



GLOBAL DATA ALLIANCE

TRUST ACROSS BORDERS

COMMENTS ON US-BRAZIL COMMERCIAL DIALOGUE

US DEP'T OF COMMERCE, INTERNATIONAL TRADE ADMINISTRATION

July 2024

Office of Latin America & the Caribbean
International Trade Administration
US Department of Commerce
1401 Constitution Ave., NW
Washington, DC 20230

Mr. Alexander Peacher, Director, Office of Latin America & Caribbean
Ms. Maria Cameron, Office of Latin America & Caribbean

Dear Mr. Peacher and Ms. Cameron:

The Global Data Alliance (GDA)¹ appreciates the opportunity to submit the following comments on the US-Brazil Commercial Dialogue to the Office of Latin America and the Caribbean within the International Trade Administration.

The GDA is a cross-industry coalition of companies that are committed to high standards of data responsibility and that rely on the ability to transfer data around the world to innovate and create jobs. GDA member companies are active in all sectors of the economy and depend heavily on cross-border access to information and data transfer to create jobs in the United States and across the Western Hemisphere. The GDA is administered by BSA | The Software Alliance, which has offices around the world, including in São Paulo and Washington DC.

We focus our comments on the joint US-Brazil goals outlined in the 21st Plenary of the US-Brazil Commercial Dialogue (Nov. 2023) to “support both countries' efforts to enhance resilient supply chains” through (among other things) “good regulatory practices” and the “digital economy.” More specifically, we focus on steps that the United States and Brazil can take to promote shared supply chain visibility, analytics, resilience, and security by avoiding knowledge deficits or blind spots that impede shared capacity to detect and recover from supply chain risks.² Achieving this outcome will bring significant benefits to the United States, as it will help ensure that the United States can maintain robust cross-border data visibility. Without reliable cross-border data visibility and access, US supply chains will be neither resilient nor secure.

DISCUSSION

The GDA supports efforts in the US-Brazil Commercial Dialogue to support both countries' “efforts to enhance resilient supply chains.” This priority under the Dialogue supports not only the Commerce Department's role as the lead US government agency on supply chain matters, but also the Biden-Harris [White House's](#) whole-of-government supply chain initiative under [EO 14017](#) (2021), as well as the [Executive Order on the White House Council on Supply Chain Resilience](#) (2024). These Executive Orders have produced supply chain resilience reports from various US departments and agencies that stressed how cross-border access to data helps US government agencies anticipate and “understand emerging supply chain threats, risks, vulnerabilities, and opportunities.”³

The GDA also supports the recognition of the Departments of [Agriculture](#), [Commerce](#), [Defense](#), [Energy](#), [Health & Human Services](#), [Justice](#), [State](#), [Transportation](#), and [Treasury](#) that cross-border data access and information exchange with US allies are necessary to advance supply chain resilience and/or priorities relating to [artificial intelligence](#), [cybersecurity](#), [data privacy](#), [democracy](#), [development](#), [financial stability](#), [foreign policy](#), [military readiness](#), [national security](#), and our [global alliances](#).⁴ See Appendix.

Congress has also emphasized that the US government can only secure its own international supply chain if it is able to secure reliable and predictable access to information about, and visibility into, that supply chain. For example, Congress has also noted the risk that foreign cross-border restrictions on data sharing and data access (including between the US and its allies) can “disrupt supply chains,”⁵ necessitating better “coordination with allies on supply chains”;⁶ and highlighting that “strong [international] ... rules are critical to ensuring strong and resilient supply chains” given that “numerous industries reliant on data flows, which encompass sectors like mining, automotive manufacturing, aviation, accounting, medical diagnostics, security services, healthcare, research, and agriculture.”⁷

There is urgency to the Commerce Department’s goal of: (1) securing cross-border sources of data and information relating to the supply chain, and (2) developing state-of-the-art approaches to understanding, analyzing, and modeling that information to safeguard US supply chain resilience and security. Indeed, a particular threat to the Commerce Department’s ability to fulfill this mission is found in foreign cross-border data restrictions that undermine US supply chain resilience and security.⁸ As discussed in the GDA [Cross-Border Data Policy Index](#), such barriers have risen by 600 percent in the Asia-Pacific region alone,⁹ and they continue to rise in the European Union. A loss of visibility and situational awareness by the US government into supply chain-relevant data sources is a serious risk factor that should not be underestimated.

The case of China is a cause for particular concern – particularly if Brazil were to consider emulating China’s proposals to block overseas access to various types of commercial and supply chain data. As discussed in the [Cross-Border Data Policy Index](#), China has the world’s most restrictive cross-border data framework, blocking significant amounts of data from leaving the country. Some data types that Chinese authorities have tried to prevent from being transferred out of the country are those that would be relevant to the Commerce Department’s *Cross-Sector Risk Assessment Tool*, such as international trade data, agricultural market data, production data, financial transaction data, and economic statistics.¹⁰ China has sought to persuade other economies to emulate its restrictive data policies. To the extent that it succeeds, the Commerce Department’s job of analyzing US supply chain risk will only become more difficult.

RECOMMENDATIONS FOR THE US-BRAZIL COMMERCIAL DIALOGUE

Given the role of cross-border data access in ensuring US supply chain resilience, it is of critical importance that the Commerce Department/ITA take steps to secure US cross-border access to the information that the United States needs to maintain supply chain visibility.

To that end, we recommend that ITA negotiate a bilateral *Memorandum of Understanding* (“MOU”) with Brazil, agreeing that both sides will not block or deny each others’ access to data relating to the supply chain, sourcing, production/manufacturing, inputs and outputs, commodities, micro- or macro-economic data, or other information elements that are relevant to making informed supply chain decisions. Stated differently, both to advance EO 14017 and the US-Brazil Commercial Dialogue’s stated objective to “support both countries’ efforts to enhance resilient supply chains,” the ITA should negotiate a bilateral MOU with Brazil to ensure that the United States will have access to all quantitative or qualitative informational inputs necessary to promote our national supply chain resilience.

As a matter of substance, this MOU should contain, at a minimum, legal commitments not to improperly (*i.e.*, for reasons that are arbitrary, discriminatory, disguised, or unnecessary) restrict each other’s cross-border access to information relevant to the international supply chain. Entering into such understandings with US allies is an integral part of the Commerce Department’s statutory obligations and the President’s delegation of authority to Commerce to take steps to analyze and protect the US supply chain. Indeed, there is no perhaps greater threat to America’s supply chain resilience than foreign governmental denial of US access to critical sources of knowledge, information and data, and foreign interference with US supply chain visibility and situational awareness. Securing and

maintaining cross-border data access is essential to protecting our line-of-sight into the supply chain, and our access to critical information and inputs, among many other core US national economic and security priorities.

GDA and BSA member company representatives have extensive experience drafting MOUs, side letters, contracts, or other legal agreements relating to cross-border information and data access, including in the supply chain context. Upon request, we would be pleased to consult with the Commerce Department on the drafting and negotiation of MOU that would meet the needs of the Department in relation to supply chain visibility, analytics, resilience, and security.

CONCLUSION

We strongly support efforts under the US-Brazil Commercial Dialogue to promote supply chain visibility, analytics, resilience, and security. We would welcome the opportunity to consult with the Commerce Department regarding potential terms for an MOU to secure cross-border access to supply chain-related data that the Commerce Department requires to assess, analyze, and protect US supply chain resilience and US national security.

¹ The GDA is a cross-industry coalition of companies, headquartered in the United States and allied nations, that are committed to high standards of data responsibility and that rely on the ability to access and transfer information across borders to innovate and create jobs in the United States. GDA member companies are active in the accounting, agriculture, automotive, aerospace and aviation, biopharmaceutical, consumer goods, energy, film and television, finance, healthcare, hospitality, insurance, manufacturing, medical device, natural resources, publishing, semiconductor, software, supply chain, telecommunications, and transportation sectors. GDA member companies have operations and support millions of jobs across all 50 US states. For more information, see <https://www.globaldataalliance.org>

² See generally Global Data Alliance, *Cross-Border Data & Supply Chain Logistics* (2021), <https://globaldataalliance.org/wp-content/uploads/2021/07/03182021gdaprimersupplychain.pdf> (“Supply-chain operators depend on data transfers and on cross-border access to industrial cloud infrastructure for sourcing, logistics, financial operations, and productivity enhancement, among other business software-driven applications. In every sector of the economy, cross-border information is helping to streamline supply-chain processes in a variety of ways. Digital technologies such as data analytics, artificial intelligence (AI), and blockchain support freight scheduling, sourcing, and inventory management; promote safety and fight counterfeiting; increase efficiency and resilience; reduce costs; and minimize disruption. For instance, AI solutions help predict demand along supply chains more accurately. Companies also use blockchain to quickly trace goods when they need to recall products.”)

³ See *id.*

⁴ See e.g., The White House, US National Cybersecurity Strategy; The White House, US National Security Strategy; The White House, US Indo-Pacific Strategy; US Department of State, Declaration for the Future of the Internet; US Department of Commerce, US-EU Data Privacy Framework; US Department of Commerce, Global Cross-Border Privacy Rules Forum

Overview; US Department of Treasury, Joint Statement on Financial Services Data Connectivity; US Department of State, US Cyberspace and Digital Policy Strategy

⁵ See Bipartisan House Letter Raising Concerns re USTR Support for WTO E-Commerce Moratorium

⁶ See New Democrat Coalition Letter Raising Concerns with USTR Trade Policy

⁷ See Congressional Letter re Competition Concerns with USTR Digital Trade Policy Reversal

⁸ See Global Data Alliance, *Cross-Border Data Policy Index* (2023), at: <https://globaldataalliance.org/resource/cross-border-data-policy-index/>

⁹ See *generally*, Global Data Alliance, *Cross-Border Data Policy Index* (2023), at: <https://globaldataalliance.org/resource/cross-border-data-policy-index/>

¹⁰ See Tianjin Free Trade Zone – Data Outbound Management List (May 2024), at: https://shangwuju.tj.gov.cn/tjsswjzz/zwgk/zcfg_48995/swjwj/202405/t20240509_6620796.html



GLOBAL DATA ALLIANCE

TRUST ACROSS BORDERS

APPENDIX TO COMMENTS ON US-BRAZIL COMMERCIAL DIALOGUE

US DEP'T OF COMMERCE, INTERNATIONAL TRADE ADMINISTRATION

PROMOTING DATA TRANSFERS & CROSS-BORDER ACCESS TO INFORMATION IS A CORE RESPONSIBILITY OF THE US COMMERCE DEPARTMENT

Cross-border access to information supports supply chain resilience in core areas of competency for the US Department of Commerce, as well as other federal Departments, as discussed below.

1. CROSS-BORDER DATA: GROWING THE RESILIENCE OF THE US WORKFORCE & SUPPLY CHAIN

Cross-border access to data supports the resilience of the US workforce and the US supply chain, including US exports and US foreign direct investment (FDI). Protecting these interests is a core responsibility of the Commerce Department's [International Trade Administration](#) (ITA), including the [US Commercial Service](#), and (highly successful) Commerce Department initiatives aimed at enhancing investment in, and the growth of, the US economy, such as [SelectUSA](#).

The resilience of the US workforce in the supply chain increasingly depends on the integration of AI- and other software-based tools necessary to compete globally and support well-paid jobs in advanced manufacturing, precision agriculture, and skilled services. These tools – used in sectors including the automotive, aerospace, clean energy, civil engineering, construction, farming, film production, telecom, transport, and many other sectors – depend upon cross-border access to information used to enhance US-based R&D, market forecasting, manufacturing, sourcing, logistics, sales, and service processes. For example, so-called “Digital Twins” technology, which is particularly cross-border data-dependent, allows US companies to build, simulate, and measure performance in a virtual setting of their US factories, products, and services. In this and many other contexts, without reliable cross-border access to data, the US workforce will be a significant competitive disadvantage vis-à-vis overseas peers, frustrating efforts to grow American manufacturing and service jobs.

A central feature of the work of [ITA](#) is to combat unfair foreign trade barriers and restrictions. Cross-border data restrictions hurt US workers (and their families and communities) that depend upon digitally-enabled or digitally-delivered exports from the United States.¹ Some 40 million US jobs depend on international trade; 16 million US jobs are in software-related fields; and roughly 4 million new US manufacturing jobs are anticipated in the coming years.² US supply chain resilience is also threatened by trading partner imposition of customs duties on US digital exports. (*Please see more detailed discussion of customs duties below*). The impacts of such restrictions would be borne not only by American workers in semiconductors, pharmaceuticals, and other integrated supply chains, but also by artists, musicians, performers, writers, photographers, software coders, and many other creators in the graphic arts, film, music, publishing, and software sectors.³

Such restrictions also undermine efforts to increase diversity in resilient supply chains – harming diverse communities across the United States, contrary to both the Commerce Department's [Strategic Plan](#) and broader US foreign policy priorities. As the United Nations has stated, “regulatory fragmentation in the digital landscape...is most likely to

adversely impact ... less well-off individuals, and marginalized communities the world over, as well as worsen structural discrimination against women.”⁴

Increasing the adaptability, diversity, training opportunities, and economic prospects of the US workforce is integral to US supply chain resilience. To promote a resilient US supply chain that benefits the US workforce, the Commerce Department should engage with allies to agree on due process norms on cross-border data transfers, localization, and related matters.

2. CROSS-BORDER DATA: SAFEGUARDING CYBERSECURITY IN THE SUPPLY CHAIN

US supply chain resilience depends heavily on ensuring cybersecurity, which is a core component of US national security. Cross-border data visibility is critical to early warning systems and the ability to anticipate, detect, respond, and recover vis-à-vis cyber-threats and events. Particularly in the cross-border data policy context, these are core competencies for the Commerce Department.

In the cybersecurity context, the ability to locate and transfer data in the most functionally and technically secure manner is a cybersecurity risk management best practice. This cybersecurity reality is reflected not only in the US [National Cybersecurity Strategy](#), but also in official materials from the [National Institute of Standards and Technology](#), including the [NIST Cybersecurity Framework](#) and the [NIST Cybersecurity Supply Chain Risk Management Framework](#). This is in part because cross-border visibility into cyber-related data allows cybersecurity tools to monitor traffic patterns, identify anomalies, and divert potential threats in ways that depend on global access to real-time data. Additionally, companies may choose to store data at geographically diverse locations to obscure the location of data, to mitigate risks from *force majeure* events, to enable companies to reduce network latency, and to maintain redundancy and resilience for critical data in the wake of physical damage to a storage location. Conversely, when governments mandate localization or restrict the ability to transfer and analyze data in real-time, they create unintended vulnerabilities. Such vulnerabilities undermine US supply chain resilience.

To promote cybersecurity and supply chain resilience, the Commerce Department should with allies to agree on due process norms on cross-border data transfers, localization, and related matters.

3. CROSS-BORDER DATA: COMBATTING ILLICIT FINANCE AND PROMOTING REGULATORY COMPLIANCE ACROSS THE SUPPLY CHAIN

US supply chain resilience is directly threatened by a range of illegal activity – often associated with transnational criminal enterprises, private- or nation state-sponsored cyber-attackers, rogue states, and terrorist groups – that increase both economic and national security risks to the United States. US supply chain resilience (and financial stability) is also threatened by a lack of transparency regarding the true performance of firms or economies abroad. These core competencies of the Treasury Department are supported by the Commerce Department and the State Department in their international economic diplomacy efforts.

First, data transfers and cross-border access to data for forensic or investigatory purposes are critical to combatting such criminal activity across the supply chain. Data transfers and information access support compliance with governmental rules designed to prevent consumer fraud, securities and financial crimes (e.g., insider trading), money laundering, and corrupt practices. For example, fraud detection models are typically built on global transaction data or transaction data collected from multiple countries because fraud patterns are not limited by national boundaries.

Second, data transfers and cross-border access to data are also essential to ensuring financial accountability, stability, and transparency that are critical to US supply chain and economic resilience. The ability to anticipate, manage, and respond to financial and economic shocks depends upon maintaining access to accurate and reliable sources of firm- and microeconomic-level data, as well as sources of sectoral-, market- and economy-wide data. Being denied cross-border access to such economic data is highly destabilizing to supply chains, securities exchanges, and other financial markets. It is particularly important to our own economic stability to maintain ready and immediate access to such data from around the world.

To make the US supply chain more resilient against financial criminal activity, and to promote the type of financial transparency upon which our supply chain and economy depend, the Commerce Department should engage with allies to agree on due process norms on cross-border data transfers, localization, and related matters.

4. CROSS-BORDER DATA: SUPPORTING HUMAN RIGHTS IN THE SUPPLY CHAIN

US supply chain resilience is directly impacted by the actions of non-democratic or authoritarian states to limit access to truthful and accurate information, freedom of expression, religious freedoms, or the ability to share information across digital networks for purposes of collective bargaining or other protected labor rights. As reflected in the State Department's [International Cyberspace and Digital Policy Strategy](#), these actions, which impair human and/or labor rights, are often effectuated by blocking, restricting, filtering, and monitoring data that is transferred across borders to democracy advocates, political dissidents, labor leaders, and even religious leaders. Similarly, digitally authoritarian states may use data localization mandates as a means of maximizing coercive state control and visibility into sensitive personal data of these or other citizens. Such states may also use cross-border data restrictions as a means of depriving populations to accurate information, censoring news reporting, and stifling public debate.

As the American Civil Liberties Union (ACLU), Center for Democracy and Technology (CDT), Freedom House, and other human rights organizations stated in a February 2024 letter, US government actions must not be:

[R]ead to signal an abandonment of ... principles of openness, freedom, and non-discrimination. ... Data localization requirements may be abused to disfavor foreign companies and speakers and undermine the functioning of a global, interoperable internet by upending the ways in which data can flow across borders. Data localization places personal data 'firmly within reach of governments,' creating unique risks for people's privacy, free expression, access to information, and other fundamental freedoms. Data localization efforts can also exacerbate cybersecurity concerns, [which] may make data more vulnerable to foreign surveillance and privacy breaches, while failing to address sophisticated attacks that do not rely on the foreign transfer of data. See Ex. 32.

To make the US supply chain more resilient against efforts by digitally authoritarian regimes to compromise human and labor rights by imposing data localization mandates and data transfer restrictions, the United States should reengage with allies to agree on due process norms on cross-border data transfers, localization, and related matters.

5. CROSS-BORDER DATA: PROMOTING INNOVATION ACROSS THE SUPPLY CHAIN

Cross-border data transfers are critical to research and development (R&D) and other innovative endeavors in today's connected economy. These are core competencies of the Commerce Department, and more particularly, the [US Patent and Trademark Office](#), as well as ancillary innovation-related functions at ITA, NIST, and other components of the Commerce Department.

Technological innovation – and the development of intellectual property – is inherently transnational. As the World Trade Organization has stated, “for data to flourish as an input to innovation, it benefits from flowing as freely as possible...” Governments can foster innovation with a mix of policy tools that includes greater cross-border access to technology; the ability to share knowledge, ideas, and information across global digital networks; and improved international digital connectivity. Cross-border data transfers are integral to every stage of the innovation life cycle.

To promote supply chain resilience through innovation, the Commerce Department should engage with allies to agree on due process norms on cross-border data transfers, localization, and related matters.

6. CROSS-BORDER DATA: FOSTERING A MORE RESILIENT SUPPLY CHAIN TO PROTECT HEALTH

Cross-border access to scientific and health data in allied nations, as well as data transfers, are essential to all actors in the US healthcare system – from gathering information on needed medical supplies, to conducting transnational R&D, to delivering services and monitoring patients. Data transfers are critical at every stage of the

research, development, and delivery process for new biopharmaceutical medicines. Data transfers are also essential for medical technology companies to detect, monitor, and treat medical conditions in a safe, effective, precise, and timely manner. Such data transfers help support the real-time monitoring of patient health conditions at the request of patients and their clinicians, offering benefits from the perspectives of patient comfort and care, remote analysis and treatment, monitoring for safety and efficacy of deployed technologies, refinements to treatment pathways and clinician education, and researching and engineering therapy improvements and innovations. Not only are these core competencies of the Department of Health & Human Services (including FDA and NIH), but they are also central to many different ITA offices focused on pharmaceutical and medical technologies (including USPTO).

To safeguard good healthcare outcomes for all Americans, the Commerce Department should engage with allies to agree on due process norms on cross-border data transfers, localization, and related matters.

7. CROSS-BORDER DATA: POWERING CARBON TRACKING TOOLS FOR AN ENVIRONMENTALLY RESILIENT SUPPLY CHAIN

The cross-border movement of data, cross-border exchange of knowledge and experience, and cross-border access to computing resources, data analytics tools, and climate mitigation technologies is a fundamental element of the global effort to address climate change. Some of the most powerful tools for combating climate change—carbon emissions tracking, predictive climate modeling, and less energy-intensive computing resources—depend on the ability to freely access cross-border data transfers. By contrast, restricting the ability to share knowledge, information, and data across transnational IT networks, and mandating the localization of computing resources in particular regions, undermines the ability to address climate challenges. In many cases, such mandates may actually produce increases – rather than decreases – in emissions. Not only are these concerns critical to the work of the Department of Energy and the Environmental Protection Agency; they are also important to Commerce offices focused on environmental issues, including part of ITA and NOAA.

To meet the challenge of climate change using carbon tracking and other data analytics tools, the Commerce Department should engage with allies to agree on due process norms on cross-border data transfers, localization, and related matters. For more information, please see Ex. 43.

8. CROSS-BORDER DATA: BUILDING A MORE RESILIENT SUPPLY CHAIN WITH ARTIFICIAL INTELLIGENCE

Cross-border data transfers are critical to meeting the goals of President Biden's [EO on Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence](#) - both to promote AI-driven R&D in life sciences and climate mitigation technologies, but also to assess the safety and security of AI technologies themselves. Science- and innovation-oriented organizations at the international and national levels make clear that these activities depend on the application of AI and data analytics techniques to data sourced globally.

From developing predictive models to deploying and using analytical solutions, AI and data analytics systems are “trained” by ingesting large data sets to identify underlying patterns, relationships, and trends that are then transformed into mathematical models that can make predictions based on new data inputs. These data sets often originate from geographically dispersed sources across transnational digital networks, making it imperative that data can move seamlessly and securely across borders. To secure the insights and other benefits that data analytics can provide, it is important to permit access and consolidation of data sets across borders.

Smart and responsible deployment of data analytics solutions, supported by data inputs from across the globe, can help advance improvements in healthcare, modernize education, expand accessibility tools, strengthen cybersecurity, and increase business productivity and competitiveness. For example, analytical techniques applied to health data transferred across transnational digital networks helped fast-track COVID-19 vaccine development, cutting timelines from years to months, as researchers analyzed data from around the world to quickly identify potential treatments.

The White House EO gives the Commerce Department specific roles and responsibilities that relate to AI safety and security, as well as AI-driven innovation and scientific advances. Without US cross-border access to information from abroad, the Commerce Department will not be able achieve these mandates. To fulfill its assigned

work from the White House and to promote a more resilient supply chain through AI and data analytics, the Commerce Department should engage with allies to agree on due process norms on cross-border data transfers, localization, and related matters.

9. CROSS-BORDER DATA: SUPPORTING EQUITY & OPPORTUNITY ACROSS THE SUPPLY CHAIN

Cross-border data transfers and digital connectivity are critical to sustainable economic development – both at home and abroad – helping support marginalized communities, including by improving access to global markets, finance, food, and healthcare. Integrating underserved communities into economic systems helps promote more resilient supply chains for all, while promoting US foreign aid and assistance programs.

First, the ability of micro-, small-, and medium-sized enterprises (MSMEs) from developing countries to access global markets where they can offer and sell their services and products depends on cross-border access to information and cloud-enabled technologies. As USAID has explained,

Digital ecosystems have the potential to equip informal merchants, women entrepreneurs, smallholder farmers, and MSMEs engaged in cross-border trade with access to markets, information, and finance. These diverse users require trustworthy services that reflect their needs....[D]igital trade that spans borders depends on free data flows, digitized customs, and innovations in trade finance made possible by new approaches to lending.⁵

Second, advances in financial inclusiveness, financial transparency, and financial security across developing countries also depend on cross-border access to data and cloud-enabled technologies. There remain more than 2.5 billion unbanked people worldwide, many living on remote and isolated locations lacking in banks or other on-the-ground financial service providers. Technologies that leverage data transfers can increase access to financial services—particularly as 95 percent of the world’s population is already covered by mobile broadband networks.

Third, the World Bank estimates that agriculture accounts for up to 25 percent of gross domestic product (GDP) and 65 percent of the lower income population in some developing countries, and that growth in the agriculture sector is two to four times more effective in raising incomes among those populations. Cross-border data transfers can also help farmers reduce transaction costs and arbitrage by middlemen, given that up to 70 percent of smallholder production value is captured by different intermediaries.

Finally, remote health services for medically underserved populations and the search for tomorrow’s medical treatments also depend on cross-border access to information, such as through: (1) the online healthcare education efforts of international health and development agencies; (2) cross-border access to aid in the treatment of diseases, including tropical, rare, and neglected diseases; and (3) cross-border digital humanitarian assistance.

The foregoing paragraphs highlight the importance of cross-border data to the equities of the Commerce Department (including CLDP), as well as Treasury, State, HHS, USAID, USTDA, the Ex-Im Bank, the US International Development Finance Corporation, and other foreign affairs and foreign development organizations. To promote a more resilient and secure supply chain that involves America’s allies in developing and least developing countries, the Commerce Department (and other departments) should engage with those allies to agree on due process norms on cross-border data transfers, localization, and related matters.

10. CROSS-BORDER DATA: SUPPORTING SMALL BUSINESSES ACROSS THE SUPPLY CHAIN

Cross-border data transfers can help small businesses by (1) increasing access to digital knowledge resources and overseas markets and leveling the playing field vis-à-vis larger enterprises; (2) allowing small businesses to use cross-border digital tools to seize economic opportunity with agility; and (3) reducing digital barriers that disproportionately impact small businesses.

Small businesses face knowledge and access barriers that larger enterprises can more easily overcome. Data transfers and cross-border access to technology and markets help level the playing field. As the OECD has explained, cross-border data flows are especially important for small businesses....Better and faster access to

critical knowledge and information also helps small businesses overcome informational disadvantages, notably with respect to larger firms, reducing barriers to engaging in international trade and allowing them more readily to compete with larger firms. One recent study estimates that digital tools helped small businesses reduce export costs by 82 percent and transaction times by 29 percent. Data localization and transfer restrictions make it harder to achieve these benefits, in part because they produce a fragmented Internet that reduces market opportunities for domestic small businesses to reach worldwide markets, which may instead be confined to some local or regional markets.

Unfortunately, the number and variety of digital trade barriers affecting small businesses has increased in recent years, and today include data localization mandates; unnecessary data transfer restrictions; customs duties on electronic transmissions; or other discriminatory digital measures. These types of digital barriers fall particularly heavily on small businesses, which lack the resources that larger companies can draw upon to comply with onerous mandates. In a recent CSIS study, small businesses highlighted divergent data privacy rules (40–60 percent of SME survey respondents) and data localization rules (30–40 percent of SME respondents) as key challenges. Conversely, with greater cross-border connectivity, small businesses estimate that they could increase sales by 15–40 percent and hire between 10–50 new employees each. (Please see additional discussion of small business impacts in Section B.13 below).

Promoting the interests of US exporters, entrepreneurs, and small businesses is a core priority of the Commerce Department, as well as the Small Business Administration. To promote a more resilient supply chain for American small businesses, the Commerce Department should engage with those allies to agree on due process norms on cross-border data transfers, localization, and related matters.

11. CROSS-BORDER DATA: FACILITATING TRADE TO SUPPORT SUPPLY CHAIN RESILIENCE AND AGILITY

Resilient supply chains run on cross-border data. Indeed, international trade, customs clearance, shipping, and logistics likely depend on cross-border access to data and digital tools as much as any business process in any other sector. From a process standpoint, a typical supply chain workflow includes the preparation and completion of contracts, invoices, receipts, bills of lading, shipping manifests, customs declarations, and various import licensing or regulatory certifications (e.g., for IP, health and safety purposes). Today, all of these supply chain data elements are typically prepared, stored, and submitted as cross-border data transmissions.

In the United States, the Department of Homeland Security and US Customs & Border Protection pioneered this cross-border data driven transformation through the so-called the Automated Commercial Environment (ACE), significantly enhancing US supply chain resilience in the process. In 2021, the ACE platform reportedly “reduced transaction processing by 795,000 hours for private actors, assisted process automation for 269 forms/document types, and led to \$2.7 billion in efficiencies.”⁶ Among other benefits, the ACE platform allows DHS and CBP to improve revenue collection, auditing for customs compliance, and enforcement (e.g., against circumvention of anti-dumping or countervailing duty orders, or of labor- or environmental safeguards). Without reliable cross-border data transfers and access to information and technology, many of these benefits would not have been achievable.

The adoption of similar paperless trading technologies by other countries – particularly developing countries – have helped to democratize and spread these benefits to many more people around the world. The widespread adoption of such cross-border data-driven systems also benefits American workers, whose products and services can more easily reach potential buyers globally. For more information, please see Ex. 55 - 56.

However, US supply chain resilience faces a significant threat as some economies consider imposing wholly unprecedented new cross-border data barriers in the form of customs duties and restrictions on a wide array of digital goods and services produced by American workers and exported across electronic networks to those economies.⁷

These new duties and restrictions would be highly disruptive to the US-allied supply chain: They would inject additional unpredictability and cost into the supply chain, cutting off US exports from barrier-free access to large and growing allied markets – potentially including Bangladesh, India, Indonesia, Malaysia, and Thailand (among others that have expressed an interest in imposing such barriers). These restrictions would directly harm American workers in digitally intensive export sectors, including semiconductors,⁸ film, music, software, and publishing, as

well as automotive, aerospace, and other digitally connected devices that depend upon the ability to transmit data via satellite or IT networks. They would also impact workers across other sectors of the US economy, including agriculture and other manufacturing companies that rely on the constant flow of research, design, and process data and software to enable their production flows and supply chains for critical products. More broadly, they would impede the ability to use digital tools necessary to the sale, financing, and movement of goods across borders.

The pressure on American jobs and wages could be considerable. Most at risk are American workers employed by small businesses that would be unable to absorb the additional costs imposed by these measures. Accounting for 95% of all US exporting enterprises, American small businesses and their workers are particularly vulnerable to this new type of digital trade barriers. This a core area of departmental expertise for the Commerce Department, which is a USG center of excellence in protecting the interests of US exporter. If the US government allows foreign countries to impose customs restrictions across these US export sectors, the disruption to trade will be paid for in lost American jobs, innovation, and economic opportunity.⁹ The Commerce Department should advance these priorities.

12. CROSS-BORDER DATA: SUPPORTING US INDUSTRIAL COMPETITIVENESS IN EVERY SECTOR

Cross-border data is necessary to building resilient supply chains at every stage of the value chain¹⁰ across every sector,¹¹ including the agriculture,¹² automotive,¹³ clean energy,¹⁴ finance and insurance,¹⁵ healthcare¹⁶ and medical technology,¹⁷ logistics,¹⁸ media,¹⁹ pharmaceutical,²⁰ and telecommunications sectors.²¹ Foreign cross-border data restrictions hurt US workers (and families and communities) in all of these sectors that depend upon digitally-enabled or digitally-delivered exports from the United States.²²

To promote a more resilient supply chain for American enterprises and their employees in every sector, the Commerce Department should engage with those allies to agree on due process norms on cross-border data transfers, localization, and related matters.

13. CROSS-BORDER DATA: SUPPORTING THE ECONOMIC FOUNDATIONS OF A RESILIENT SUPPLY CHAIN

Macro- and micro-economic analyses performed by the WTO, World Bank, IMF, OECD, and independent economists show that foreign cross-border data restrictions also harm GDP (minus 0.7-1.7%); investment flows (minus 4%); productivity (4.5% loss); small business (up to 80% higher trade costs); and the US tax base.²³ As the World Bank has noted, “[r]estrictions on data flows have large negative consequences on the productivity of local companies.”

Foreign direct investment (FDI) into the United States represents a pillar of US supply chain resilience. In 2023, FDI in the United States totaled \$5.25 trillion, with most of those funds coming from Japan, the United Kingdom, Germany, the Netherlands, and Canada (in that order).²⁴ The United States must not adopt a cross-border data policy stance that indicates to our closest allies that the United States may – in the future – block those countries’ access to information out of (or into) the United States for reasons that are arbitrary, discriminatory, disguised, or unnecessary.

This policy stance risks undermining foreign investor confidence in the United States. The US government should consider China’s experience in this regard, given the severe impact that China’s arbitrary and capricious cross-border data policies have had on FDI into that country. The United States is currently a beneficiary of significant foreign FDI. It should not risk losing that privileged position due to the adoption vis-à-vis its own allies of arbitrary, discriminatory, disguised, or unnecessary cross-border data policy positions.

To support healthy, long-term resilient economic growth across the American supply chain, the Commerce Department should engage with those allies to agree on due process norms on cross-border data transfers, localization, and related matters.

14. CROSS-BORDER DATA: SUPPORTING US STRATEGIC INTERESTS IN A RESILIENT ALLIED SUPPLY CHAIN

US supply chain resilience requires communicating, cooperating, and collaborating with allies. To that end, the United States must not abandon the pro-democracy, pro-economic opportunity, and pro-science cross-border data

disciplines that have helped it assemble a coalition of democracies across APAC, EMEA, and the Western Hemisphere to resist the challenge of digitally authoritarian policies. The US should not isolate itself from its allies, nor should it disregard the longstanding US-Allied efforts to bring greater predictability – consistent with democratic values – to cross-border data access and data transfers throughout the supply chain.

US government efforts to promote cross-border access to information across the supply chain have spanned decades. The United States drafted the relevant trade law disciplines based on US legal principles – helping ensure that US values and legal norms remain at the foundation of international economic law. These efforts have also served US geopolitical goals (keeping alliances strong, overseas markets open, and promoting US-based norms of transparency, due process, and procedural fairness among allies). And these efforts were integral to supporting democracy around the world, given that the United States always understood that access to knowledge and information is critical to civil and economic freedoms. The disciplines at issue serve to [protect human rights](#) and [counter digital authoritarianism](#), consistent with the [Presidential Initiative for Democratic Renewal](#) and the [International Cyberspace and Data Policy Strategy](#).

From a supply chain resilience perspective, failure to work with allies to advance democratic norms of cross-border data access will undermine specific calls for the promotion of US-Allied cross-border data access in the [National Security Strategy](#), the [National Cybersecurity Strategy](#), the [Indo-Pacific Strategy](#), the [Declaration for the Future of the Internet](#), the [International Cyberspace and Digital Policy Strategy](#); the [Data Privacy Framework](#), the [Global CBPR Forum](#), the [USAID Digital Strategy](#), and the [Joint Statement on Financial Services Data Connectivity](#). More specifically that continued failure is at odds with:

- The Biden-Harris [Executive Order on Artificial Intelligence \(AI\)](#) and US leadership in AI, which require reliable cross-border access to information from abroad.
- White House commitments to pursue “high-standard rules of the road in the digital economy, including [standards on cross-border data flows and data localization](#).”
- The [National Security Strategy](#) call to “to promote the free flow of data and ideas with trust, while protecting our security, privacy, and human rights, and enhancing our competitiveness.”
- The [National Cybersecurity Strategy](#) call to “rally like-minded countries, the international business community, and other stakeholders to advance our vision for the future of the Internet that promotes secure and trusted data flows, respects privacy, promotes human rights, and enables progress on broader challenges.”
- The call in the [Declaration for the Future of the Internet](#) to “realize the benefits of data free flows with trust based on our shared values as like-minded, democratic, open and outward looking partners.”
- The call in the [International Cyberspace and Data Policy Strategy](#), calling for greater “[digital solidarity](#)” with US allies via “[support for the trusted flow of data](#)” and “mutual recognition of rights-respecting approaches to data governance and digital trade”
- The call in the Statement on [Financial Services Data Connectivity](#) to oppose “measures that restrict where data can be stored and processed for financial service suppliers as long as financial regulators have full and timely access to data needed to fulfill their regulatory and supervisory mandate.”
- The call in the [USAID Digital Strategy](#) to support “digital trade that spans borders depends on free data flows, digitized customs, and innovations in trade finance.” and to allow digital technology to fulfill its “potential to democratize the flow of data and enhance the ability of governments to respond to citizens’ needs efficiently and effectively.”

To support US strategic interests in a resilient and secure supply chain in which the United States and its allies support one another, the Commerce Department and other federal Departments should engage with those allies to agree on due process norms on cross-border data transfers, localization, and related matters.

15. CROSS-BORDER DATA: SUPPORTING OTHER US GOVERNMENT AGENCY INTERESTS IN A RESILIENT ALLIED SUPPLY CHAIN

In the Executive Order on America's Supply Chains, [EO 14017](#), the President highlighted the importance of undertaking "diplomatic, economic, security, trade policy, informational, and other actions that can successfully engage allies and partners to strengthen supply chains jointly or in coordination" as well as "ongoing data gathering and supply chain monitoring." The reports submitted in response to this EO and subsequent thereto underscore the importance of cross-border access to data for many US government agencies and departments. This includes (among others)²⁵:

- **Department of Agriculture**, *USDA Agri-Food Supply Chain Assessment: Program and Policy Options for Strengthening Resilience (2022)*. This report stresses that cross-border access to "economic information and market intelligence form a critical knowledge base for anticipating both urgent and longer-term supply chain vulnerabilities as well as conducting real-time monitoring when supply chain challenges are experienced. Numerous information sources currently exist and are summarized below. Moving forward, enhancing the connection and real-time monitoring of these varied data sources will provide a more wholistic and actionable picture of food and agriculture supply chains..."²⁶
- **Department of Defense**, *Securing Defense-Critical Supply Chains: An action plan developed in response to President Biden's Executive Order 14017 (2022)*. This report underscores DoD's need for cross-border access to data from US allies. For example, the report states, "DoD will continue to build on previous efforts to expand its supply chain visibility. This effort will begin with evaluating the data needed to inform real-time supply chain management decisions. Collecting and organizing key data will position the Department to maximize the use of analytic tools and mitigation strategies to proactively identify and address trends, vulnerabilities, and disruptions."²⁷
- **Department of Energy**, *America's Strategy to Secure the Supply Chain for a Robust Clean Energy Transition (2022)*. This report underscored that DoE faced "limitations in current data and analytical tools to assess and understand holistic and interdependent supply chains. To understand emerging supply chain threats, risks, vulnerabilities, and opportunities, it is important to have access to supply chain data and analytical tools to inform thinking and support decision making in building and maintaining resilient energy sector supply chains."²⁸
- **Department of Health & Human Services**, *Public Health Supply Chain and Industrial Base (2022)*. This report underscores the importance of cross-border access to data from allied nations in several contexts. First, in the re-shoring and friend-shoring context, cross-border data from allied nations is necessary to sustain a "reliable manufacturing base, leveraging partnerships with industry and international neighbors and allies, and reviewing domestic sourcing and international procurement commitments to ensure they support US supply chain capacity and resiliency." Second, HHS underscores that for public-private partnerships to enhance supply chain resilience, it is critical to have "transparent, real-time dialogue and data sharing between government and industry partners," including in an international setting. Third, cross-border data access is also important to HHS' goals of "building and improving end-to-end visibility of the supply chain, including through the Supply Chain Control Tower(SCCT). FDA's Resilient Supply Chain and Shortages Prevention Program will enhance Center for Devices and Radiological Health's capacity to enable rapid intervention to prevent and mitigate supply chain interruptions." HHS underscores that, "enhancing supply chain surveillance and monitoring will enable earlier identification of concerns, issues, and challenges and help bring this information to leadership and relevant agencies sooner than might have been possible before."²⁹

As reflected above, Commerce Department efforts to advance supply chain resilience should recognize and respect the importance of securing America's future cross-border access to data.

¹ See generally, Global Data Alliance, *GDA Comments on Worker-Centered Trade Policy* (2023), <https://globaldataalliance.org/wp-content/uploads/2023/09/09252023gdaworktradepolicy.pdf>

² See e.g., Business Roundtable, *Trade Supports over 40 Million American Jobs* (2020), at: <https://www.businessroundtable.org/new-study-trade-supported-over-40-million-american-jobs>; National Association of Manufacturers, *US Manufacturing Could Need up to 3.8 million workers* (2024), at: <https://nam.org/study-manufacturing-in-u-s-could-need-up-to-3-8-million-workers-30626/>; US Chamber of Commerce, *How US Workers and Companies Benefit from Digital Trade* (2024), at: https://www.uschamber.com/assets/documents/USCC_Digital-Trade-Report.pdf; US Chamber of Commerce, *International Trade Opens Doors for American Workers* (2023), <https://www.uschamber.com/international/international-trade-opens-doors-for-american-workers>; International Trade Administration, *SELECTUSA Sector Overview: Software and Information Technology Association* (2020), <https://www.trade.gov/selectusa-software-and-information-technology-industry>

³ See Global Data Alliance, *WTO Moratorium on Customs Duties on Electronic Transmissions – Statistical Summary* (2024), at: <https://globaldataalliance.org/wp-content/uploads/2024/02/02222024gdawtostatsum.pdf> ; BSA | The Software Alliance, *Customs Duties on Software and Other US Digital Exports – A Threat to Growth & Innovation* (2019), at: <https://www.bsa.org/files/policy-filings/10182019wtomoratoriumus.pdf>

⁴ See id.

⁵ USAID, *Digital Ecosystem Framework* (2022), at: https://www.usaid.gov/sites/default/files/2022-05/Digital_Strategy_Digital_Ecosystem_Final.pdf

⁶ <https://www.tradeready.ca/2024/featured-stories/simplifying-international-trade-with-single-windows/>

⁷ For example, Indonesia has introduced Regulation No.17/PMK.010/2018 (Regulation 17) purports to cover a wide array of categories, classified in Indonesia’s tariff schedule between subheadings 9901.10.00 to subheading 9901.90.00, including “multimedia (audio, video or audiovisual); operating system software; application software; “support or driver data, including design for machinery system”; and a broad catch-all category covering “other software and digital products.”

⁸ For example, the duty-free movement of electronic transmissions within and across borders has been essential in making the US semiconductor industry strong and innovative over the past several decades. Semiconductors are one of the most complex products to develop, design, and manufacture. The most advanced chips have more than 50 billion transistors etched onto a device smaller than the size of a fingernail. The task of chip design at this level of complexity can be massive in scope, requiring large R&D and design teams consisting of hundreds of highly skilled engineers spread across the globe to collaborate for years before a design is ready for production. This complex R&D and design process involves an innumerable number of cross-border data transfers, which are foundational to the more than \$4 trillion global IT spending every year. If the United States allowed other countries to impose such customs duties, the cross-border movement of semiconductor design, software, chemical formulations, manufacturing information and other development data could potentially face tariffs and customs restrictions across the globe, increasing costs for companies and consumers and further straining the current chip shortage and semiconductor supply chain challenges. Semiconductor R&D activities involving designs, computing blocks, circuit layouts and software could also be severely impacted – even if that technical information were to be transferred intra-company. This is especially problematic given that India, one of the main opponents of renewing the Moratorium, is home to a significant share of the world’s semiconductor design workforce.

As the Biden Administration seeks to boost US manufacturing competitiveness under the CHIPS Act and the Inflation Reduction Act, it is important to remember that the US semiconductor design and manufacturing sectors – like other advanced manufacturing sectors – can only be successful and competitive in an environment that permits the protected and seamless movement of R&D, design, engineering and manufacturing data without being impeded by customs restrictions and other intrusions into a secure and resilient semiconductor supply chain.

⁹ Allowing the imposition of such customs duties and restrictions by trading partners – or the imposition by the United States of such measures – would be deeply would likely result in increased inflationary pressures at a time that American citizens are struggling with levels of price inflation unseen in more than a generation. Allowing for the imposition of customs duties, at unknown *ad valorem* percentage rates and on entirely new categories of digital inputs and services, would aggravate this situation. The risks of increased price inflation are exacerbated for at least two reasons: (1) The nature and scope of the increased duties under consideration, and (2) the countries actively considering this course of action. As regards nature and scope, Indonesia’s Regulation No. 17, for example, would impose broad-based customs restrictions on data flows and a wide array of digital tools that are critical to companies across business sectors. Indeed, 75 percent of the value of data flows is in sectors like agriculture, logistics, and manufacturing. Global Data Alliance, *Cross-Border Data Transfers – Facts & Figures* (2020), at: <https://globaldataalliance.org/wp-content/uploads/2021/07/gdafactsandfigures.pdf> This would suggest that the application of customs duties to such data flows would be magnified across industries.

- ¹⁰ Global Data Alliance, *Jobs in All Sectors Depend Upon Data Flows* (2020), at: <https://globaldataalliance.org/wp-content/uploads/2021/07/infographicgda.pdf>
- ¹¹ Global Data Alliance, *The Cross-Border Movement of Data: Creating Jobs and Trust Across Borders in Every Sector* (2020), at: <https://globaldataalliance.org/wp-content/uploads/2021/07/GDAeverysector.pdf>
- ¹² Global Data Alliance, *GDA Website – Agriculture* (2022), at: <https://globaldataalliance.org/sectors/agriculture/>
- ¹³ Global Data Alliance, *GDA Website – Automotive* (2022), at: <https://globaldataalliance.org/sectors/automotive/>
- ¹⁴ Global Data Alliance, *GDA Website – Energy* (2022), at: <https://globaldataalliance.org/sectors/energy/>
- ¹⁵ Global Data Alliance, *GDA Website – Finance* (2022), <https://globaldataalliance.org/sectors/finance/>
- ¹⁶ Global Data Alliance, *GDA Website – Healthcare* (2022), <https://globaldataalliance.org/sectors/healthcare/>
- ¹⁷ Global Data Alliance, *GDA Website – Medical Technologies* (2023), <https://globaldataalliance.org/sectors/medical-technology/>
- ¹⁸ Global Data Alliance, *GDA Website – Supply Chain Logistics* (2022), <https://globaldataalliance.org/sectors/supply-chain-logistics/>
- ¹⁹ Global Data Alliance, *GDA Website – Media and Publishing* (2022), <https://globaldataalliance.org/sectors/media-publishing/>
- ²⁰ Global Data Alliance, *GDA Website – Biopharmaceutical R&D* (2022), <https://globaldataalliance.org/sectors/biopharmaceutical-rd/>
- ²¹ Global Data Alliance, *GDA Website – Telecommunications* (2022), <https://globaldataalliance.org/sectors/telecommunications/>
- ²² See generally, Global Data Alliance, *GDA Comments on Worker-Centered Trade Policy* (2023), <https://globaldataalliance.org/wp-content/uploads/2023/09/09252023gdaworktradepolicy.pdf>
- ²³ See generally, Global Data Alliance, *Cross-Border Data Policy Index* (2023), at: <https://globaldataalliance.org/resource/cross-border-data-policy-index/>
- ²⁴ Bureau of Economic Analysis, *Direct Investment by Country and Industry* (2022), at: <https://www.bea.gov/news/2023/direct-investment-country-and-industry-2022#:~:text=The%20foreign%20direct%20investment%20in%20the%20United%20States,from%20%245.04%20trillion%20at%20the%20end%20of%202021.>
- ²⁵ Other examples of agency reports highlighting the importance of cross-border data include:
- **Department of Commerce**, *2023 Annual Performance Report*. This report underscores the criticality of US-Allied cross-border data access to the security and resilience of US supply chains and economic opportunity, including in its discussion of data transfer frameworks with the EU and Switzerland and with other US allies, and in its discussion of supporting "US company resilience to foreign economic and geopolitical coercion and policies and practices of malign actors and their sponsored entities in third country markets as well as promote US standards and business practices worldwide. See US Department of Commerce, *2023 Annual Performance Report* (2024), at: <https://www.commerce.gov/sites/default/files/2024-03/FY2023-2025-APPR.pdf>
 - **Department of Defense** commissioned report, [US Alliance and Partner Networks – A Network Analysis of their Health & Strength](#). That report stresses the role that cross-border access to information and integrated allied supply chains play in protecting US national security, particularly in times of conflict. The report also stresses the gravity of the present situation, noting that, "as China rose to become an international trading power, displacing the United States, US centrality to the economic network layer fell by more than two-thirds (69 percent), [placing]... the United States as the greatest loser of network depth." Office of the Secretary of Defense, Report Commissioned through RAND Corporation, *US Alliance and Partner Networks – A Network Analysis of Their Health and Strength* (2024), at https://www.rand.org/content/dam/rand/pubs/research_reports/RRA1000/RRA1066-1/RAND_RRA1066-1.pdf
- ²⁶ Department of Agriculture, *USDA Agri-Food Supply Chain Assessment: Program and Policy Options for Strengthening Resilience* (2022), at: <https://www.ams.usda.gov/sites/default/files/media/USDAAgriFoodSupplyChainReport.pdf>
- ²⁷ Department of Defense, *Securing Defense-Critical Supply Chains: An action plan developed in response to President Biden's Executive Order 14017* (2022), at <https://media.defense.gov/2022/Feb/24/2002944158/-1/-1/1/DOD-EO-14017-REPORT-SECURING-DEFENSE-CRITICAL-SUPPLY-CHAINS.PDF>
- ²⁸ Department of Energy, *America's Strategy to Secure the Supply Chain for a Robust Clean Energy Transition* (2022), at: <https://www.energy.gov/policy/articles/americas-strategy-secure-supply-chain-robust-clean-energy-transition>.
- ²⁹ See Department of Health & Human Services, *Public Health Supply Chain and Industrial Base* (2022), at: <https://aspr.hhs.gov/MCM/IBx/2022Report/Documents/Public-Health-Supply-Chain-and-Industrial-Base%20One-Year-Report-Feb2022.pdf>