty of restocking shelves has increased the prices of goods, making it more expensive for the average family to buy necessities. With Executive Order 14005, President Biden aims to tackle issues with labor resignations that continue to cause bottlenecks at U.S. ports. (*The White House)* Supply chains will have to play catch up with domestic demands as bottlenecks become more of an issue for different industries.

Due to Covid, many businesses decreased their inventory capabilities and could not keep up with consumer demand. In March, the economy-wide and retail-sector inventory-to-sales ratios hit record lows. The ratios measure how many days of current sales businesses and retailers could support from existing inventories. Consumer demand plummeted at the pandemic's beginning, and companies were left with billions of unsold goods. Momentarily there was a spike in the economy-wide and retail-sector inventory-to-sales ratios before companies liquidated all of their merchandise. As the economy rises, businesses have not restored their inventories to pre-pandemic levels. To better understand the problem, take this example, a coffee shop lowered its inventory of 20,000 coffee beans to 5,000 coffee beans. The coffee shop used to use about 4,000 beans a week; it now only uses 1,000 beans a week because of the pandemic. It makes sense for a business to lower their inventory to keep a proper inventory-to-sales ratio and not have unnecessary spending to support an unneeded inventory space. Fast forward to 2021, people are going back to work, and the demand for coffee beans has risen back to 4,000 beans a week. The coffee shop can not fix their inventory at the same pace of the demand and must use a fourth of their original inventory to support pre-pandemic levels of business. As businesses struggle to restock their inventories, it puts more stress on supply chains to fulfill this need. This scenario illustrates that the low inventories of businesses are creating many shortage problems.

4. SHORTAGES LEADING TO LOWERED PRODUCTIVITY

The shortages caused by the disruption of global supply chains have increased product prices and lowered production levels. Around 60% of manufacturing, construction, and retail trade businesses are experiencing domestic suppliers delays. The shortages of goods are increasing the prices of products as they hit the stores' shelves. Between May 2020 and 2021, The prices of commodities tracked by the Producer Price Index reported a 19 percent increase (the largest increase since 1974). (The White House)The shortage of raw materials has halted production and inflated prices, such as lumber in the construction industry. Lumber prices jumped to $1,711 per thousand board feet in 2021, meaning the average cost to frame a house out of lumber would be about four times the pre-pandemic price. (The White House)

The shortage of semiconductor chips in the automobile industry has held back the production of new vehicles. The supply chains of semiconductor chips are complex. The production of a semiconductor chip can go through many different firms; therefore, locating bottlenecks can be especially difficult. Parties in the semiconductor industry distrust each other to disclose any information to help locate the bottlenecks. They worry that someone will give others the information to undercut their prices. Scott

Hill, Executive Partner and member of the Corporate Practice Team at Varnum LLP, expects chip supply recovery into late 2022. (T*he National Law Review*) Shortages will continue to hold back production and the economy's recovery while inflating the cost of various commodities.

The shortage of consumer goods and raw materials has slowed the economy's recovery and growth. Many businesses have reported lower earnings without materials to produce goods, not meeting predicted growth. China released its third-quarter GDP; it grew a poor 4.9% from the previous quarter, as industrial activity rose less than expected in September 2021. (IMF) China only increased by 3.1%, below the 4.5% expected by Reuters. According to the OECD, the major G7 countries experienced a slowdown in GDP growth compared to the second quarter. G7 countries went from a 1.7% increase in the second quarter to 0.9% in the third quarter of 2021. (*OECD*) The supply chain issues and labor shortages lead to higher production costs which will impact the earnings for many businesses. A rise in input cost will significantly impact low-margin companies in transportation, general retail, construction, and autos industries. On the contrary, the companies that will receive the least impact would have wide profit margins, limited raw material costs, and small workforces. These companies fall in growth sectors such as tech and health care. The shortages in labor and materials have directly increased the production costs of many goods, consequently creating negative outlooks for many companies.

5. METHODS FOR BUSINESSES CAN USE TO REFILL THEIR WORKFORCE

As the economy recovers from the consequences of covid, businesses are implementing different tactics to combat the disruption of covid. For example, the heavily impacted industries, the travel industry, had to yield to the worker's demands to refill their workforce. Hotels increased their wages and flexibility for their employees, decreasing their profit margin. Many manual workers found jobs in different industries while hotels were shut down; therefore, hotels will have to compete with wages outside their industry to get their workers back. The increased benefits for workers will help businesses repair their reduced workforce while inflating the prices of the hotels will make up for the profit loss. Increased wages are not the most cost-effective method; businesses can attempt to reschedule their work hours to increase job satisfaction. The standard 9-5 is not logical for the majority of parents that want to drop off and pick up their children. Businesses should make more part-time and flexible shift options for employees while including increased benefits.

Businesses can also invest in a solid backbone in their companies to persevere productivity if they can not find enough talent. Suppose a business severely lacks talent and does not have the resources to revamp its workforce. In that case, they can invest their resources only in a robust and capable backbone of leaders in their company. An experienced leader in charge of a team of people will be able to lead inexperienced workers in the right direction. After gaining proper guidance, a group of new workers would be able to fulfill the job requirements and be cheaper than hiring older, more capable talent. Unqualified workers will make many mistakes; therefore, the business must be patient and prepared to respond to problems. In the long-term, this approach allows desperate businesses to hold on while their workforce recovers from the great resignation.

Another approach that businesses could implement is direct partnerships with other organizations to develop more young talent in their workforce. During the great resignation, many workers left their companies, leaving many opportunities to young people who recently finished their education. For companies to hire these young people and replace old employees, companies should create direct partnerships with colleges. By creating a direct partnership with various businesses, college students would be able to gain training on the on-hand work that workers in their field do daily. College students would be very attracted to these opportunities because the preparation would make them more successful in their future careers. Businesses would benefit from these training programs because they would build relationships with the future generation of workers. After training them, the college's students would be more inclined to stay with the company and accept any offers. By creating direct partnerships with colleges, businesses improve the size and capabilities of their workforce while increasing the number of young talent in their organizations.

Businesses can decrease their expenses by cutting down on office space and allowing employees to work from home. Since many employees are now working from home, large office buildings become more unoccupied and unnecessary. Instead of assigning employees to individual offices or cubicles, have an online attendance sheet where employees can reserve workplaces in the building. Therefore, if certain employees can take a day off and work from home, someone else can replace them in their cubicle. This approach will allow employees to have more flexibility in their schedules while businesses can reduce their expenditures. The fault to this approach is that employees might find the continual chore of reserving a workplace inconvenient or if an employee forgets to reserve a workplace. Employees that constantly come in for work and prefer a consistent workplace may find the continuous changing annoying. Therefore, employees should be allowed and encouraged to reserve workplaces up to 3 months in advance with a two-week notice. Businesses increase their profit margin by avoiding maintenance costs, property taxes, and construction costs in this compromising solution. Similarly, employees benefit from more flexibility, less commute time, and reduced travel expenses. Increasing benefits and altering work-customs will allow businesses to be more synchronized with the new Covid mindset in the job market.

6. Improving Logistics

Optimized Logistics minimized the company's expense while keeping the customer satisfied with their performance. Using Operations Research (OR), a company can outline its logistics and estimate the optimal solution. OR analysts need a detailed understanding of the logistics for a company; therefore, they can apply their advanced mathematical and analytical methods to help the company's understanding of how various logistical decisions affect service for customers and total cost. Usually, the least expensive method of transportation of goods is more warehouses and less utilization of airplanes, ships, and trucks. The problem with reducing investment in transportation is that it would force businesses to transport inventory in bulk, meaning slower transportation. The slower transportation can lead to customer dissatisfaction, allowing competitors to steal customers. In reverse, reducing inventory and increasing dependence on transportation decreases the company's warehousing maintenance costs. However, customers that live farther away from the central warehouse will be disappointed with the speed of delivery and may ask for faster transportation which is more expensive. Also, customers farther away will be opted for competitors that are much closer and offer faster service. OR analysis aims to find the most efficient solution using a system approach, meaning trying to optimize the entire system as a whole rather than one element. The solution usually is a tradeoff between various parts such as transportation, inventory, warehousing, information exchange, and customer service while considering a company's circumstances.

Another approach to improving logistics is incorporating data science and automation into inventory management. Using data sciences, companies can evaluate their inventory, considering all of the stock and removing the dead stock. Companies can also forecast their demand, analyze consumer spending patterns, and prepare the proper production level. Increasing visibility for inventory management about their demand and warehouses will help a business avoid the excess stock. Overstocking leads to increased maintenance costs and goods degradation as inventory sits on the shelves for too long. Having more consistent inventory management will help businesses avoid excess or inventory storage. Increased automation can help companies track sales and supply issues, optimizing their inventory. By applying a software solution into a warehouse, a company can track if a supplier is constantly falling short on deliveries and be able to switch suppliers. Instead of using spreadsheet and other manual devices, improving a POS system can help a company track sales and prioritize stock that make the most profit. Companies maximize profit by increasing automation and data analysis to improve the visibility of their inventory.

7. Improving Productivity

In order to improve a business's productivity, business leaders should consider optimizing and strengthening their supply chains by training their workforce and enhancing the cooperation between parts of their supply chain. Leaders should focus on reskilling supply chain workers to adapt to new digital technologies, company strategies, and working methods. The improved employees will increase the efficiency of the supply chains, creating fewer issues in the manufacturing and transportation of goods. Another way to grow productivity is to heighten the visibility through supply chains, shifting from linear supply chains to more integrated networks. Linear supply means that the digital connection to suppliers is limited to sharing emails and spreadsheets compared to more integrated networks connecting more stakeholders. The consequences of disconnection in supply chains are displayed by the struggle of the automobile industry to find the bottlenecks in the semiconductor chips supply chains. Businesses can implement sensors to provide valuable data on where goods are in the chain and their status, giving management more information to make adjustments. Monitoring the condition of goods, increased virtual collaboration, and more experienced workers will speed up the recovery from Covid-19 and prevent future disruptions in the supply chains.

The modernization of the supply chain increases the efficiency of transportation. Creating autonomous supply chains will optimize transportation of goods between the supplier, manufacturers, and organizations. 500 senior-level executives from various countries and a range of sectors were asked about their supply chain procedure to get insight into future automation plans for their supply chains. Many business leaders said incorporating AI and other digital technologies would be a priority. It would help management "make predictive and prescriptive decisions" (Harapko) in response to demand changes. More integrated management can quickly adjust transportation and production schedules in response to an externality in the supply chain. This theory was proven by approximately 90% of correspondences with mostly autonomous supply chains, who said they experienced a significant increase in market share and customer satisfaction (Harapko). Improving the visibility between every supplier and manufacturer increases transportation efficiency. The repercussions of not being flexible in demanding changes are displayed by the various bottlenecks created during the Covid Pandemic. Increased automation increases transportation speed and adaptation to new expectations placed on suppliers.

8. Conclusion

The Covid Pandemic has accelerated pre-existing issues in the workforce and logistics, exposing the problems of lack of communication and digitalization. The productivity of businesses decreased due to shortages and instability, pressuring businesses to reinvent their approaches to recruitment and management. Businesses aim to create autonomous supply chains to prevent future disruptions of bottlenecks and shortages issues. Transitioning into a business model that places importance on analytics and data science will increase the efficiency and longevity of many recovering companies. The changes being implemented will have beneficial ramifications to many free-market countries, improving their standard of living and economy. Business leaders should not focus on short-term interests but on the future of their business by enacting the changes right now.

References

Ellyatt, Holly. "Supply Chain Chaos Is Already Hitting Global Growth. and It's about to Get Worse." *CNBC*, CNBC, 19 Oct. 2021, https://www.cnbc.com/2021/10/18/supply-chain-chaos-is-hitting-global-growth-and-could-get-worse.html.

"GDP Growth-Third Quarter of 2021, OECD." *GDP Growth - Third Quarter of 2021, OECD*, https://www.oecd.org/newsroom/gdp-growth-third-quarter-2021-oecd.htm.

"Global Supply Chains in a Post-Pandemic World." *Harvard Business Review*, 23 Nov. 2021, https://hbr.org/2020/09/global-supply-chains-in-a-post-pandemic-world.

Harapko, Sean. "How Covid-19 Impacted Supply Chains and What Comes Next." *EY*, EY, 18 Feb. 2021, https://www.ey.com/en_us/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next.

"How Covid-19 Is Impacting Global Supply Chains & How Companies Can Cope." *The National Law Review*, https://www.natlawreview.com/article/how-covid-19-impacting-global-supply-chains-how-companies-can-cope.

"How Many Americans Have Lost Jobs with Employer Health Coverage during the Pandemic?" *How Many Have Lost Jobs with Employer Coverage During Pandemic? | Commonwealth Fund*, https://www.commonwealthfund.org/publications/issue-briefs/2020/oct/how-many-lost-jobs-employer-coverage-pandemic.

Person, and David Lawder. "IMF Raises Growth Forecasts for Rich Nations, Dims Outlook for Developing World." *Reuters*, Thomson Reuters, 27 July 2021, https://www.reuters.com/business/imf-lifts-growth-forecasts-rich-nations-dims-outlook-developing-world-2021-07-27/

Steinberg, Glenn A. "How Reinventing the Supply Chain Can Lead to an Autonomous Future." *EY*, EY, 14 June 2019,https://www.ey.com/en_us/consulting/how-reinventing-the-supply-chain-can-lead-to-an-autonomous-future.

"Uncertain and Uneven Recovery Expected Following Unprecedented Labour Market Crisis." *ILO*, 25 Jan. 2021, https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_766949/lang--en/index.htm.

"Why the Pandemic Has Disrupted Supply Chains." *The White House*, The United States Government, 30 Nov. 2021, https://www.whitehouse.gov/cea/blog/2021/06/17/why-the-pandemic-has-disrupted-supply-chains/.

"Informit." *InformIT*, https://www.informit.com/articles/article.aspx?p=2171313.

AUTHOR'S BIOGRAPHY

Aryan Goel, is a senior at St Albans School in Washington DC, USA

MENTOR'S BIOGRAPHY

Ajai Gaur, is a Professor of Strategic Management and International Business and Vice-Chair in the Department of Management and Global Business at Rutgers Business School – Newark and New Brunswick, with an additional appointment in the Division of Global Affairs, Rutgers University.

Citation: *Aryan Goel "The COVID-19 Disruption of Global Economy and Potential Solutions " International Journal of Managerial Studies and Research (IJMSR), vol 11, no. 7, 2023, pp. 01-06. DOI: https://doi.org/ 10.20431/2349-0349.1107001.*