

**Testimony of Scott N. Paul
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Before the Energy and Commerce Subcommittee on
Innovation, Data, and Commerce
Hearing Entitled
“Mapping America’s Supply Chains:
Solutions to Unleash Innovation, Boost Economic Resilience, and Beat China”
September 20, 2023**

Chairman Bilirakis, Ranking Member Schakowsky, and members of the subcommittee, on behalf of the Alliance for American Manufacturing (AAM), thank you for the opportunity to testify at today’s hearing, entitled, “Mapping America’s Supply Chains: Solutions to Unleash Innovation, Boost Economic Resilience, and Beat China.” We appreciate the opportunity to share our views on policy steps that should be taken to address supply chain security, resiliency, and revitalization.

AAM is a non-profit, non-partisan partnership formed in 2007 by some of America’s leading manufacturers and the United Steelworkers. Our mission is to strengthen American manufacturing and create new private-sector jobs through smart public policies. We believe that an innovative and growing manufacturing base is vital to America’s economic and national security, as well as to providing good jobs for future generations. AAM achieves its mission through research, public education, advocacy, strategic communications, and coalition building around the issues that matter most to America’s manufacturers and workers.

The last several years have made all Americans painfully aware of the tragic inadequacy of our deteriorated industrial capabilities and broken supply chains. Confronted with a global health emergency in early 2020, our nation was forced to look to unreliable and potentially hostile sources for respirators, ventilators, medicines, and other products essential for the pandemic response. In this moment, it became clear to all Americans that we’ve become too dependent on China and other nations as a single source for many essential goods. This manifested itself as shortages in the United States.

But, as we know all too well, the crisis did not end there. In the months that followed and continuing even today, the economic shockwaves that followed exposed a dangerous reliance on global suppliers for many other consumer, medical, and commercial products, revealing that

the United States is ill-equipped to produce, or even readily access, everything from semiconductors to building materials to life-saving cancer drugs. The frailty of on-demand global supply chains and our utter reliance on them left us dangerously exposed during an international health emergency and in the years that have followed.

And, to make matters worse, the federal government does not currently have the complete set of tools and authorities to identify, prevent, and mitigate supply chain vulnerabilities before they spiral out-of-control.

The supply chain disruptions that have plagued our nation in recent years must be viewed through the lens of years of public policy decisions that both facilitated, and in some cases actively encouraged, the offshoring of domestic production and critical supply chains. The pandemic and its subsequent supply chain shocks exposed in rather dramatic fashion that years of flawed tax, trade, procurement, and other economic policies have put the United States in a perilous position of being overly dependent on imports.

Over 90,000 American manufacturing facilities have closed their doors since the late 1990s. While many factors impact U.S. manufacturing employment, the surge of Chinese imports has been measurable and devastating: the Economic Policy Institute (EPI) estimates they displaced 3.7 million American jobs, including 2.8 million in manufacturing, between 2001 and 2018.¹ China surpassed the United States as the world's largest manufacturing nation in 2010, and in 2019 held nearly 29 percent of global factory output while the U.S. share had shrunk to 17 percent.²

With our high domestic consumption rates, this means imports have replaced domestic production throughout our supply chains at an alarming rate. We imported \$1.2 trillion in goods in 2000. By 2021, that total surged to \$2.8 trillion, a 133 percent increase, while our GDP grew over the same period at a slower (115 percent) rate. Not only has this replacement led to the

¹ "Growing China trade deficit cost 3.7 million American jobs between 2001 and 2018 Jobs lost in every U.S. state and congressional district," Scott and Mokhiber. Economic Policy Institute (EPI). Jan. 30, 2020. Link: <https://www.epi.org/publication/growing-china-trade-deficits-costs-us-jobs/>

² "China Is the World's Manufacturing Superpower," Felix Richter. Statista. May 4, 2021. Accessed via Web Link: <https://www.statista.com/chart/20858/top-10-countries-by-share-of-global-manufacturing-output/>

loss of millions of good, middle-class jobs and devastated communities across our nation, it has left us increasingly dependent on imports, often from adversarial countries like China and Russia, for everything from consumer goods and advanced technology products to lifesaving personal protective equipment.

Even though the United States generally accounts for 20 percent of the world's consumption, our global market share for making things falls woefully short of that. We manufacture only about 10 percent of the world's electric vehicles,³ 7 percent of lithium-ion batteries,⁴ 12 percent of semiconductors (down from 37 percent in less than a generation),⁵ and 4 percent of printed circuit boards.⁶ There is only one domestic producer of grain-oriented electrical steel needed to build out our energy grid,⁷ and there are many other examples of greatly diminished capacity in critical industries such as machine tools.

The United States' reliance on China, in particular, for critical supply chains is a significant danger for our economic and national security. China dominates production in hardware essential to 5G technology, Internet of Things equipment, and commercial drones. It's also alarming that so many inputs crucial to renewable energy or electrification are centered in China, from polysilicon and solar panels to large capacity batteries and critical minerals. In the summer of 2020, China was exporting more than half of the world's respirators and PPE.⁸

Annual U.S. foreign direct investment in China has grown from \$11 billion in 2000 to \$118 billion in 2021.⁹ Cumulatively, U.S. companies have invested at least \$1.3 trillion in China over that timeframe. U.S. companies bolstered their research and development in China at more than

³ AAM Testimony Before the U.S. Senate Finance Committee. Link: <https://www.finance.senate.gov/imo/media/doc/Scott%20Paul%20AAM%20Testimony%20Finance%20Trade%20Sub%20Hearing%20Re%20Supply%20Chains%2006%2015%2022.pdf>

⁴ "Share of the global lithium-ion battery manufacturing capacity in 2021 with a forecast for 2025, by country," statista. Link: <https://www.statista.com/statistics/1249871/share-of-the-global-lithium-ion-battery-manufacturing-capacity-by-country/>

⁵ "The chip shortage won't be fixed without major federal investment," Muro and Maxim. Brookings. Feb. 1, 2022. Link: <https://www.brookings.edu/blog/the-avenue/2022/02/01/the-chip-shortage-wont-be-fixed-without-major-federal-investment/>

⁶ The Printed Circuit Board Association of America, Link: https://www.pcbaa.org/uploads/1/3/7/8/137883711/pcb_aa_one_pager-2.pdf

⁷ "US electrical steel output vital to infrastructure plans – Cleveland-Cliffs CEO," S&P Global Market Intelligence. Dec. 1, 2021. Link: <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-electrical-steel-output-vital-to-infrastructure-plans-8211-cleveland-cliffs-ceo-67766869>

⁸ "China Dominates Medical Supplies, in This Outbreak and the Next," Keith Bradsher. New York Times. July 5, 2020. Link: <https://www.nytimes.com/2020/07/05/business/china-medical-supplies.html>

⁹ "Direct investment position of the United States in China from 2000 to 2021," statista. Accessed 02 24 2023. Link: <https://www.statista.com/statistics/188629/united-states-direct-investments-in-china-since-2000/>

three times their domestic rate from 2000-2017.¹⁰ While some companies are investing in China to sell there, many others are utilizing China as a factory floor to import goods back into the U.S., essentially shipping American jobs overseas in the process. We've seen that reflected in the trade deficit in goods with China, which rose from \$84 billion in 2000 to a peak of \$418 billion in 2018, settling in at \$383 billion last year.¹¹

We should no longer question whether China will weaponize its supply chains and our reliance upon them to its advantage. During the pandemic, China engaged in so-called mask and vaccine “diplomacy” using shipments of PPE to garner political support and foster diplomatic gains.

In 2019, the U.S.-China Commission found that “China is the world’s largest producer of active pharmaceutical ingredients (APIs). The United States is heavily dependent on drugs that are either sourced from China or include APIs sourced from China. This is especially true for generic drugs...” We have already squandered critical time without taking decisive action to address this clear danger to the American public and to our armed forces. In addition to the dangers of contamination in the supply chain, the CCP may also be able to “weaponize” this dependency. In a political situation or potential conflict, we can't trust that China won't withhold products from reaching our people.

Christopher Priest, principal deputy to the deputy assistant director of healthcare operations of the Defense Health Agency, told the USCC, “*The national security risks of increased Chinese dominance of the global API market cannot be overstated ... Should China decide to limit or restrict the delivery of APIs to the U.S. it would have a debilitating effect on U.S. domestic production and could result in severe shortages of pharmaceuticals for both domestic and military uses.*”

¹⁰ “Trends in U.S. Multinational Enterprise Activity in China, 2000–2017,” Malden and Listerud. U.S.-China Economic and Security Review Commission: Staff Research Report. July 1, 2020. Link: https://www.uscc.gov/sites/default/files/2020-06/US_Multinational_Enterprise_Activity_in_China.pdf

¹¹ “Trade in Goods with China,” United States Census Bureau. Link: <https://www.census.gov/foreign-trade/balance/c5700.html>

It would not be the first time China has weaponized a dependency. In 2010, after Japan's navy arrested a Chinese fishing boat captain near disputed islands in the South China Sea, the CCP retaliated by halting exports of rare earth exports for several months.

While there are policies and investments now in place to address some of these shortfalls, we're starting from a very precarious position.

The unfortunate, yet entirely predictable, reality we now face is that decades of offshoring have contributed to ongoing supply chain shortages and risks that continue to hinder growth and have forced some factories to go idle. This is an alarming economic and national security issue that experts have predicted for years.

In a 2012 report, entitled "Preparing for 21st Century Risks," former Department of Homeland Security Secretary Tom Ridge warned that the United States was at-risk of being unprepared to recover from disaster — whether it was terrorism, natural disaster, cyber disruption, or pandemic influenza – due to its dependence on other countries for critical manufacturing. Governor Ridge warned that hostile trading partners may make a deliberate choice to not supply needed products, materials or technologies during a time of domestic crisis – citing U.S. reliance on imports as a national security risk.¹²

In a 2013 report, entitled "ReMaking American Security," Brigadier Gen. John Adams, U.S. Army (Ret.) found that U.S. national security is at-risk due to our military's reliance on foreign nations for the raw materials, parts, and products used to defend the American people. He examined the risks and vulnerabilities associated with 14 defense-critical natural resources, inputs, and components—including semiconductors and rare-earth minerals—and presented recommendations to help mitigate the risks to our national security posed by the pervasive outsourcing of our defense industrial base.¹³

¹² "Preparing for 21st Century Risks," Gov. Tom Ridge & Col. Robert B. Stephan (USAF Ret.). Prepared for the Alliance for American Manufacturing. 2012. Link: <https://www.americanmanufacturing.org/wp-content/uploads/2017/02/Homeland-Security-Report.July23.2012.pdf>
¹³ "ReMaking American Security," Brigadier General John Adams (U.S. Army Ret.). Prepared for the Alliance for American Manufacturing. May 2013. Link: <https://docs.house.gov/meetings/FA/FA14/20130725/101216/HHRG-113-FA14-Wstate-AdamsB-20130725.pdf>

Regrettably, these reports proved prescient, and the authors' warnings and recommendations were largely ignored. It took the COVID-19 pandemic to bring these concerns to the national spotlight, as the one-two punch of our gutted domestic supply chains and over reliance on foreign sources impacted Americans in countless ways. We must be better prepared for the next crisis, and that requires taking bold action, starting right away.

To address these supply chain disruptions, as well as anticipate and prepare for future crises, we must acknowledge how we got here and what went wrong. As Congress continues its work on a policy framework to address these supply chain challenges, we must move away from the status quo approach that fosters continued and growing reliance on imports, and instead focus on efforts that increase our own production capabilities.

Our vulnerabilities reflect an outdated notion of the benefits of hyper-globalization, where our consumers, workers, domestic businesses, and our national security suffer. We must break the vicious cycle of implementing policies that reward imports over domestic production.

We must also prioritize the expansion of all stages of manufacturing in the United States, including upstream inputs that are critical for the completion of a final product assembly or manufacture. Too often our policies overlook the components, parts, and upstream raw materials fundamentally necessary to produce a given product. In a future emergency, relying only on end products that are assembled or manufactured in the United States from all or mostly imported products is not a solution to the problems that have plagued our economy over the past several years. In fact, such approaches will only set us up to repeat this failure.

Rebuilding supply chains will chart a course for a stronger future and create millions of new, well-paid jobs along the way. We note that several significant steps have already been taken to advance an industrial policy to supercharge domestic manufacturing and grow supply chains, and there is more that must be done.

We are pleased that the subcommittee is considering legislation today to address the supply chain challenges that have disrupted our economic, health, and national security in recent years. Holding this hearing and advancing this legislation is, by itself, an

acknowledgement that supply chain resiliency is not a challenge that the private sector alone can fix. There is an appropriate role for government to provide leadership, coordination, a supportive policy framework, and, if necessary, grants, loans, and other forms of federal assistance directed to domestic production expansion where the vulnerabilities are most critical.

This is not an easy task, but it is one that the American people demand because it is critical to our future security and prosperity. Neglecting to take meaningful action is not an option as it will inevitably set the stage for a repeat of the supply chain crisis that has affected and continues to affect our nation. As it stands today, the United States remains unprepared for future emergencies and supply chain shocks.

Today's hearing raises important questions:

- First, will we heed the lessons learned from the pandemic and the subsequent supply chain crisis and take meaningful action to identify and mitigate supply chain vulnerabilities before they spiral out-of-control?
- Or, will our nation fall back on failed policies with the irrational hope that the outcome will be different next time?

The bill before us today – H.R. To establish a supply chain resiliency and crisis response program in the Department of Commerce, and for other purposes (Rep. Bucshon, R-IL) – is an important starting point for supply chains legislation that can be made more effective by adding commonsense improvements to fully address the challenges facing our nation.

This bill is nearly identical to Section 2505 of the United States Innovation and Competition Act (USICA), which was introduced in the 117th Congress on April 20, 2021 – before the supply chain crisis had reached its peak and before anyone could fully comprehend the scope of the supply chain disruptions that would ensue.

In the intervening time, we have experienced the fragility of U.S. supply chains, the inability of the private sector to overcome these challenges on its own, and lack of preparedness of our government to coordinate and assist in the identification, prevention, and mitigation of vulnerabilities.

Russia's invasion of Ukraine in February 2022 further exacerbated already fragile supply chains.

We have also benefited from important work by the Biden administration to begin to address supply chains even in the absence of Congress producing legislation. This includes 100-day reviews of semiconductors, batteries, critical minerals and materials, and pharmaceuticals and active pharmaceutical ingredients conducted in early 2021 with results and recommendations published in June 2021. And in February 2022 seven departments complemented the administration's supply chain review efforts by releasing reports identifying key weaknesses in some of the nation's most crucial supply chains and devising multi-year strategies to address those weaknesses.

Throughout the 117th Congress, the supply chains legislation before us today benefited from bipartisan, bicameral negotiations during the legislative process that ultimately produced the *Chips and Science Act*. Valuable discussions took place during that process to advance supply chain policies that are reflected in the *Supply CHAINS Act*. Ultimately, a narrower package advanced that provided timely funding for domestic semiconductor capabilities. Many important policies – including the bipartisan work on supply chains legislation – were left unfinished.

This legislation is a good starting point and includes reflects bipartisan work to establish mapping and monitoring tools and authorities for the federal government to identify supply chain gaps before they become full blown crisis. There is a demonstrated need for the federal government to provide support where the private sector is either unable, or unwilling, to identify supply chain vulnerabilities on its own. Many large corporations have only limited knowledge of even their own supply chains. Vulnerabilities lurking among their tier-2 or tier-3 suppliers could pose significant problems for the broader economy or to the health and safety of Americans.

In significant ways, the bill before us today does not fully reflect the lessons learned from the pandemic and the supply chain crisis that followed. With commonsense improvements, the legislation can create a long-overdue policy framework for supply chain security, resiliency, and revitalization. As such, we wish to direct your attention to several important policy provisions found in **H.R. 763 The Supply CHAINS Act (Rep. Blunt Rochester, D-DE)** which deserve the attention of this subcommittee.

First, the federal government needs a dedicated Office with the necessary clout to direct supply chain efforts and to implement a comprehensive and coordinated supply chains strategy with participation of private sector stakeholders and other key departments and agencies. The Supply CHAINS Act does just that by creating a Supply Chain Resilience and Crisis Response Office at the Department of Commerce charged with leading a whole-of-government approach to identifying and addressing supply chain vulnerabilities.

Many other countries have already put a coordinated strategy in place to guide the private sector in identifying and mitigating supply chain constraints. Conducting reviews of vulnerabilities through mapping and monitoring is a good starting point, but a dedicated Office is necessary to conduct a coordinated strategy.

At the peak of the supply chain crisis in the summer of 2021, private sector entities did not know who to contact for assistance with critical supply chain concerns. It would have been far preferable to have a central office with senior leadership to coordinate actions across government as opposed to a haphazard, inaccessible approach across many departments. The current approach of relying on a host of different federal agencies – each with its own unique responsibilities – effectively leaves no single entity to identify, manage, and respond to supply chain vulnerabilities amidst a crisis.

The Department of Commerce and its leadership should be commended for their work in the intervening time to address supply chain challenges in the absence of congressional action. This important mission should be made permanent with the congressional stamp of approval so that it can endure over time. We cannot predict when the next emergency will occur. It is

common sense to establish a permanent Office with senior leadership in place at all times and without the threat of lapses in continuity as we move from one administration to the next.

Second, the federal government should provide coordination for the private sector by creating voluntary standards and best practices that can be used to address supply chain vulnerabilities. These tools would be immensely valuable to small- and medium-sized companies that are critical to U.S. supply chain resiliency but often do not have the resources or know-how to do this on their own. Even for larger firms, being able to recognize the scale of potential supply chain disruptions in advance would be valuable for their own bottom line and beneficial to the country. With better public-private coordination, the private sector can proactively identify and address supply chain vulnerabilities before government intervention is necessary.

Third, we support capitalizing a robust supply chain resiliency fund that can provide a mix of loans, loan guarantees, grants, and other forms of financial assistance where there is a demonstrated need. At a minimum, Congress should commission an independent study to determine whether grant and loan making authority is warranted – as called for in the *Supply CHAINS Act*.

Just a generation ago, some economists predicted large new factories or boosts in manufacturing jobs would never be possible again because of automation and import competition. But we've seen a recent increase in manufacturing job growth and private sector investment leveraged through public support under the bipartisan infrastructure law, the CHIPS Act, and the clean energy manufacturing components of the Inflation Reduction Act. In semiconductors, the private sector has committed to at least \$200 billion in new American investments.¹⁴ Companies have announced well over \$100 billion in battery, EV, and related supply chain investments.¹⁵ And more are coming.

¹⁴ "The CHIPS Act Has Already Sparked \$200 Billion in Private Investments for U.S. Semiconductor Production," Semiconductor Industry Association. Link: <https://www.semiconductors.org/the-chips-act-has-already-sparked-200-billion-in-private-investments-for-u-s-semiconductor-production/#:~:text=The%20total%20impact%20of%20the,the%20U.S.%20semiconductor%20supply%20chain>

¹⁵ "FACT SHEET: Biden-Harris Administration Announces New Standards and Major Progress for a Made-in-America National Network of Electric Vehicle Chargers," The White House. Feb. 15, 2023. Link: <https://www.whitehouse.gov/briefing-room/statements-releases/2023/02/15/fact-sheet-biden-harris-administration-announces-new-standards-and-major-progress-for-a-made-in-america-national-network-of-electric-vehicle-chargers/>

I would be remiss if I did not also strongly recommend that any federal assistance directed by the federal government for the purpose of strengthening supply chains adhere to commonsense policy guardrails: 1) Federal dollars and other forms of assistance should not be available to entities that are owned by or affiliated with the foreign government or militaries of countries that are uncooperative or pose risks to our economic and national security interests; 2) Critical supply chains strengthened by federal dollars should give priority to those here in America, not offshore; and, 3) Robust “Buy America” policies should be enforced as a condition of federal assistance used to construct infrastructure associated with critical supply chains.

And, finally, we are deeply concerned that the pending legislation eliminates government consultation activities with America’s workers. By deliberately removing unions from the original text included in Section 2505 of USICA, the pending legislation appears to adopt the view that America’s workers have no experience with the impacts of globalization or the decades of flawed policies that have incentivized, if not actively encouraged, the offshoring of our industrial base.

Of course, the exact opposite is true, as U.S. factory workers are on the front lines of competition with the rest of the world. Frequently, some of the best ideas to inform critical decisions facing corporate leadership come directly from the shop floor, where the workers themselves have valuable insights not otherwise available. Moreover, it should come as no surprise that companies – in particular, those that are multi-national – have priorities that are not always fully aligned with U.S. economic and national security.

As the federal government seeks out private sector collaboration on future supply challenges, America’s workers would be a logical first stop for input on potential vulnerabilities and what steps may be necessary to address them. There is significant precedent for labor consultations across government, including at the Department of Commerce where supply chain activities take place.

The Alliance for American Manufacturing is a labor-management partnership, and I can speak with firsthand knowledge that giving both companies and workers a voice greatly enhances the work of building a policy framework to revitalize American manufacturing.

We also note that another piece of legislation on the hearing agenda today – H.R. 5146, the Advancing Gig Economy Act (Rep. John Joyce, R-PA) – similarly overlooks the important voice of organized labor as a stakeholder in the execution of a study on the gig economy. Any analysis of issues surrounding impacts on wages, healthcare, workplace safety protections, organizing, and other workforce issues would be incomplete, or even one-sided, without the participation of America’s workers.

Lastly, while it is not within the jurisdiction of this subcommittee, it is critical for the United States to strongly enforce its trade remedy laws to ensure a level playing field for American workers and manufacturers. To create the market conditions that allow for the incubation of new technologies into domestic production, manufacturers should have the confidence that they will not be wiped out by a surge of subsidized imports from foreign state-owned enterprises seeking to capture our markets. A logical first step would be for Congress to pass the *Levelling the Playing Field Act 2.0* (H.R. 3882), which modernizes our trade remedy laws to keep up with new and evolving tactics used by China and other foreign competitors to circumvent critical trade enforcement actions.

In conclusion, we encourage the subcommittee to proceed on a bipartisan basis by incorporating these proposals and swiftly advancing legislation. It is not inevitable that future emergencies yield the same outcomes as those experienced in recent years. These challenges can and should be addressed through legislation, and we are certain that these proposals will be received with bipartisan support in the Senate and signed by the President.

Thank you for the opportunity to testify at today’s hearing and thank you for your work to rebuild America’s manufacturing capabilities.