

Chapter 5

The Impact of the COVID–19 Pandemic on Manpower (Labor) and the Supply Chain

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ABSTRACT

The COVID-19 pandemic of 2020 has changed everything on a global scale. The lockdowns and general fear of the unknown caused a dramatic increase in ecommerce as buyers turned to the internet to get the goods and products they wanted. Many businesses had to close during this time due to lack of customers, lack of workers, and due to staffing issues due to the virus. As things started opening back up the demand for goods and services has been overwhelming to many industries. Ships are waiting off the coast for months to be unloaded, shelves are empty, the next day deliveries are taking days and weeks as the transportation system is overwhelmed. High demand and a lack of workers in every industry has led to a major global supply chain disruption that has not been experienced before. These disruptions affect every part of the supply chain from manufactures, warehouses, shipping, rail, truck, down to the retail level. This chapter will look at two companies in the Pittsburgh area (i.e., FedEx Ground and Ensinger, Inc.).

INTRODUCTION

COVID-19 Economic Impacts

Walk into almost any store and you find empty shelves. Order something online from any of the major retailers and what used to be next day delivery may now be a week later and sometimes a month later. The shortages that are seen everywhere are painting a bleak picture for the holiday season. The labor shortages have been linked to the disruptions in the supply chain. This labor shortage comes at a time of high demand and effects every part of the supply chain. “Companies are facing sharply higher demand for goods and services, with sharply less labor availability, and substantial uncertainty about their ability to pass cost on their customers.” (Conerly, 2021, p. 4). With all parts of the supply chain impacted by

DOI: 10.4018/978-1-6684-5250-9.ch005

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this labor shortage the effects are widespread. The Global supply chain woes all point back to the lack of labor (Caminiti, 2021). Shipping cost have increased four to five times and transit times have increased three to four times longer than usual. (Caminiti, 2021). There are many reasons for the labor shortage but its impact on the supply chain is long lasting and impactful.

BACKGROUND

Agility in Supply Chains

In an uncertain environment, it is critical that the supply chain management adopts different, and more innovative strategies that support a better response to customer needs. They must be able to respond rapidly and in a cost-effective way both in terms of volume and variety. Supply chains are unfortunately vulnerable to disruptions which makes risk to business continuity very high and continuing to get higher. There are many changes that businesses are constantly dealing with in regard to customer service to relationship management, forecasting to end-casting, functional integration to process integration, and share of information among supply chain entities. These changes have been stimulated by restructuring to drive down costs, the increasing importance of reverse logistics to manage waste and protect the environment, and constant search for cheap manufacturing labor. Businesses are forced to be reactive, and need to find ways to become proactive. Agile supply chain management refers to, “the degree of flexibility, velocity, responsiveness, competence, visibility and collaboration will influence the supply chain behavior supporting the quick response to changes in demand,” (Agile and resilient ..., 2012).

An agile supply chain management approach depends on market sensibility, customer satisfaction, quality improvement, delivery speed, data accuracy, new product introduction, and much more. This approach helps the supply chain respond quickly and pursues responsiveness of the supply network. Having this type of supply chain skill will influence the supply chain performance and increase competitiveness. As suggested by Kim and Davis (2016), sustainability can be enhanced by utilizing an agile approach. They conducted an analysis of conflict minerals reports submitted to the Securities and Exchange Commission (SEC) by directive of Section 1502 of the Dodd-Frank Act 2010. This section of Dodd-Frank required firms to determine and report whether product contained conflict minerals from the Democratic Republic of Congo (DRC) geographic area benefitted armed militia groups. In their narrative, the authors analyze and critique data that is required to show the origin of their products. As the operations of any give firm become more complex, the control over their supply chain operations is lessened to the point that a firm may not be aware of the source of their end products. Kim and Davis (2016) found that by identifying the organizational factors that enable a firm to vet their supply chain versus factors that hinder their ability to provide effective governance of their supply chain can be a very effective supply chain strategy in adverse environmental conditions.

According to Carvalho, et al. (2012), the 6 main characteristics of the supply chain. Flexibility refers to the ability of a supply chain to adjust its speed, destinations, and volume in response to changes in demand. It is critical for the supply chain to be consistent with the demand of its customers. As customer needs change, the product or service changes in regard to what will make their customers happy. Velocity refers to the ability to complete an activity as quickly as possible. As disruptions in the supply chain occur, recovery needs to happen instantly. Responsiveness is the ability to identify changes in demand and responding quickly. This relates to market sensitivity and response to real demand. It is better for a

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