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U.S. House of Representatives
Washington DC 20515

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November 15, 2021

SUMMARY OF SUBJECT MATTER

TO: Members of Congress, Committee on Transportation and Infrastructure
FROM: Staff, Committee on Transportation and Infrastructure
RE: Hearing on "Industry and Labor Perspectives: A Further Look at North American Supply Chain Challenges."

PURPOSE

The Committee on Transportation and Infrastructure will hold a hearing on Wednesday, November 17, 2021, at 10:30 a.m. EST to examine North American supply chain challenges. The hearing will take place in 2167 Rayburn House Office Building and via Zoom. The Committee will hear testimony from the following representatives of the transportation industry and its workforce: Mario Cordero of the Port of Long Beach on behalf of the American Association of Port Authorities, Chris Spear of the American Trucking Associations, Ian Jefferies of the Association of American Railroads, Anne Reinke of the Transportation Intermediaries Association, David Correll of the Massachusetts Institute of Technology Center for Transportation and Logistics, and Greg Regan of the Transportation Trades Department, AFL-CIO.

BACKGROUND

COVID-19 and the Supply Chain

The COVID-19 pandemic has disrupted many aspects of the global supply chain. In response to several COVID-19 outbreaks across factories in Asia in 2019-2020, factories shut down.[1] Shipping companies also cut schedules, anticipating that with reduced levels of activity due to outbreaks and quarantine, overall demand would drop.[2] However, shipping capacity proved to be

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[1] Simina Mistreanu, Forbes, "China's Factories Are Reeling from Forced Coronavirus Closures." February 23, 2020. https://www.forbes.com/sites/siminamistreanu/2020/02/23/chinas-factories-are-reeling-from-forced-coronavirus-closures/?sh=21d514eb73f2. Accessed November 11, 2021.

[2] United Nations on Trade and Development, "COVID-19 cuts global maritime trade, transforms industry." November 12, 2020. https://unctad.org/news/covid-19-cuts-global-maritime-trade-transforms-industry. Accessed November 11, 2021.

key as Americans increased their demands for consumer goods in 2021.[3] The surge in consumer goods, particularly moving from Asia into West Coast ports by ship and through the rest of the country via truck and rail, inundated the system. The Ports of Los Angeles and Long Beach have experienced significant cargo volume increases, and have been at times unable to process incoming shipping containers as they arrived, resulting in cargo logjams off shore and within the port complex. COVID-19 has exposed fragilities in transportation networks, with disruption in one part of the supply chain having a ripple effect across all parts of the supply chain, from manufacturers to suppliers and distributors.[4] What has followed since has resulted in container and other equipment shortages, port and rail congestion, and shipping delays. The lack of available space onboard vessels, trains, trucks, in distribution warehouses, and at ports has impacted industries and frustrated consumers across the country and increased prices on some goods and commodities.[5]

Online retail has fundamentally changed how products are purchased and distributed. According to the U.S. Census Bureau, e-commerce sales have grown from just over five percent of total retail sales in the first quarter of 2012 to over 13 percent of total retail sales in the second quarter of 2021.[6] E-commerce accounted for $791.7 billion in 2020, a 32.4% increase from 2019.[7] As a result of this trend, the demands for freight movements by truck, and the need for more timely and efficient deliveries, have grown significantly. This has also prompted changes to supply chains and increased the focus on first-mile and last-mile delivery of freight that impacts both urban and rural areas.[8]

Cross-modal freight tonnage has recovered from the beginning of the COVID-19 pandemic. The Bureau of Transportation Statistics (BTS) measures the amount of freight carried by the transportation industry using an index called the Freight Transportation Services Index (FTSI). In September 2021, the FTSI shows a seasonally-adjusted mark of 135.8 in September 2021, which is below the all-time high of 142 in April 2019, but significantly above the COVID-19 low of 125.3 in April 2020. The FTSI, which declined from the April 2021 level, is a good predictor of changes in the economic growth rate. Shipments of raw materials and intermediate goods occur before consumers and other businesses buy the products made from them. So, freight activity is seen as an early indicator of economic growth or decline. When more freight is being shipped, that generally signals a future increase in economic activity. When less freight is demanded, that points to decreasing economic activity.[9]

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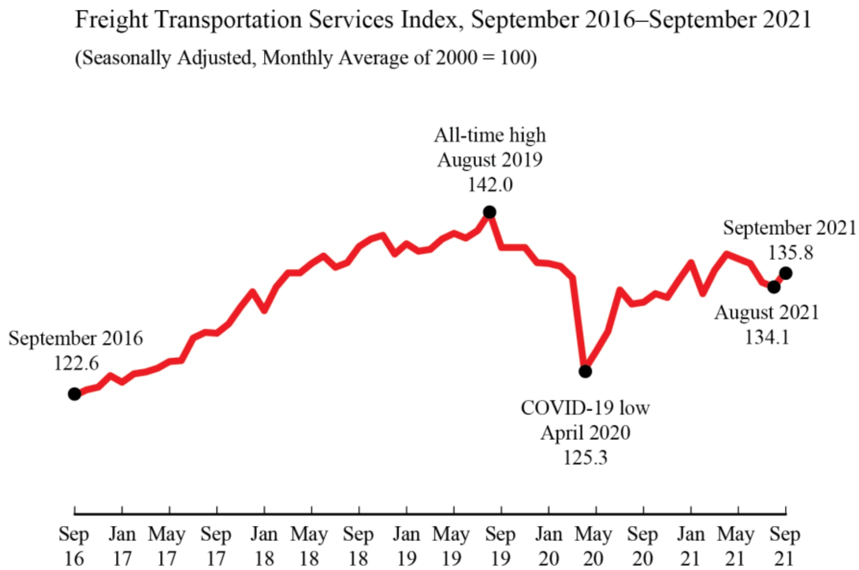
[3] New York Times. "How the Supply Chain Broke, and Why it Won't Be Fixed Anytime Soon." https://www.nytimes.com/2021/10/22/business/shortages-supply-chain.html. Accessed October 23, 2021
[4] *Id.*
[5] *Id.*
[6] U.S. Census Bureau, Quarterly Retail E-Commerce Sales, 3rd Quarter 2019 (https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf).
[7] Digital Commerce 360, "US E-Commerce Grows 32.4% in 2020," (https://www.digitalcommerce360.com/article/us-ecommerce-sales/).
[8] Shelagh Dolan, Business Insider. "The challenges of last mile delivery logistics and the tech solutions cutting costs in the final mile," January 21, 2021. https://www.businessinsider.com/last-mile-delivery-shipping-explained
[9] BTS Technical Brief. "What the Transportation Services Index, Dow Transportation Index, and Cass Freight Index Tell Us. August. 2019. https://www.bts.gov/sites/bts.dot.gov/files/docs/explore-topics-and-geography/topics/transportation-and-economy/226881/what-tsi-dow-transportation-index-cass-freight-index-tell-us.pdf. Accessed November 10, 2021.



Source: September 2021 Freight Transportation Services Index (TSI), BTS 67-21

Maritime Industry Overview and Current Challenges

The COVID-19 pandemic triggered an unprecedented shift in consumer spending as Americans shifted spending from services to goods, exposing gaps in the supply chain and container processing capacity across the country and worldwide.[10] In response to several coronavirus outbreaks across factories in Asia during the initial months of the COVID-19 pandemic, factories shut down.[11] Shipping companies then cut schedules, anticipating reduced demand resulting from further COVID-19 restrictions. As a result, almost every ship and container has been deployed into the market since Fall 2020.[12] October 2021 saw a record-breaking total of 100 container ships sitting idle awaiting dock availability at the Ports of LA and Long Beach.[13] These delays are expected to continue well into 2022.[14]

According to Maersk, the world's largest container shipping corporation, its East (Asia)-West (North America) trade has been the most impacted route in the market.[15] Currently, for every three containers that China exports to the U.S. West Coast, only one is imported back, exacerbating

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[10] The Journal of Commerce. "ONE's Nixon says US port productivity gaps mean congestion for months." https://www.joc.com/port-news/us-ports/tpm21-one%E2%80%99s-nixon-says-us-port-productivity-gaps-mean-congestion-months_20210302.html.

[11] Simina Mistreanu, Forbes, "China's Factories Are Reeling from Forced Coronavirus Closures." February 23, 2020. https://www.forbes.com/sites/siminamistreanu/2020/02/23/chinas-factories-are-reeling-from-forced-coronavirus-closures/?sh=21d514eb73f2. Accessed November 11, 2021.

[12] The New York Times. "I've Never Seen Anything Like This: Chaos Strikes Global Shipping." https://www.nytimes.com/2021/03/06/business/global-shipping.html. Accessed June 7, 2021.

[13] NBC News. "As 100 ships idle offshore, California communities see rise in toxic pollutants." October 29, 2021. https://www.nbcnews.com/business/100-ships-idle-offshore-california-communities-see-rise-toxic-pollutan-rcna3984.

[14] https://www.reuters.com/business/global-economy-asian-factories-stagnate-chinas-slowdown-supply-constraints-hit-2021-10-01/

[15] Financial Times. "How coronavirus is changing global shipping routes." https://www.youtube.com/watch?v=MvG8c8v5Nfw

the trade imbalance.[16] This uneven recovery has caused container shortages where they are needed most. As a result, global container rates jumped nearly 290 percent[17], from an average of $1,377 per 40-foot container in March 2020 to $9,195.41 in November 2021.[18] Despite these higher numbers, the price per container has fallen since mid-October including a drop of 4.9 percent the first week of November 2021.[19]

Beyond the lack of capacity on vessels and getting containers from the vessels into port, containers face additional backlogs once offloaded and moved to marine terminals. Due to the sheer number of containers and cargo transiting through ports, marine terminals are at capacity—limiting movement into, out of, and within the port.[20] As containers are stacked higher and higher, the ability to access containers is affected further extending delays and bottlenecks.

Port accessibility continues to be a significant issue affecting truckers and other transporters in the supply chain. For example, the lack of appointments due to congestion and demand to enter terminal gates to repossess import containers for U.S.-based exporters has severely affected how port distribution centers are accepting containers.[21] Containers are filling terminals and storage locations, making it difficult for truckers to return containers to a terminal, or move them geographically out of a given zone.[22] Recently, some containers have been kept sitting idle for up to 30 days, representing a significant opportunity cost.[23]

Trucking Industry Overview and Current Challenges

Freight moves by truck on more than four million miles of public roads (including 223,000 miles on the National Highway System) and 616,000 bridges.[24] The trucking industry is made up by over 996,000 trucking companies and more than 3.3 million commercial drivers.[25]

Trucks carried 10.2 billion tons of freight in 2020, and trucking accounts for approximately 80.4 percent of all freight tonnage by value and 72.5 percent by weight.[26] According to the BTS,

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[16] Reuters. "Boxed out: China's exports pinched by global run on shipping containers." https://www.reuters.com/article/us-global-shipping-container/boxed-out-chinas-exports-pinched-by-global-run-on-shipping-containers-idUSKBN28K0UA.
[17] Bloomberg. "Container Shipping Rates Drift Lower After a Record-Setting Climb." https://www.bloomberg.com/news/newsletters/2021-10-11/supply-chain-latest-container-shipping-rates-are-drifting-lower.
[18] Drewry Supply Chain Advisors. "World Container Index – 09 Nov." https://www.drewry.co.uk/supply-chain-advisors/supply-chain-expertise/world-container-index-assessed-by-drewry. Accessed November 8, 2021.
[19] *Id.*
[20] https://www.cnn.com/2021/10/18/business/container-port-record-backlog/index.html
[21] Agriculture Transportation Coalition. "Overview: The Current Export Crisis." https://soyagrainsalliance.org/wp-content/uploads/2021/02/AgTC-The-Current-Export-Crisis_02-12-21.pdf.
[22] The Journal of Commerce. "Import deluge fills LA-LB terminals to capacity." https://www.joc.com/port-news/us-ports/import-deluge-fills-la-lb-terminals-capacity_20201209.html.
[23] The Journal of Commerce. "FMC reviewing whether ag export booking rejections violate Shipping Act." https://www.joc.com/print/3647481.
[24] U.S. Department of Transportation, National Freight Strategic Plan, September 2020, page. 6. https://www.transportation.gov/sites/dot.gov/files/2020-09/NFSP_fullplan_508.pdf. Accessed November 11, 2021.
[25] American Trucking Associations, Economics and Industry Data, https://www.trucking.org/economics-and-industry-data.
[26] American Trucking Associations, Economics and Industry Data, https://www.trucking.org/economics-and-industry-data.

long-haul freight truck traffic is projected to increase "dramatically" on the National Highway System over the next three decades, from 311 million miles per day in 2015 to 488 million miles per day by 2045.[27]

Truck freight tonnage continues to steadily recover. According to the American Trucking Associations' Seasonally-Adjusted (SA) For-Hire Truck Tonnage Index, September 2021 marked a 2.4% increase from August 2021.[28] The September 2021 SA Index was also a 1.7% year-over-year increase from September 2020, indicating steady growth.[29]

Current supply chain challenges have amplified longstanding issues in truck freight delivery. These include a lack of truck parking, congestion at freight bottlenecks, and poor conditions at intermodal connectors. The increasing cost and shortage of equipment, such as chassis, has hindered the capacity of the trucking industry to move freight.[30] Port inefficiencies, such as poor information sharing and a lack of available, interoperable chassis, also limit how frequently and swiftly trucks can pick up loads, contributing to delays in loading and unloading at shipping facilities, a form of "detention time."[31]

Detention time is time spent at shipping and receiving facilities beyond that which is legitimately needed for loading and unloading, as specified by contracts. Contracts between shippers, receivers, and motor carriers generally define limits on loading and unloading time at 2 hours.[32] Any time beyond that is detention time.[33] Loading and unloading times can vary based on the type of cargo, operations at the facility, congestion at a facility, and other factors.[34]

Excessive detention time creates both safety and financial issues for truckers.[35] A U.S. Department of Transportation Inspector General study estimated that a 15-minute increase in average dwell time—the total time spent by a truck at a facility—increases the average expected crash rate by 6.2 percent.[36] The same study found that detention time is associated with reductions in annual earnings of $1.1 billion to $1.3 billion for for-hire commercial drivers in the truckload sector, and that detention reduces net income by $250.6 million to $302.9 million annually for motor carriers in that sector.[37] There is no accurate, industry-wide data on detention time, especially during the pandemic. The bipartisan infrastructure framework, recently passed as the Senate Amendment to

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[27] Bureau of Transportation Statistics, "Freight Transportation System Extent and Use" (https://data.transportation.gov/stories/s/Freight-Transportation-System-Extent-Use/r3vy-npqd).
[28] American Trucking Associations, "Index 1.7% Above September 2020," (https://www.trucking.org/news-insights/ata-truck-tonnage-index-increased-24-september).
[29] *Id.*
[30] American Trucking Associations, Comments in the Federal Register, "America's Supply Chains and the Transportation Industrial Base," Docket No. DOT– OST–2021–0106, p. 5.
[31] *Id.* p. 6-7.
[32] U.S. DOT Office of Inspector General, "Estimates Show Commercial Driver Detention Increases Crash Risks and Costs, but Current Data Limit Further Analysis," p. 3 (Jan 2018).
[33] U.S. Government Accountability Office (GAO), Commercial Motor Carriers: More Could Be Done to Determine Impact of Excessive Loading and Unloading Wait Times on Hours of Service Violations, GAO-11-198, January 2011.
[34] *Id.*
[35] Owner-Operators Independent Drivers Association, Comments in the Federal Register, "America's Supply Chains and the Transportation Industrial Base," Docket No. DOT– OST–2021–0106, p. 2.
[36] U.S. DOT Office of Inspector General, "Estimates Show Commercial Driver Detention Increases Crash Risks and Costs, but Current Data Limit Further Analysis," p. 6 (Jan 2018).
[37] U.S. DOT Office of Inspector General, "Estimates Show Commercial Driver Detention Increases Crash Risks and Costs, but Current Data Limit Further Analysis," p. 6 (Jan 2018).

H.R. 3684, the *Infrastructure Investment and Jobs Act,* directed FMCSA to enter into a contract with the Transportation Research Board to conduct a study on driver compensation—one factor that will be studied is payment for detention time.[38]

The COVID-19 crisis has renewed a focus on workforce challenges in the trucking industry, including claims of a truck driver shortage.

As truck freight tonnage has risen in recent decades, the industry has faced increasing workforce challenges.[39] For the past several years, larger motor carriers have identified a difficulty in attracting truck drivers, with recent American Trucking Associations (ATA) estimates showing a shortage of 80,000 drivers, a 30% increase over pre-pandemic estimates.[40]

Currently, 49 states and the District of Columbia allow 18 to 20 year old truck drivers to operate commercial vehicles for intrastate commerce only and do not allow them to operate vehicles in interstate commerce.[41] ATA and others support changing federal rules to allow drivers to operate in interstate commerce at 18 years old.[42]However, current federal rules prohibit a driver from operating interstate until 21 years old, largely because crash data indicate that the typical driver under the age of 21 is approximately three times more likely to be the cause of a fatal crash.[43] Under Section 5404 of the FAST Act, Congress authorized a pilot program for individuals between the ages of 18 and 21 to drive commercial vehicles across state lines, but only for those with commercial motor vehicle training in the Armed Services. On September 4, 2020, FMCSA published a Notice of Proposed Rulemaking soliciting comments on a broader proposed pilot program for drivers ages 18-21 to operate in interstate commerce. The military pilot remains ongoing, while the agency has not taken further action to establish a broader pilot. The recently passed Senate amendment to H.R. 3684, the *Infrastructure Investment and Jobs Act,* directs DOT to establish, within 60 days, an apprenticeship pilot program for CDL drivers under the age of 21.

Other segments of the industry cite driver retention as the workforce challenge most plaguing the industry, highlighting driver wages and working conditions as obstacles to attracting and retaining qualified drivers.[44] These groups point to U.S. Department of Labor analysis of trucking industry turnover rates,[45] as well as FMCSA estimates that over 400,000 commercial driver's

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[38] Senate Amendment to HR. 3684, Sec. 23022

[39] New York Times, "The Biggest Kink in America's Supply Chain: Not Enough Truckers," November 9, 2021. https://www.nytimes.com/2021/11/09/us/politics/trucker-shortage-supply-chain.html

[40] American Trucking Associations, "ATA Chief Economist Pegs Driver Shortage at Historic High," October 25, 2021, (https://www.trucking.org/news-insights/ata-chief-economist-pegs-driver-shortage-historic-high).

[41] American Trucking Associations, Comments in the Federal Register, "America's Supply Chains and the Transportation Industrial Base," Docket No. DOT– OST–2021–0106, p. 19

[42] American Trucking Associations, Comments in the Federal Register, "America's Supply Chains and the Transportation Industrial Base," Docket No. DOT– OST–2021–0106, p. 19

[43] Centers for Disease Control, "Teen Drivers: Get the Facts." Accessed November 8, 2021. https://www.cdc.gov/transportationsafety/teen_drivers/teendrivers_factsheet.html#:~:text=The%20risk%20of%20motor%20vehicle,be%20in%20a%20fatal%20crash.

[44] Todd Spencer, Owner-Operator Independent Drivers Association, Testimony to House Committee on Transportation and Infrastructure, (June 12, 2019) (https://docs.house.gov/meetings/PW/PW12/20190612/109600/HHRG-116-PW12-Wstate-SpencerT-20190612.pdf).

[45] U.S. Department of Labor, "Is the U.S. labor market for truck drivers broken?", March 2019, (https://www.bls.gov/opub/mlr/2019/article/is-the-us-labor-market-for-truck-drivers-broken.htm).

licenses (CDLs) are issued each year.[46] Most truck drivers today are paid by the mile or by the load, not by the time it takes to make a delivery. Drivers are also subject to hours-of-service limits, limiting the time they are legally allowed to operate.[47] Supply chain delays that are outside of the control of drivers—such as congestion at ports and excessive detention time at shipper and receiver facilities—affect how much a driver can earn.

Rail Industry Overview and Current Challenges

In 2019, railroads carried nearly one-third of the nation's freight.[48] While freight rail carloads have declined over the last twenty years, intermodal rail freight traffic has increased over the same timeframe.[49] Rail intermodal is the long-haul movement of shipping containers and truck trailers by rail, combined with a truck or water movement at one or both ends.[50] Class I railroads have reduced their workforce. In 2015, the Class I workforce average was 169,478 workers. By 2019 and pre-COVID, some 29,000 jobs were eliminated, a 17 percent decrease.[51] In 2020, railroads eliminated another 20,000 jobs, a 14 percent decrease from the prior year.[52]

More than 40 percent of freight rail carloads and intermodal units is based on international trade. [53] Further, this market accounts for approximately 35 percent of U.S. rail revenue and more than a quarter of U.S. rail tonnage.[54] During this same six-month period in 2021, the Class I railroad workforce averaged 114,909 workers, compared to 144,346 workers during the same six-month period in 2019. Some weeks in late 2020 and the first half of 2021, U.S. railroads were handling more than 300,000 containers and trailers per week.[55] To right size the imbalance of volumes and staffing levels, railroads have attempted to re-hire some furloughed workers and train new employees, though according to shippers and the Surface Transportation Board, they have been unsuccessful at hiring or retaining an adequate workforce following the reduction in forces described above.[56]

In addition to suppressed workforce levels and previously planned cuts to yard capacity, freight railroads are encountering an imbalance between incoming and outgoing freight that constrains terminal fluidity.[57] Certain rail terminals are not designed for long-term storage of significant numbers of containers and two of the largest U.S. railroads temporarily restricted

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46 FreightWaves, "OOIDA urges Biden administration to bust driver shortage 'myth'," August 2021, (https://www.freightwaves.com/news/ooida-urges-biden-administration-to-bust-driver-shortage-myth).
47 https://www.fmcsa.dot.gov/regulations/hours-of-service
48 U.S. Department of Transportation, Pocket Guide to Transportation 2019, Page 3.
49 U.S. Department of Transportation, Pocket Guide to Transportation 2021, Page 7.
50 Federal Highway Administration, Background and Definitions - The Role of the National Highway System Connectors - FHWA Freight Management and Operations (dot.gov)
51 Surface Transportation Board, Economic Data, Employment Data, Accessed November 5, 2021, https://www.stb.gov/reports-data/economic-data/employment-data/
52 *Id.*
53 Comments of the Association of American Railroads to the U.S. Department of Transportation's Notice of Request for Information published in the Federal Register on September 16, 2021 (Docket N. DOT-OST-2021-0106). Page 3.
54 *Id.*
55 https://www.aar.org/supply-chain
56 Paul Ziobro, The Wall Street Journal. "Shortage of Railroad Workers Threatens Recovery." July 22, 2021. "https://www.wsj.com/articles/shortage-of-railroad-workers-threatens-recovery-11626953584
57 Comments of the Association of American Railroads to the U.S. Department of Transportation's Notice of Request for Information published in the Federal Register on September 16, 2021 (Docket N. DOT-OST-2021-0106). Page 9.

shipments to Chicago this past summer in order to clear space.[58] Extreme weather events, including wildfires in the western United States and hurricanes in the Gulf Coast have further constrained the national railroad system in the last year.[59]

Conclusion

This hearing will explore ideas, improvements, and solutions to alleviate the current supply chain challenges. On February 24, 2021, the Biden administration issued Executive Order 4017, "America's Supply Chains" and convened a Supply Chain Taskforce to help support and improve America's supply chain.[60] Similarly, the recently passed Senate Amendment to H.R. 3684, the *Infrastructure Investment and Jobs Act*, includes $27.75 billion in competitive grant programs that are eligible to fund highway and intermodal freight improvements and port infrastructure projects, in addition to hundreds of billions of dollars for investments in roads, bridges, and rail. These funds can support projects critical to maintaining, improving, and increasing the resiliency of the nation's supply chain.[61]

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58 David Lynch, The Washington Post. "From Ports to Rail Yards, Global Supply Lines Struggle Amid Virus Outbreaks In The Developing World." July 26, 2021. https://www.washingtonpost.com/business/2021/07/27/supply-chains-freight-rail-ports/

59 Steff Chavez, *Financial Times*. "Wildfires and 'Violent' Weather Leave Railroad Giant Facing $100m Bill." September 16, 2021. https://www.ft.com/content/8f5c8360-19eb-437a-b55c-4c393ffa0ba5

60 https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/08/fact-sheet-biden-harris-administration-announces-supply-chain-disruptions-task-force-to-address-short-term-supply-chain-discontinuities/

61 https://www.congress.gov/bill/117th-congress/house-bill/3684/text

WITNESS LIST

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