

Congress of the United States  
U.S. House of Representatives  
Committee on Small Business  
2361 Rayburn House Office Building  
Washington, DC 20515-6515

**MEMORANDUM**

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**TO:** Members, Subcommittee on Economic Growth, Tax, and Capital Access  
**FROM:** Andy Kim, Chairman  
**RE:** Subcommittee Hearing: “Supply Chain Resiliency”  
**DATE:** July 2, 2020

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The Committee on Small Business, Subcommittee on Economic Growth, Tax, and Capital Access will hold a hearing entitled, “Supply Chain Resiliency.” The hearing is scheduled for **Thursday, July 2, 2020 at 9:00 A.M. in-person in Rayburn room 2360 and virtually via the WebEx platform (information to be provided).**

In the aftermath of the economic disaster caused by the COVID-19 pandemic, many small businesses are analyzing the disruption to their domestic and global supply chains. Early disruption in February and March of 2020 was largely due to dependence on foreign countries for certain goods, leaving small firms particularly vulnerable to the ensuing economic shutdown. As the pandemic forced more businesses domestically to close, many small businesses shifted to making new products and services to survive, but some faced new challenges sourcing materials and getting their products to market. This hearing will discuss how small firms have rebuilt their supply chains to make them more resilient and issues policymakers should consider to support small firms. It will particularly focus on the ways we can correct the vulnerabilities of small firms and utilize their strengths in building a resilient supply chain for the overall economy.

**Witnesses**

- Dr. Eswar Prasad, PhD., Professor of Trade Policy, Cornell University, Senior Fellow, Brookings Institution, Ithaca, NY
- Ms. Christine Fagnani, Co-Owner and Vice President, Lynn Medical Instrumentation Company, Wixom, MI
- Mr. David Billstrom, CEO, Kitsbow Cycling Apparel, Old Fort, NC
- Ms. Sheila Lawson, Chief Operations Officer and Vice President of Supply Chain, RL Hudson, Broken Arrow, OK

**Background**

The COVID-19 pandemic exposed many of the weaknesses in global supply chains. Economic shutdowns to slow the spread of the virus caused shortages in nearly every industry including medical supplies, clothing, electronic components, and agriculture. A vast shortage in personal protective equipment (PPE), such as masks, gowns, and gloves, forced some medical professionals on the front lines of fighting the pandemic to improvise with garbage bags as gowns and coffee

filters as masks.<sup>1</sup> Nearly 80 percent of U.S. businesses experienced a disruption in their supply chain due to the pandemic, with small businesses operating on thin margins facing particularly difficult challenges.<sup>2</sup>

As a result of increasing globalization, supply chains have become vastly complex, and can vary significantly from product to product. While small businesses may be particularly vulnerable to supply chain disruptions – lacking more than a couple weeks of stock, mass data collection, or being dependent on low prices from overseas – they can also be an important part of ensuring a resilient supply chain. In many cases they are more nimble than large companies and can adapt quickly by finding different suppliers in a hurry. Small firms that have awareness of supply and demand flows, bottlenecks, interconnections, and interdependencies are better prepared for future disaster and also have the ability to adapt their business models to meet new demands. They can also help source goods locally for government contracts, and quickly shift their manufacturing, distribution, and sales capacity to fit the needs of the community, such as distillers making hand sanitizer, or small manufacturers making PPE.

### **How Industries Were Affected by Disruptions Caused by COVID-19**

Given China's outsized role in global supply chains, early shutdowns in that country in February and March caused significant disruption in the global economy. By March, 90 percent of business activity and transportation were impacted throughout the affected Chinese provinces.<sup>3</sup> This left them unable to fulfill orders and contractual obligations, leaving many companies unable to import critical components needed for their products. The early effects of Chinese shutdowns largely affected the electronics industry; however, it greatly reduced the supply of medical supplies available to the U.S. as well. As the pandemic spread throughout the world and into the U.S. it also disrupted local supply chains, such as agriculture and food when restaurants were shut down and grocery stores struggled to meet increased demand.

### **Personal Protective Equipment, Medical Devices, and Pharmaceutical Ingredients**

The COVID-19 pandemic caused a mass shortage in PPE, as hospitals created new demand for supplies before an influx of COVID-19 patients. The initial rush to secure PPE resulted in a shortage of gowns, gloves, and N-95 respirator masks along with face shields and other equipment like ventilators. Months into the pandemic, many hospitals still lack sufficient supplies of PPE to protect medical professionals from contracting the virus and further restricting hospital capacity. In fact, about 70 percent of workers had to wear the same mask for more than a day.<sup>4</sup> According

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<sup>1</sup> Sophia Ankel, *Photos Show How Shortages are Forcing Doctors and Nurses to Improvise Coronavirus PPE from Snorkel Masks, Pool Noodles, and Trash Bags*, BUSINESS INSIDER, Apr. 23, 2020, <https://www.businessinsider.com/photos-show-doctors-nurses-improvising-due-to-lack-of-ppe-2020-4#but-these-measures-dont-always-work-several-nurses-in-the-uk-who-were-forced-to-wear-trash-bags-during-their-shifts-tested-positive-for-the-virus-while-one-nurse-in-new-york-died-3>.

<sup>2</sup> Jack Keough, *Pandemic has Caused Supply Chain Disruptions for 80% of U.S. Businesses*, INDUSTRIAL DISTRIBUTION, Jun. 11, 2020, <https://www.inddist.com/supply-chain/article/21131454/keough-pandemic-has-caused-supply-chain-disruptions-for-80-of-us-businesses>.

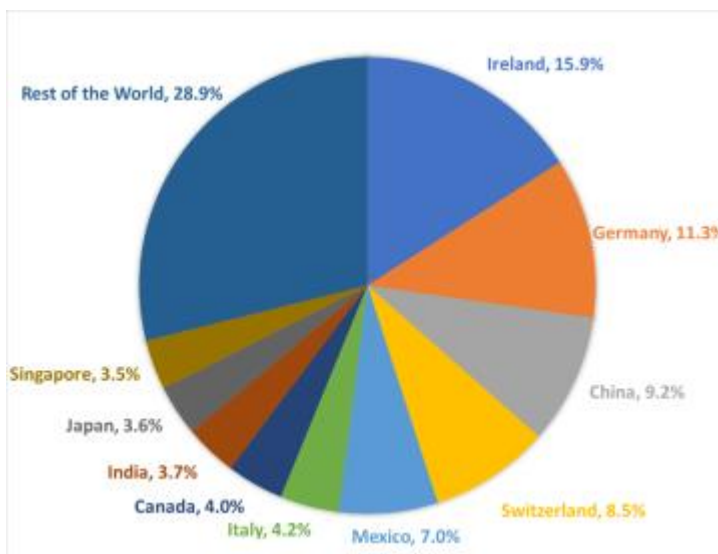
<sup>3</sup> Huileng Tan, *Coronavirus Outbreak in China Spurs Supply Chain Shifts that Began During Trade War*, CNBC (Feb. 20, 2020), <https://www.cnbc.com/2020/02/20/coronavirus-outbreak-spurs-supply-chain-shifts-started-by-uschina-trade-war.html>.

<sup>4</sup> Tara Lagu, Rachel Werner and Andrew W. Artenstein, *Why Don't Hospitals Have Enough Masks? Because Coronavirus Broke the Market*, WASHINGTON POST, May 21, 2020,

to a survey published by the U.S. Conference of Mayors, 91.5 percent of the cities do not have an adequate supply of face masks for their first responders (including police, fire, and EMTs) and medical personnel.<sup>5</sup> 88.2 percent do not have an adequate supply of personal protective equipment other than face masks, like gowns and gloves.<sup>6</sup> Finally, 85 percent lack an adequate supply of ventilators for use by health facilities.<sup>7</sup>

The U.S. largely depends on suppliers from other countries for medical equipment, PPE, and pharmaceutical ingredients, as shown in Figure 1 below. Specifically, most PPE are imported and China manufactures the majority of this medical equipment and gear, so when China nationalized medical supplies for its own use to fight the pandemic, America was largely left to a small number of domestic producers.<sup>8</sup>

**Figure 1. U.S. Imports of Pharmaceuticals and Medical Equipment, Products, and Supplies in 2019**



**Source:** CRS using the World Customs Organization’s “HS Classification Reference for COVID-19 Medical Supplies;” Gary Clyde and Jeffrey J. Schott’s “List of Pharmaceutical and Medical Device Products by Harmonized System (HS) Code” in Local Content Requirements: A Global Problem; and Chad Bown’s “Trump’s Trade Policy Is Hampering the U.S. Fight Against COVID-19.” Data sourced from the U.S. International Trade Commission’s DataWeb and Global Trade Atlas.

Furthermore, in normal times, hospitals and health systems do not stockpile materials for emergency situations. Instead, they use “just-in-time” ordering to limit excess inventory.<sup>9</sup> Usually,

<https://www.washingtonpost.com/outlook/2020/05/21/why-dont-hospitals-have-enough-masks-because-coronavirus-broke-market/>.

<sup>5</sup> U.S. Mayors, Shortages of COVID-19 Emergency Equipment in U.S. Cities, Mar. 27, 2020, <https://www.usmayors.org/issues/covid-19/equipment-survey/>.

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

<sup>8</sup> KAREN M. SUTTER, ANDRES B. SCHWARZENBERG, AND MICHAEL D. SUTHERLAND, CONG. RES. SERV., R46304, COVID-19: CHINA MEDICAL SUPPLY CHAINS AND BROADER TRADE ISSUES (2020).

<sup>9</sup> *Supra* note 4.

this creates efficiency and helps reduce costs, but during a pandemic or similar disruption, it can leave health systems and manufacturers vulnerable to shortages and disruptions. Since there is no national tracking system for protective gear, health systems were unable to find the existing supply.<sup>10</sup>

However, much of this disruption was predictable and preventable, so several steps could have been taken in the early days to make the supply chain more resilient. For instance, the Defense Production Act could have been invoked to make respirator masks and ventilators and deliver to areas experiences shortages. The government could also enforce greater stockpiling and reporting requirements in case of disruption in the market. In fact, only a small number of health care providers were able access the strategic national stockpile in March.<sup>11</sup> Finally, it can provide larger subsidies for domestic companies to quickly ramp up production during a shortage.

### Agricultural Supply Chain

COVID-19 has thrown the U.S. agricultural supply chain into disarray. Supermarkets and grocery stores had trouble restocking their shelves. Millions of Americans are turning to food banks, as farmers had to dump milk, crush eggs, and plow under vegetables because of lost market opportunities. Farm and agricultural workers have not received adequate protection from COVID-19, with farms and food processors around the country seeing spikes in reported cases.<sup>12</sup>

Shutdowns and slowdowns across the food system forced many businesses to shift their business models to stay afloat. However, small firms across the food system have been nimble and innovative. For example, Midwestern commodity farmers have started to grow more fresh produce for their local community,<sup>13</sup> seafood wholesalers have pivoted to support retail and delivery sales,<sup>14</sup> craft distillers have started making alcohol-based sanitizers,<sup>15</sup> and restaurants have shifted to take-out, batch cocktails, selling grocery staples.<sup>16</sup> Unfortunately, many of these changes are not able to fully account for losses in revenue, and small firms across the food system are at risk of going under as COVID-19 cases continue to spike in different regions across the country.

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<sup>10</sup> *Id.*

<sup>11</sup> ASSN. FOR PROF. INFECTION CTRL. AND EPIDEMIOLOGY, *National Survey Shows Dire Shortages in PPE, Hand Sanitizer Across the U.S.*, Mar. 27, 2020, <https://apic.org/news/national-survey-shows-dire-shortages-of-ppe-hand-sanitizer-across-the-u-s/>.

<sup>12</sup> Mike Dorning and Jen Skerritt, *Every Single Worker Has Covid at One U.S. Farm on Eve of Harvest*, BLOOMBERG, May 29, 2020, <https://www.bloomberg.com/news/articles/2020-05-29/every-single-worker-has-covid-at-one-u-s-farm-on-eve-of-harvest>.

<sup>13</sup> Daphne Miller, *Most Farmers in the Great Plains Don't Grow Fruits and Vegetables. The Pandemic is Changing That.*, CIVIL EATS, May 12, 2020. <https://civileats.com/2020/05/12/most-farmers-in-the-great-plains-dont-grow-fruits-and-vegetables-the-pandemic-is-changing-that/>.

<sup>14</sup> Pete Wells, *A Quarantine Surprise: Americans are Cooking More Seafood*, NEW YORK TIMES, May 5, 2020, <https://www.nytimes.com/2020/05/05/dining/seafood-fish-coronavirus.html>.

<sup>15</sup> Andy Markowitz, *Craft Distillers Step In to Ease Hand Sanitizer Shortage*, AARP, Mar. 24, 2020. <https://www.aarp.org/health/healthy-living/info-2020/craft-distillers-hand-sanitizer.html>.

<sup>16</sup> BON APPETIT, *From Pandemic to Protests: How Food Businesses Nationwide are Responding*, Jun. 8, 2020. <https://www.bonappetit.com/story/food-businesses-covid-19>.

## **Building Supply Chain Resiliency**

Building a more resilient supply chain means ensuring the ability of a preexisting network of demand and supply to deploy surviving capacity, and introduce new capacity, under severe duress. It is the ability of a network, or portion of that network, to continue moving goods and services even when important elements of that network are no longer operating.<sup>17</sup> This requires intense collaboration between stakeholders throughout the supply chain in both the public and private sector. It can be anything from small, individual business decisions to large policy changes made by the federal government. The goal is to both maintain the flow of goods and services during a disaster and minimizing the economic harm that comes from parts of that supply chain being disrupted.

Some solutions can be tied to individual firm decisions, such as adopting a digital supply network. Modern day supply chains are interconnected and globally dispersed, and while this helps many firms obtain goods for lower prices, it can make them more sensitive to the demand levels in other countries and put them at greater risk. Mapping out a supply chain can help firms have a greater understanding of their vulnerabilities, such as bottlenecks and interdependencies and help them become more flexible in a disaster by recognizing alternatives beforehand.

Firms and governments can also focus more on sourcing locally. This can eliminate travel and shipping times as well as stimulate the local economy and create jobs. Governments can do this through government contracting, especially if they abide by “made in America” rules and ensure those products – along with their components and materials – are truly made in America. The federal government can put a greater emphasis on increasing the share of products manufactured domestically. There are many proposed ideas to do this, such as increasing subsidies to manufacture in America, or establishing an investment bank for domestic manufacturing. This way, supply chains in the U.S., especially for essential goods, won’t be impacted by demand in other countries.

Finally, engaging smaller firms as part of a supply chain can increase resiliency by utilizing their ability to be flexible in shifting their operations to meet certain demands. During the COVID-19 pandemic, many businesses made decisions to shift their resources to make things needed by their communities, others were able to more flexibly shift suppliers for certain goods. Either way, it is important to engage small and local businesses during times of disruption.

## **Conclusion**

The COVID-19 pandemic exposed many of the vulnerabilities of global supply chains, but it also revealed the areas for which businesses and governments can improve. While globalization will continue to help many countries form crucial relationships, this gives the U.S. the ability to rethink its dependency on certain countries for materials, components, and products that are crucial to public health and national security. There are a number of different tools that individual firms and governments can use to maximize their resiliency in the face of disruption, and the severe disruption caused by the COVID-19 pandemic gives the U.S. the opportunity to review those tools and implement them as it rebuilds.

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<sup>17</sup> FEMA, *Supply Chain Resilience Guide*, Apr. 2019, <https://www.fema.gov/media-library-data/1555328671083-d9422177bd55d9c6fafc327a6b239290/SupplyChainResilienceGuide-April2019.pdf>.