General U.S. Supply Chain Issues 2019-2021

Dr. Christopher Hekimian

On February 24th of 2021 President Joseph Biden issued Executive Order 14017 entitled "America's Supply Chains". Paramount in the EO was the requirement that the U.S. government agencies of Departments of Commerce, State, Energy, Defense, and Health and Human Services complete reports on risks facing the key supply chains that support their areas of responsibility. The EO was originated based observations that effects of supply chain risk factors had already become manifest and the risk of additional detrimental effects and conditions in the future, was elevated.

The manifest effects of supply chain risks that were observed then, and are still observable in an exacerbated state as of the date of this report include the following:

1. Elevated inflation in the U.S. dollar driving up the cost of paying wages, conducting operations and production. Government spending, in particular as it applies to paying interest on the national debt, is a big contributor to this effect.
2. Confidence in the value of the U.S. dollar that impacts the interest rates managed by the federal reserve impacts the ability to pay against the national debt and can be cited as a reason to print more dollars further aggravating inflation.
3. Confidence in the U.S. dollar and the U.S. and world markets in general were negatively impacted by the effects of government responses to COVID-19 virus that damaged businesses or eliminated them and impacted personal savings, the housing market and employment. In addition to constraining supply chains and driving up costs for goods and transportation of goods, businesses have been faced with acute challenges in finding and keeping employees who have been provided alternatives to employment in the form of extended unemployment benefits and rent and debt forgiveness mandated or encouraged at various levels of government.
4. Early in the COVID-19 response effort many countries shut down or severely limited their exports. Many countries would not allow import activities during the same period. This condition as well as reduced production due to lockdowns contributed to a lack of demand for shipping containers and a need for medium to long term storage of them. Since then many have been lost track of. While the regular flow of shipping containers flowing in and out of countries was interrupted and only began to resume in fits and starts beginning with China, the distribution of shipping containers continued to be distorted and skewed[1]. Thus, too many shipping containers are ending up in the U.S. such that U.S. importers are often subject to elevated shipping costs and delays in order to account for acquisition of empty containers.

[1] "Global Shipping Container Shortage: the story so far", Frankie Youd, Ship Technology, 29 April 2021, URL: ship-technology.com/features/global-shipping-container-shortage-the-story-so-far/

5. The current state of trade with China favors China's ability to export to the U.S. despite China's unwillingness to fail to meet the import level of $200B that were agreed upon with the Trump administration in 2020. The shortfall of about 30% [2], negatively affects the GNP of the U.S. as well as the surplus of shipping containers in the U.S. (and corresponding shortage of them found in Asia).
6. Shipping companies have been or are facing state-imposed COVID-19 restrictions upon entering U.S. ports. These restrictions typically require that the ship employees (i.e., crew) remain in their ships and do not disembark onto American soil. This represents an unattractive working condition that impacts the ability of foreign shippers to find ship crews and drives up the cost of hiring crewmembers.
7. Based on 2018 gross volume of shipping containers handled by the top ten shipping ports in the U.S., ports in California account for 39% of the total shipping volume across ports in 7 other states[3]. Further, only ports in the states of California, Washington and Oregon have shipping lanes to and from Asia that are practical by any current standard. This has the effect of granting the state governments of California, Oregon and Washington undue influence over the supply chains originating from Asia. As a result, in the case of California, state laws such as Assembly Bill 5 (CA AB- 5) have had a detrimental impact on the ability of companies supporting the operation out and transportation out of its ports. CA AB-5 stipulated a legal test for whether an independent contractor could be considered as an independent contractor by the state for purposes of the labor, unemployment insurance and industrial welfare commission codes. The bill had the effect of forcing California businesses that forthwith hired independent contractors, to budget for those contractors as employees which many could not afford. Stagnation of operations as well as financial uncertainties imposed by the law caused many trucking, warehousing and longshoreman businesses to shut down or flee the state. This contributed to the back up of container ships offshore as they waited for a fewer number of trucker to remove goods from overloaded and understaffed warehouses so the warehouses could be replenished by a smaller number of dock workers. The stagnation in shipping that is still occurring at the west coast ports based on policy such as CA AB-5 propagates eastward. Truckers that don't have freight to move go out of business. A Department of Labor report issued in April of 2020 indicated that more than 88,000 trucking jobs were lost nationwide- the biggest single month loss in trucking jobs on record. In the first half of 2019, 640 trucking companies

[2] "Biden sets stage to get assertive with China on trade", Don Lee, Los Angeles Times (latimes.com), 4 Oct 2021, URL: https://www.latimes.com/politics/story/2021-10-04/biden-administration-unveils-new-approach-to-china-trade

[3] "America's Top 50 Power Ports", Taylor Girardi-Schachter, Global Trade, 7 June 2019, URL: globaltrademag.com/Americas-top-50-power-ports/

closed completely, compared to just 175 in the same period of the year before. Approximately three-quarters of all freight in the U.S. is moved by truck.[4]

8. The cost of petroleum in the U.S. has increased markedly due both to a lack of exploitation of domestic sources and due to reliance on the supply chains that are strained as described above. The increased costs for petroleum affect the shipping, freight rail, and trucking industries directly and the industries that rely on transportation, indirectly.

Supply chain networks are not self-healing. They rely on access to fixed functional transportation hubs, a capable workforce to offload ships, heavy equipment to handle containers, vast storage and warehouse space with a complementary workforce. They require access to trucking depots, functioning trucks and or similar rail capabilities and the workforce to operate and maintain those functions. It is seldom easy or inexpensive to switch one element of the supply chain out for another. For example, if the port of Los Angeles is suffering a large back log, shifting to Long Beach would require comparable berthing, offloading, storage and ground transportation resources.

The freight rail and trucking industries are not immune from supply chain deficiencies themselves. These industries rely on a steady flow of replacement parts, often made in China, in order to keep their fleets operational. The backlog for replacement parts for trucks is on the order of several months. New vehicles are prohibitively expensive and trucking companies are frequently opting to recondition older, less efficient vehicles or to utilize them for spare parts that can be retrofitted to newer equipment. All of this extra work must be done with a diminished pool of available talent and at inflated labor, materiel and energy costs.

[4] "88,300 truck drivers lost their jobs in April, and it's the biggest trucking job loss on record", Rachel Premack, Business Insider, 8 May 2020. URL: businessinsider.com/trucking-bloodbath-truck-drivers-lost-jobs-april-jobs-report-2020-5?op=1