Chapter 1
In Search of a Remedy for Disruptions:
Assessing the Effects of Inflationary Pressures on Supply Chains During the COVID-19 Era

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ABSTRACT

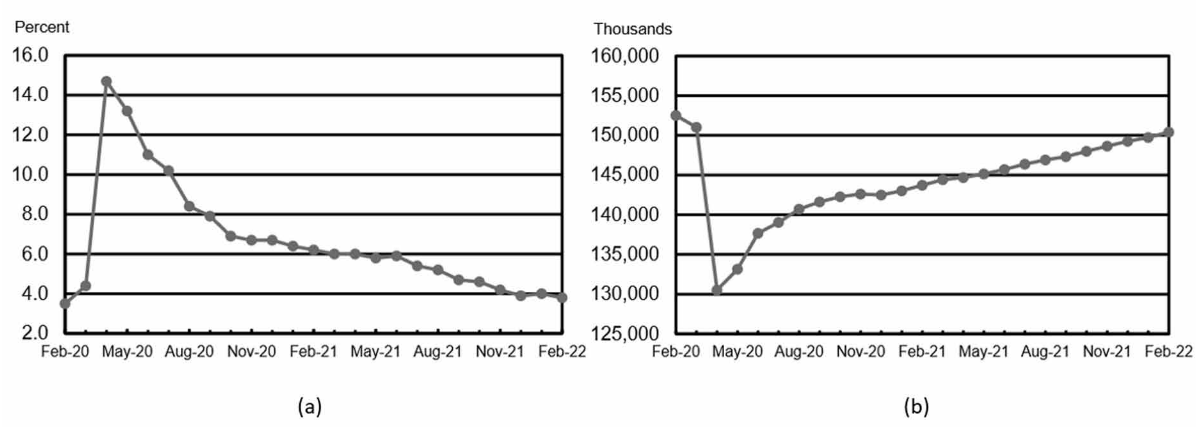
This chapter assesses the effects of worldwide supply chain disruptions, focusing on the role of the U.S. monetary policy as a catalyst that contributed to the shift of consumer demand from its pre-COVID-19 equilibrium. It analyses how stimulus payments and quantitative easing facilitated labour shortages in supply chain operations and how the growing demand increased the magnitude of shortages, followed by a bullwhip effect in orders from retailers. The study argues that the economic equilibrium between supply and demand for goods that has been greatly affected by the outbreak of COVID-19 has also been affected by substantial monetary changes that have further increased the scope of supply chain disruptions due to their inflationary effects.

1. INTRODUCTION

COVID-19 was, and still is, a life changing event that affected nearly every aspect of the global economy, including the demand and the supply of services and goods in every sector of the economy. Lockdowns and quarantines worldwide, notably in China—the world's leading production hub—affected the supply of labour, raw materials, and finished products, causing significant disruptions in manufacturing, shipping, and transportation of goods. Additionally, stimulus payments issued by the government to selected groups of citizens, companies whose income and revenues were negatively affected by the pandemic, or to all citizens, as evidenced in the U.S., caused major changes in consumer behaviour. This fostered

DOI: 10.4018/978-1-6684-5876-1.ch001

Figure 1. (a) Unemployment rate; seasonally adjusted, (b) Nonfarm payroll employment; seasonally adjusted (U.S. Bureau of Labor Statistics, 2022).



growth in the demand for consumer goods, which facilitated additional demand for raw materials and production facilities when these resources were at their lowest supply and inventory levels.

Some of these effects are indeed attributed to labour shortages resulting from long periods of lockdowns in many countries worldwide (see Table 1), which led to a reduction in production capacities in many economy sectors. Here, the economic equilibrium between supply and demand for goods has also been greatly affected by these major events. Before COVID-19, demand was influenced largely by factors such as population growth, economic growth, market trends, and changes in consumer behaviour and preferences. However, monetary policies implemented by governments worldwide (and particularly the quantitative easing and the stimulus created by the U.S. Federal Reserve) caused major shifts in demand for goods, services, and raw materials, impacting an already fragile global economy.

Since the global outbreak of COVID-19 in March 2020, the changes in infection rates and the appearance of new variants in the population, as well as the development and distribution of new vaccines and methods for treating patients, have dictated the market dynamics in terms of the availability of resources, such as labour, production, and shipping facilities. Consumer behaviour was also affected in terms of the propensity of consumers to purchase new services and goods, changes in their personal income, and the level of their risk aversion to engaging in the purchase of costly products as well as day-to-day goods. Here, purchasing behaviour was influenced by the availability of goods, which was volatile in nature due to supply chain disruptions.

Global supply chains need to function in a complete coherence resulting in an uninterrupted flow of goods throughout all the parts that construct them as intra- and inter-linked chains. However, when a single part of the supply chain suffers from a shortage of resources necessary to carry out its functions or bottlenecks, such as labour shortages (Fig. 1a and b), disruptions begin to appear in all other parts of the supply chain, affecting its functioning and the balance of received and issued goods. For example, in October 2021, a shortage of 80,000 truck drivers in the U.S. was reported (ATA, 2021). Other disruptions in supply chains were present in maritime shipping operations, where shortages in available shipping containers existed throughout 2020-2021. Additionally, backlogs of ships awaiting off-loading in major ports worldwide for long periods created additional disruptions in supply chains due to scheduling changes of cargo ships and shipments (Notteboom et al., 2021).

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