

# H-Diplo | Robert Jervis International Security Studies Forum

## Policy Roundtable III-5

### On US Economic Statecraft

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#### Contents

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Introduction by Sarah Kreps, Cornell University.....	2
“The Future of Economic Sanctions: From Coercion to Denial” by Daniel W. Drezner, the Fletcher School, Tufts University .....	5
“The Policy Paradox: Emerging Technology and US Economic Statecraft” by Caileigh Glenn, Duke University .....	9
“Why Not do More: Imposition and Economic Statecraft” by Mariya Grinberg, MIT.....	15

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## Introduction by Sarah Kreps, Cornell University

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In 2022, the Biden Administration enacted two major policies at the intersection of emerging technology and political economy. First, in August 2022, President Joe Biden signed the Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Fund, which allocated \$52 billion in incentives and investments to re-shore semiconductor chip manufacturing from abroad. The legislative language stated that “in awarding federal financial assistance to covered entities under such additional program, Commerce must give priority to covered entities that support the resiliency of semiconductor supply chains for critical manufacturing industries in the United States.”<sup>1</sup>

Second, in October 2022, the Department of Commerce passed a set of export restrictions that banned China from importing semiconductor chips that it might use for artificial intelligence, advanced military technologies, or simply as an engine in the economy. The goal, the Bureau of Industry and Security observed, was to “restrict the People’s Republic of China’s (PRC’s) ability to both purchase and manufacture certain high-end chips used in military applications and build on prior policies, company-specific actions, and less public regulatory, legal, and enforcement actions taken by BIS.”<sup>2</sup>

After several decades of increasingly integrated global economy, these policies mark a reversal, raising several questions. Do these policies reflect a conclusion that globalization did not work? If policymakers are walking back globalized trade, what are they seeking to optimize, and will there be costs such as higher prices associated with rethinking theories of comparative advantage? Will these policies lead to the large-scale fragmentation of the global economy in which allies trade with allies and designate adversaries as grounds for trade sanction or even prohibition? Will free trade return, or will it be relegated to the dustbin of history? Why are policymakers focusing on the digital economy—semiconductor chips, artificial intelligence, and 5G technologies—as the overwhelming basis of their trade restrictions? Are these policies simply backdoor mechanisms for protectionism that are aimed at favoring domestic industries?

The literature on the international political economy has long grappled with questions of economic sanctions, including their causes and consequences, the distributional consequences of globalization, whether trade can mitigate security tensions or risk of war between countries, and, in a more distant past, on the basis for industrial policy and national security risks of foreign investment.<sup>3</sup> The literature has been more silent, however, in answering the questions raised by these policies. The scholars in this roundtable address the theoretical, policy, and historical questions that are surfacing through these policies.

Drezner takes the question of the future of economic coercion with his overview of economic sanctions in the post-Cold War. His examples of sanctions suggest in some ways that the current approach of export restrictions on digital technologies and industrial policy that seeks to bring tech manufacturing back to the US may not end well. He teases out approaches of historical institutionalism that would tell us to shine the flashlight on interest groups seeking to promote self-serving policies, in this case the manufacturing sectors that may benefit from re-shored industries. But as he notes, policies that reduce competition within these industries are unlikely to succeed in the end, as there will be fewer rather than more incentives to innovate. His analysis indirectly positions further fruitful research questions about interest-group politics and coalitions

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<sup>1</sup> <https://uscode.house.gov/view.xhtml?path=/prelim@title15/chapter72A&edition=prelim>.

<sup>2</sup> <https://www.bis.doc.gov/index.php/documents/about-bis/newsroom/press-releases/3158-2022-10-07-bis-press-release-advanced-computing-and-semiconductor-manufacturing-controls-final/file>.

<sup>3</sup> Daniel W. Drezner, “Sanctions Sometimes Smart: Targeted Sanctions in Theory and Practice,” *International Studies Review* 13:1 (March 2011): 96–108; <https://doi.org/10.1111/j.1468-2486.2010.01001.x>.

of support for protectionist policies, the time horizons of success and failure of these policies, and whether we are entering a world of fragmentation in the global economy.

Caileigh Glenn observes that the conundrum that digital technologies are often both the subject of export controls but also a way for states to circumvent sanctions. For example, the United States has imposed export restrictions on China, but countries like Russia have to some extent used cryptocurrencies such as Bitcoin to circumvent sanctions because individuals can move money in and out of the country outside the SWIFT banking system (although the quantities are not necessarily of a high enough volume to fund militaries since large transactions are on the blockchain and are likely to be flagged by the Treasury Department). These examples point to the types of tensions that are inherent in the emphasis on digital currencies as both the target of sanctions but also as a vehicle for sanctions evasion. There is no reason to think that these tensions cannot be resolved, and framing the problem is an important first step toward understanding the possible solutions.

In her contribution, Mariya Grinberg wonders whether policies such as the October 2022 export controls are effective, in part because the policy was implemented unilaterally. In theory, then, third-party states that manufacture products that the United States would consider to be contraband can sell these components to China, rendering the restrictions less meaningful, particularly because of the awkwardness of co-opting these third-party states to comply with American export controls. She concludes that the game, in these cases, may not be worth the candle.

All of these contributions not only shed light on ongoing policy developments but also help set the stage for theoretical innovations that can graft onto these real-world policies.

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**Daniel W. Drezner** is Professor of International Politics at the Fletcher School of Law and Diplomacy at Tufts University and co-director of Fletcher's Russia and Eurasia program. He is the author of seven books, including *The Sanctions Paradox* (Cambridge University Press, 1999), and edited three others, including *The Uses and Abuses of Weaponized Interdependence* (Brookings, 2021).

**Caileigh Glenn** is an America in the World Consortium Fellow in the Program in Grand Strategy at Duke University. Her expertise includes topics at the intersection of international security and international political economy, with a focus on the political effects of financial coercion in foreign policy. Her current book project identifies the conditions that prompt hostile government responses to the imposition of targeted financial sanctions on subnational actors by the United States. Previously, Glenn was a Grand Strategy, Security, and Statecraft Postdoctoral Fellow in MIT's Security Studies Program and Harvard's Belfer Center. She received her PhD in Political Science from the University of Wisconsin-Madison. She also holds an MA in Political Science from UW-Madison and undergraduate degrees in Economics and Political Science from Oklahoma State University.

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“The Future of Economic Sanctions: From Coercion to Denial”  
by Daniel W. Drezner, the Fletcher School, Tufts University

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The terms “economic sanctions,” “economic coercion,” and “economic statecraft” are often used interchangeably, leading to considerable confusion in the public sphere. In the political science literature, they have distinct albeit overlapping definitions. Economic coercion is defined as the threat or use of measures to restrict economic exchange unless a targeted actor agrees to a non-economic policy concession of some kind. With economic coercion, there is a clear quid pro quo between the economic pressure and the demand articulated by the sender country. Economic sanctions encompass all cases of economic coercion – but also include instances in which economic restrictions are used as a tool of denial, containment, or political symbolism.<sup>1</sup> The US export controls placed on semiconductor exports to China (which Kreps references in her introduction) have no policy demand attached to them; rather, they are an attempt to deny a great power rival easy access to cutting-edge technology. Economic statecraft encompasses all instances of economic sanctions, but also includes inducement strategies. China’s Belt and Road Initiative, for example, is clearly an attempt to use catalytic carrots to foster stronger ties with recipient nations—as is the US-led Indo-Pacific Economic Framework.<sup>2</sup> One reason for the conceptual confusion among these terms is that policymakers often offer evolving explanations for the same policy. After Russia invaded Ukraine in 2022, the US-led response seemed at first to be an attempt at economic coercion. Over time, however, it has become clear that the ongoing sanctions function as a tool of denial.

Writing in 1985, David Baldwin assessed the state of research in *Economic Statecraft* as follows: “The two most salient characteristics of the literature on economic statecraft are scarcity and the nearly universal tendency to denigrate the utility of such tools of foreign policy.”<sup>3</sup> Nearly four decades later, Baldwin’s assertions no longer hold. There has been an efflorescence in research on the topic over the past two decades; Paul Poast goes so far as to note “the massive literature” on the topic.<sup>4</sup> At the same time, there has been a sea change in public policy debates about the efficacy of the instrument. When Baldwin wrote his book he had to defend the very idea that economic statecraft could be useful in world politics; this was because he faced a policy consensus that was dripping with disdain. In this century, however, US policymakers have enthusiastically embraced economic coercion as a policy option of first resort.<sup>5</sup> The concept of “weaponized interdependence” has convinced many officials that twenty-first century economic statecraft has more potency than twentieth century efforts.<sup>6</sup> In *Chip War*, Christopher Miller quotes one US official saying, “weaponized interdependence, it’s a beautiful thing.”<sup>7</sup>

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<sup>1</sup> David Baldwin, *Economic Statecraft* (Princeton: Princeton University Press, 1985); Daniel W. Drezner, “Global Economic Sanctions,” *Annual Review of Political Science* 27: <https://doi.org/10.1146/annurev-polisci-041322-032240>.

<sup>2</sup> Mingjiang Li. “The Belt and Road Initiative: geo-economics and Indo-Pacific security competition,” *International Affairs* 96 (January 2020): 169-187.

<sup>3</sup> Baldwin, *Economic Statecraft*, 51.

<sup>4</sup> Paul Poast, “Beyond the ‘Sinew of War’: The Political Economy of Security as a Subfield,” *Annual Review of Political Science* 22 (2019): 223-239, here 230.

<sup>5</sup> Juan Zarate, *Treasury’s War: The Unleashing of a New Era of Financial Warfare* (New York: PublicAffairs, 2013); Robert Blackwill and Jennifer Harris, *War by Other Means: Geoeconomics and Statecraft* (Cambridge: Belknap, 2016); Richard Nephew, *The Art of Sanctions: A View from the Field* (New York: Columbia University Press, 2017).

<sup>6</sup> Henry Farrell and Abraham L. Newman. “Weaponized Interdependence: How Global Economic Networks Shape State Coercion,” *International Security* 44 (July 2019): 42-79; Farrell and Newman, *Underground Empire: How America Weaponized the World Economy* (New York: McMillan, 2023).

<sup>7</sup> Christopher Miller, *Chip War: The Fight for the World’s Most Critical Technology* (New York: Simon and Schuster, 2022), 317.

There is no denying the appreciable surge in the threat and use of economic coercion in this century. Between 1945 and 1990 there was an average of 13.5 sanctions episodes a year; between 1990 and 2005 that average increased to 53.5 sanctions episodes a year.<sup>8</sup> The rate of sanctions has increased even further since then. The Global Sanctions Database has recorded a steady and homogeneous increase across all types of sanctions over the past two decades.<sup>9</sup> The increased enthusiasm for economic statecraft among policymakers has not, however, been matched by an observable increase in the effectiveness of economic coercion.<sup>10</sup> The twenty-first century has seen more cases of economic sanctions, but not more target concessions. At this point, high-profile sanctions seem to be more about denial than coercion.

This pattern suggests a future for economic statecraft that looks different from the recent past, one that will alter the geopolitical landscape. The post-Cold War era might have had frequent sanctioning activity, but most of that economic statecraft had minimal effects on the global economy. The modal sanctions event during this period was the United States sanctioning a country that was peripheral to the global economy. While sanctions against Iraq or Iran might have affected global energy markets, the systemic effect of such measures were minimal. Indeed, the targets of Western economic statecraft tended to pursue policies that made them anathema to global capital inflows in the first place.<sup>11</sup> Frequent sanctioning activity was therefore able to co-exist with a rapidly globalizing economy.

The more recent pattern of economic sanctions will have systemic effects on the global economy. First, the great powers are now sanctioning and counter-sanctioning each other. US-led sanctions on Russia have triggered counter-sanctions by Moscow.<sup>12</sup> Sanctions diplomacy over the past eighteen months suggests a continued ratcheting up of economic pressure, as the G-7 economies move to cut off third-party channels that connect Russia's economy to the West. Similarly, the Biden administration has continued the Trump administration's trade war with China; indeed, it escalated it with a bevy of export controls that were imposed over the past two years. China, in turn, has reciprocated by ratcheting up its own exercise of economic coercion. This prompted the G-7 leaders to pledge to "foster resilience to economic coercion" in response to Chinese economic statecraft.<sup>13</sup> The European Union has matched US moves towards Russia, and key allies like Japan and the Netherlands have cooperated with the United States on export controls to China.

The combined effect is to construct a global economy in which economic sanctions are frequently imposed but yield minimal concessions. Long-lasting sanctions will have knock-on effects on patterns of global investment, as companies "de-risk" from countries that are likely to be frequent sanctions targets. The result

<sup>8</sup> Bruce Jentleson, *Sanctions: What Everyone Needs to Know* (New York: Oxford University Press, 2022), 3.

<sup>9</sup> Gabriel Felbermayr et al, "The Global Sanctions Data Base," *European Economic Review* 129 (October 2020): <https://doi.org/10.1016/j.euroecorev.2020.103561>.

<sup>10</sup> Dursun Peksen, "When do Imposed Economic Sanctions Work? A Critical Review of the Sanctions Effectiveness Literature," *Defense and Peace Economics* 30 (September 2019): 635-647; Özgür Özdamar and Evgeniia Shahin, "Consequences of Economic Sanctions: The State of the Art and Paths Forward," *International Studies Review* 23 (December 2021): 1646-1671; Agathe Demarais, *Backfire: How Sanctions Reshape the World Against U.S. Interests* (New York: Columbia University Press, 2022).

<sup>11</sup> Etel Solingen, ed. *Sanctions, Statecraft, and Nuclear Proliferation* (New York: Cambridge University Press, 2012).

<sup>12</sup> On sanctions, see Daniel Ahn and Rodney Ludema, "The Sword and the Shield: The Economics of Targeted Sanctions," *European Economic Review* 130 (November 2020): 1-21; and Jeffrey Sonnenfeld et al. "Business Retreats and Sanctions are Crippling the Russian Economy," 2022. Available at SSRN: <http://dx.doi.org/10.2139/ssrn.4167193>. On countersanctions, see Masha Hedberg, "The Target Strikes Back: Explaining Countersanctions and Russia's Strategy of Differentiated Retaliation," *Post-Soviet Affairs* 34 (January 2018): 35-54; and Alena Vieira and Syuzanna Vasilyan, "Armenia and Belarus: Caught between the EU's and Russia's conditionalities?" *European Politics and Society* 19 (August 2018): 471-489.

<sup>13</sup> See G7 communique at <https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/20/g7-hiroshima-leaders-communique/>.

will be economic and technological decoupling by attrition, in which each major economy guards against excessive economic dependence on great power rivals. This trend will accelerate what the International Monetary Fund (IMF) has labelled “gloeonomic fragmentation.”<sup>14</sup>

Fragmentation will accelerate if the great powers also attempt to ensure that they are operating on different technological standards. Fear of weaponized interdependence is likely to ensure that outcome going forward. The US use of financial statecraft has served as a wake-up call for US rivals about dependence on the dollar. At the same time, the United States and its allies have grown increasingly wary of China’s ability to weaponize interdependence through control over 5G networks.<sup>15</sup> Heightened wariness to possible weaponized interdependence decreases the likelihood of new global networks happening in the future. Weaponized interdependence can only come to fruition if participating actors, including the central node, are initially unconcerned and uninterested in network dependency. Precisely because great powers are now on the alert for this phenomenon, they are unlikely to allow networked structures with economic rivals to emerge in the future. The result is fewer global supply chains and/or international service networks.

Finally, the proliferation of economic coercion is also likely to lead to statebuilding that bolsters the state’s role in national economies and reduces economic openness. As export controls proliferate, states will respond by implementing their own forms of industrial policy and defensive economic measures. As Kreps notes in her introduction, over the past few years the United States has passed the Bipartisan Infrastructure Law, the CHIPS and Science Act, and Inflation Reduction Act—the most significant industrial policies in the past half-century. At the same time, the United States has “converted” pre-existing laws to employ even more forms of coercive economic statecraft; China and Russia have engaged in similar practices.<sup>16</sup> US officials have also pushed “allyshoring” initiatives such as the Indo-Pacific Economic Framework.<sup>17</sup> Each of these statecraft policies emphasize state control over strategic sectors of the economy, reinforcing the trend towards “post-neoliberal” thinking in Western economic policy circles.<sup>18</sup> China and Russia are engaging in similar response strategies, bolstering the state’s capacity to defend against Western economic coercion.

The result is a recursive form of state interference in the economy. As historical institutionalists have argued, the creation of new institutions to foster policies often inculcates interest groups with a vested interest in the preservation and reinforcement of those institutions. In this instance, the development of new state structures to foster indigenous innovation will encourage firms that are reliant on state subsidies and preferential treatment to lobby for their continued use. The result will be a global economy in which new technologies will have decidedly national origins, and in which trade in high-tech sectors will take on an increasingly mercantilist edge.

In most epochs of global economic governance, economic sanctions have defined the contours of the system; prominent sanctions failures have often led to the breakdown of economic order. The trade wars prior to the

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<sup>14</sup> Aiyar, Shekhar et al. 2023. “Gloeonomic Fragmentation and the Future of Multilateralism,” 2023, IMF Staff Discussion Note SDN/2023/001.

<sup>15</sup> Adam Segal, “Huawei, 5G, and Weaponized Interdependence,” in *The Uses and Abuses of Weaponized Interdependence*, Daniel W. Drezner, Henry Farrell, and Abraham Newman, eds. (Washington: Brookings Institution Press, 2021), 149-165.

<sup>16</sup> Victor Ferguson, “Economic Lawfare: The Logic and Dynamics of Using Law to Exercise Economic Power,” *International Studies Review* 24 (September 2022): <https://doi.org/10.1093/isr/viac032>; Andrey Tomashevskiy, “Economic Statecraft by Other Means: The Use and Abuse of Anti-Bribery Prosecution,” *International Studies Quarterly* 65 (June 2021): 387-400.

<sup>17</sup> Ash Jain and Matthew Kroenig, “Ally Shoring: A New Tool of Economic Statecraft,” *Orbis* 67 (January 2023): 21-26.

<sup>18</sup> See Rana Farooqar, “After Neoliberalism,” *Foreign Affairs* 101 (November/December 2022): 134-145.

First World War made it easier for Germany, Austria, and Russia to conceive of going to war with each other.<sup>19</sup> The League of Nations' sanctions during the interwar period incentivized the Axis powers to invest in autarkic policies to prepare for a great power war.<sup>20</sup> It is difficult not to see the parallels in how modern economic statecraft will accelerate the geoeconomic fragmentation of the twenty-first century global political economy. As scholars wrestle with the meaning and implications of a post-neoliberal global economy, they will need to consider how global economic coercion will buttress this emergent order—or expose its internal contradictions. For a quarter-century, scholars labored under the illusion that economic sanctions could be divorced from the deeper forces driving the global political economy. That illusion should be put to rest.

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<sup>19</sup> Erik Gartzke and Yonatan Lupu, “Trading on Preconceptions: Why World War I was not a Failure of Economic Interdependence,” *International Security* 36 (Spring 2012): 115-150.

<sup>20</sup> Nicholas Mulder, *The Economic Weapon: The Rise of Sanctions as a Tool of Modern War* (New Haven: Yale University Press, 2022).



“The Policy Paradox: Emerging Technology and US Economic Statecraft”  
by Caileigh Glenn, Duke University

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As export controls restrict the sale of computing and semiconductor technology to Chinese military entities and financial sanctions target technology suppliers of Russia’s military, emerging technologies appear to play dual roles in United States’ economic statecraft. The US uses sanctions and export controls to address perceived threats from critical technologies while firms and other states use critical technologies in their sanctions compliance practices.

A close look at the connections between US economic statecraft and emerging technology governance reveals a policy paradox: The United States is, on one hand, curtailing the spread and use of critical technologies out of concern for national security while depending on these technologies and their stakeholders for the advancement of its security goals. This policy paradox highlights the use of critical digital technologies to carry out economic statecraft and vice versa: the use of economic statecraft to curtail nefarious use of critical technologies. Critical technologies are both the subject of US economic statecraft and the means with which statecraft is implemented.

The paradox reveals the limits on economic statecraft, in which US national security goals rely on two sets of actors. Compliance by the private sector and support from international partners are crucial for both the implementation of US economic statecraft and the secure use of critical technologies. These partners-in-statecraft align with US government interests where their preferences overlap, though these partners are a broad and intertwined set of stakeholders; indeed, their preferences over technology regulation and adoption can diverge from the policy goals of the US government where innovation and profit are concerned. This is especially acute in a changing global context in which, unlikely during the Cold War, the US no longer enjoys overwhelming technological dominance and supply chains are more diffused.<sup>1</sup> Wielding tools of economic statecraft while securing stakeholder support for US-led technology governance without hindering innovation presents a complex challenge,<sup>2</sup> one that involves the US government delegating some control over its national security to the creators and users of critical technologies.

### Critical Technology as the Subject of Economic Statecraft

Two processes unfold concurrently: the US government deploys economic statecraft to govern technologies while selecting the technologies that are “critical” to US political objectives. The specific items included under the “emerging technologies” umbrella are quite diverse. Indeed, the US Office of Science and Technology Policy’s National Science and Technology Council recently identified 103 critical and emerging technology subfields within 19 categories, each of which contains a number of specific items.<sup>3</sup>

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<sup>1</sup> Maria Shagina, “The Role of Export Controls in Managing Emerging Technology,” in Julia Berghofer, Andrew Futter, Clemens Häusler, Maximilian Hoell, Juraj Nosál, eds., *The Implications of Emerging Technologies in the Euro-Atlantic Space: Views from the Younger Generation Leaders Network* (Cham, Switzerland: Palgrave Macmillan, 2023): 57-72.

<sup>2</sup> Information Technology Industry Council, “Principles for Improved Policymaking and Enhanced Cooperation on National Security, Technology, and Trade.” *ITI*. June 2020; [https://www.itic.org/policy/ITI\\_NationalSecurity\\_Policy\\_June2020.pdf](https://www.itic.org/policy/ITI_NationalSecurity_Policy_June2020.pdf).

<sup>3</sup> Fast Track Action Subcommittee on Critical and Emerging Technologies. February 2022. “Critical and Emerging Technologies List Update.” National Science and Technology Council. *Office of Science and Technology Policy*, February 2022; <https://www.whitehouse.gov/wp-content/uploads/2022/02/02-2022-Critical-and-Emerging-Technologies-List-Update.pdf>.

When critical and emerging technologies are the subject of US economic statecraft, they are perceived to pose a threat to national security via one of two pathways: (1) the capabilities of the technologies themselves create vulnerabilities for US national security and (2) the use of emerging technologies for military modernization threatens US material power. The framing of these threats to national security is fairly all-encompassing. Executive orders directing the imposition of sanctions allege that emerging internet-based communications technologies, digital services, and financial technologies create weaknesses in the US defense of its national interests and that their use by outside actors presents a threat to national security. President Barack Obama's Executive Order 13694 notes, "the increasing prevalence and severity of malicious cyber-enabled activities originating from, or directed by persons located, in whole or in substantial part, outside the United States constitute an unusual and extraordinary threat to the national security, foreign policy, and economy of the United States."<sup>4</sup> The phrasing of malicious cyber-enabled activities is broad in scope, which enables the US to apply a catch-all approach to the technologies used to carry out such activities. Similarly, President Donald Trump's Executive Order 13848 states that, "in recent years, the proliferation of digital devices and internet-based communications has created significant vulnerabilities and magnified the scope and intensity of the threat of foreign interference."<sup>5</sup> To that end, the order directs the imposition of sanctions on foreign actors who interfere with a US election, as well as any actor who provides them with technological support, broadly construed.

Executive orders identify emerging technologies as extensively threatening to US national security, warranting the imposition of sanctions. Export controls, conversely, are typically imposed with concerns of economic competition in mind and primarily address economic goals. However, the security of semiconductor supply chains and skepticism over the perceived aims of Chinese technological development feature prominently in the October 2022 export controls. The Department of Commerce's Bureau of Industry and Security (BIS) considers the export controls "as part of BIS's ongoing efforts to protect US national security and foreign policy interests" vis-à-vis the People's Republic of China.<sup>6</sup> The controls specifically cite China's ability to use the controlled technology to "produce advanced military systems including weapons of mass destruction."<sup>7</sup> Thus, the October 2022 policy securitizes export controls and positions them as a tool of strategic competition with China. This marks a departure both from historic uses of export controls and from the national security threats addressed by prior technology-related sanctions. To bring the US approach to technology-related sanctions in line with that of US export controls, President Joe Biden released Executive Order 14105 in August 2023. The order names the People's Republic of China as the "country of concern" for its use of emerging technologies, and reinforces the perception of Chinese technology use specifically as a threat to US national security.<sup>8</sup>

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<sup>4</sup> Barack Obama. Executive Order. 2 April 2015. "Blocking the Property of Certain Persons Engaging in Significant Malicious Cyber-Enabled Activities, Executive Order 13694 of April 1, 2015." *Federal Register* 80, no. 18077. (April 2, 2015): 18077-18079. <https://www.federalregister.gov/documents/2015/04/02/2015-07788/blocking-the-property-of-certain-persons-engaging-in-significant-malicious-cyber-enabled-activities> 18077.

<sup>5</sup> Donald Trump. Executive Order. 14 September 2018. "Imposing Certain Sanctions in the Event of Foreign Interference in a United States Election, Executive Order 13848 of September 12, 2018." *Federal Register* 83, no. 46843. (September 14, 2018): 46843-46848. <https://www.federalregister.gov/documents/2018/09/14/2018-20203/imposing-certain-sanctions-in-the-event-of-foreign-interference-in-a-united-states-election> 46843.

<sup>6</sup> Bureau of Industry and Security, "Commerce Implements New Export Controls on Advanced Computing and Semiconductor Manufacturing Items to the People's Republic of China." *US Department of Commerce*. [Press Release, 7 October 2022] <https://www.bis.doc.gov/index.php/documents/about-bis/newsroom/press-releases/3158-2022-10-07-bis-press-release-advanced-computing-and-semiconductor-manufacturing-controls-final/file>.

<sup>7</sup> Bureau of Industry and Security, 1.

<sup>8</sup> Joseph Biden. Executive Order. 11 August 2023. "Addressing United States Investments in Certain National Security Technologies and Products in Countries of Concern, Executive Order 14105 of August 9, 2023." *Federal Register*

There are two possible reasons for securitizing some technologies. First, the technologies identified as critical indeed pose threats to US national security, via one or both pathways outlined above. Second, possessing national control over the development and use of critical technologies affords the United States an economic advantage. Deploying national security framing in export control policy may be an attempt to skirt World Trade Organization challenges: measures that are a matter of national security are not subject to WTO rules. China responded to the US export controls by lodging an official complaint with the WTO in December 2022, stating that the export controls violated international agreements on free trade and intellectual property.<sup>9</sup> The Export Control Reform Act of 2018 does not define national security nor emerging technologies. Experts note that such “strategic ambiguity” means that the “scope of national security is up for interpretation and may change over time” but that it is “primarily driven by China-specific threats.”<sup>10</sup>

These reasons are not mutually exclusive, though their relative emphasis informs assessments of the US government’s identification of certain technologies as threats. However, because both of these motivations appear plausible, international stakeholders may be wary of US economic statecraft for a simple reason: they use the technology governed by US export controls and sanctions.

### Critical Technology as the Means of Economic Statecraft

Successful implementation of sanctions and export controls hinges on private-sector adoption of technologies that enable firms to identify the actors and products in their supply chain that are designated for restrictions. The Department of Treasury’s Office of Foreign Assets Control’s guidance for sanctions compliance advises that companies have sufficient controls which include information technology systems and software.<sup>11</sup> Domestic and global business sectors deploy digital technologies to conduct their policy compliance, and technological innovation assists compliance practices; without such technology, compliance practices do not keep pace with demands, especially for firms operating in markets that span multiple jurisdictions and industries.

Domestic and international private sectors rely on information technology, cloud-based services, and digital technologies to conduct business and compliance management. To identify sanctioned clients and non-compliant transactions, firms use digital identity infrastructure. To run compliance software, firms rely on next-generation wireless networks, and to automate transaction screening, some firms use artificial intelligence and machine-learning models. More recently, digital ledger technologies offer a means of replacing manual compliance processes when handling large amounts of data. Each of these technologies is useful for sanctions and export controls compliance practices, and each is considered critical and emerging technologies by the US.<sup>12</sup>

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88, no. 54867. (August 11, 2023): 54867-54872. <https://www.federalregister.gov/documents/2023/08/11/2023-17449/addressing-united-states-investments-in-certain-national-security-technologies-and-products-in-54867>.

<sup>9</sup> World Trade Organization. 15 December 2022. “China initiates WTO dispute complaint targeting US semiconductor chip measures.” [https://www.wto.org/english/news\\_e/news22\\_e/ds615rfc\\_15dec22\\_e.htm](https://www.wto.org/english/news_e/news22_e/ds615rfc_15dec22_e.htm).

<sup>10</sup> Shagina, “The Role of Export Controls in Managing Emerging Technology,” 62.

<sup>11</sup> Office of Foreign Assets Control. 2 May 2019. “A Framework for OFAC Compliance Commitments.” *US Department of the Treasury*. [Press Release]. <https://ofac.treasury.gov/media/16331/download?inline>.

<sup>12</sup> Fast Track Action Subcommittee on Critical and Emerging Technologies, “Critical and Emerging Technologies List Update.” National Science and Technology Council. *Office of Science and Technology Policy*, February 2022; <https://www.whitehouse.gov/wp-content/uploads/2022/02/02-2022-Critical-and-Emerging-Technologies-List-Update.pdf>.

Technical assistance and technology sharing with international partners also forms a key crux of US economic statecraft. For instance, US officials worked to incentivize broad compliance with US sanctions and export controls on Russia following Russia's full-scale invasion of Ukraine, and efforts to crack down on sanctions evasion by third-party countries involve providing assistance with the technology that is used in global sanctions compliance. Technology sharing enables sanctions partner-states to close gaps in their country's compliance practices and modernize their sanctions practices. Not only can critical technologies help implement statecraft, but the leverage created from technological prowess can serve coercive statecraft. A domestic technological advantage affords the US government with the ability to use technology trade as a tool of statecraft. This, in the abstract, is not new. In 1993, for instance, the Clinton administration restricted the sale of state-of-the-art satellite technology as a means of coercing the Chinese government into cancelling its missile exports to countries in the Middle East.<sup>13</sup> In more recent US policy, digital transactions fall under the jurisdiction of US sanctions rules if the transaction makes use of US-origin software or if it is routed through servers hosted in the US, regardless of the location or nationality of the transacting parties, expanding the reach of US statecraft. Thus, the actual functioning of US economic statecraft depends on the use of critical technologies by private actors. Because of this, the US has entrusted some control over the realization of its foreign policy goals and over the development of technologies critical to its foreign policy to private and international actors.

### The Technology Policy Paradox

The US deploys tools of economic statecraft to govern the use of critical technologies out of concern for its national security while relying on stakeholders' mastery of these technologies for the implementation of US statecraft. Thus, while exerting power over the spread and use of critical technologies, such as advanced microchips and quantum computing, the US is susceptible to the technology—to private sector innovation, to multilateral partner responses to US incentives for technology development, and to private sector and multilateral partner decisions regarding the speedy and secure adoption of technology for statecraft compliance.

The paradox highlights the complexity of critical technology's integration into foreign policy, and the influence of technology's stakeholders on the successful implementation of economic statecraft. This is not to suggest that the US government refrain from technological governance; indeed, every government will grapple with the capabilities and risks associated with critical technology adoption. Rather, the role of critical technology as both the subject and means of statecraft reveals potential political vulnerabilities and opportunities for future policymaking.

While the US government oversaw and funded most of the technological development in the immediate post-World War II era, in the twenty-first century commercial firms and independent research labs generate a greater percentage of critical technology development than the federal government.<sup>14</sup> Technology firms, for their part, are aware of this dependence; the Information Technology Industry Council (ITIC), a trade association, noted the information asymmetry: "Companies have information that governments do not have about their network operations and how they detect, manage, and defend against risks to data, systems,

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<sup>13</sup> Jim Mann, "US to Lift Ban on Satellite Tech Sales to China." *Los Angeles Times*, 5 October 1994; <https://www.latimes.com/archives/la-xpm-1994-10-05-mn-46694-story.html>.

<sup>14</sup> Ash Carter, *Inside the Five-Sided Box: Lessons from a Lifetime of Leadership in the Pentagon* (New York, NY: Dutton, 2019).

networks, and supply chains.”<sup>15</sup> Government, therefore, no longer has a monopoly over critical technology creation. Despite this shift in relative control over technology development, the government cannot outsource outsized decisionmaking power to the private sector and international actors regarding their use of critical technologies without encountering security vulnerabilities. The US government is aware of this paradox. The Department of Treasury issued a release requiring the tightening of sanctions compliance measures in the financial technology industry, noting, “While these fintech firms are enabling new capabilities, they are also creating new risks.”<sup>16</sup> Not only do critical technologies open a window for malicious actors to enter but they can be used to evade sanctions and export controls in a dynamic that is akin to an economic offense-defense balance.<sup>17</sup>

Moreover, US sanctions are enabled by the complementary preferences of the financial sector and government regarding the security of transactions.<sup>18</sup> With new technology adoption, though, preferences can diverge as private sectors favor greater freedom in their use of critical technologies and limited regulation on innovation. The ITIC, for instance, notes the concern that “overbroad policy responses risk stifling innovation, hindering technological leadership, and harming the industrial and defense base.”<sup>19</sup>

US economic statecraft also depends on multilateral coordination; however, US industrial policy that promotes domestic technological innovation also makes forging international partnerships and soliciting multilateral support for US economic statecraft difficult. The Creating Helpful Incentives to Produce Semiconductors and Science Act, which invested \$53 billion to boost US development and manufacturing of critical technologies, and the Inflation Reduction Act, which created tax credits for specific technology adoption, drew the ire of US allies who were worried about the market impact of US technology protection.<sup>20</sup> The European Union subsequently passed its own version of the CHIPS act, which challenges US unilateral technology governance.<sup>21</sup>

The policy paradox highlights the limits on statecraft arising from both the capabilities of new technological developments and the lack of a government monopoly over technology’s spread. By depending on private-actor compliance and international support for the implementation of its policies, the US government outsources some control over the realization of its economic statecraft and technology governance goals. The United States remains an attractive destination for work on and foreign investment in emerging technologies, which enables it to be the setting of cutting-edge technological advances. This offers the US both economic and strategic advantages. However, the challenge involves striking the delicate balance between governing the

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<sup>15</sup> Information Technology Industry Council. June 2020. “Principles for Improved Policymaking and Enhanced Cooperation on National Security, Technology, and Trade.” 4.

<sup>16</sup> <https://home.treasury.gov/news/press-releases/jy1105>.

<sup>17</sup> On the potential for an economic statecraft offense-defense dynamic, see Daniel W. Drezner, “Targeted Sanctions in a World of Global Finance,” *International Interactions*. 41 (2015): 755-764.

<sup>18</sup> Juan C. Zarate, “Harnessing the Financial Furies: Smart Financial Power and National Security,” *The Washington Quarterly*. 32:4 (2009): 43-59.

<sup>19</sup> Information Technology Industry Council. “Principles for Improved Policymaking and Enhanced Cooperation on National Security, Technology, and Trade,” 4.

<sup>20</sup> Olivier Knox and Caroline Anders. “Europe’s Not Happy with Biden’s Inflation Reduction Act,” *The Washington Post*. 17 January 2023; <https://www.washingtonpost.com/politics/2023/01/17/europe-not-happy-with-bidens-inflation-reduction-act/>.

<sup>21</sup> Sarah Kreps and Paul Timmers, “Bringing Economics back into EU and US Chips Policy,” *Brookings*. 20 December 2022; <https://www.brookings.edu/articles/bringing-economics-back-into-the-politics-of-the-cu-and-u-s-chips-acts-china-semiconductor-competition/>.

spread of critical technologies to country competitors and private actors with imperfectly aligned incentives while encouraging the innovation and multilateralism that are critical to effective economic statecraft.

“Why Not do More: Imposition and Economic Statecraft”  
by Mariya Grinberg, MIT

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States’ constant recourse to economic statecraft as the channel of foreign policy showcases both the amplified potential and the perceived utility of economic power in the pursuit of security goals. Technological changes make the detection of trade moving across borders more transparent to states that are seeking to interfere with it; improvements in satellite and radar technologies increase the search radius of blockading states; faster communication technologies permit faster information-gathering on global trade. Most of these technologies require raw materials that are found in select locations, thus increasing states’ dependence on their strategic trade partners. Supply-chain integration makes individual states more vulnerable to strategic disruptions. Given the fertile conditions for economic statecraft, powerful states, especially the United States, are capable of causing substantial damage to their rivals.

Yet, while the United States can, for example, severely impede Chinese economic growth, it has hesitated to use economic statecraft to the full extent of its capabilities. Conventionally, this is explained as a relative cost calculation. Economic statecraft is a double-edged sword—policies that target the rival also impose costs on the sending state.<sup>1</sup> Policies that cost the United States, in dollar equivalents, more than they hurt the rival state, are deemed counterproductive.<sup>2</sup> The United States, in this view, does not do more because it does not want to bear the economic cost of more restrictive policies that target its rivals.

But the issue runs much deeper. The economies of states, especially in the modern world, are highly interconnected. Economic statecraft not only impacts the sender and the target state, but also the rest of the world. When the United States severs a relationship with a rival state, third-party states<sup>3</sup> have the lucrative opportunity to either provide their own services to the rival state or to act as an indirect channel between the United States and the rival.<sup>4</sup> Increasing the effectiveness of an economic statecraft policy requires the sender to control not only its own economic policy, but also those of third-party states. Economic statecraft can achieve its best results when the sending state is not concerned about offending third-party states—typically when there is near universal agreement on the issue or when the stakes are so high that offending third-party states pales in comparison. Since neither condition is met with China, or Russia, or any of the American rivals, the existing American policies tend towards the less effective, more conciliatory to third-parties side of the spectrum.

The connection between policy effectiveness and third-party states is typically confined to the comparison of unilateral and collective sanctions.<sup>5</sup> From the point of view of the United States, collective sanctions limit

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<sup>1</sup> Richard D. Farmer, “Costs of Economic Sanctions to the Sender,” *The World Economy* 23, no. 1 (2000): 93-117; David J. Lektzian and Christopher M. Sprecher, “Sanctions, Signals, and Militarized Conflict,” *American Journal of Political Science* 51, no. 2 (2007): 415-31; Solomon William Polachek, “Conflict and Trade,” *The Journal of Conflict Resolution* 24, no. 1 (March 1, 1980): 55-78; Lisa L. Martin, “Credibility, Costs, and Institutions: Cooperation on Economic Sanctions,” *World Politics* 45, no. 3 (April 1993): 406-32, <https://doi.org/10.2307/2950724>.

<sup>2</sup> Jiawen Yang et al., “US Economic Sanctions Against China: Who Gets Hurt?,” *The World Economy* 27, no. 7 (2004): 1047-81, <https://doi.org/10.1111/j.1467-9701.2004.00640.x>.

<sup>3</sup> “Third party states” refers any state other than the sender and the rival target state.

<sup>4</sup> David Lektzian and Glen Biglaiser, “Investment, Opportunity, and Risk: Do US Sanctions Deter or Encourage Global Investment?,” *International Studies Quarterly* 57, no. 1 (2013): 65-78.

<sup>5</sup> Bryan R. Early, *Busted Sanctions: Explaining Why Economic Sanctions Fail* (Stanford University Press, 2015); Daniel W. Drezner, “Bargaining, Enforcement, and Multilateral Sanctions: When Is Cooperation Counterproductive?,” *International Organization* 54, no. 1 (ed 2000): 73-102, <https://doi.org/10.1162/002081800551127>; William H. Kaempfer and Anton D. Lowenberg, “Unilateral Versus Multilateral International Sanctions: A Public Choice Perspective,” *International Studies Quarterly* 43, no. 1 (1999): 37-58.

agreed upon third-party states' commercial relations with the target, in addition to the limits imposed by the United States. Overall, when more sources of products can be severed, more economic damage is done to the target states. However, collective sanctions require negotiations between participating states, which dilutes the set of prohibitions imposed and defers the commencement of measures, giving the target time to adjust.<sup>6</sup> By respecting the sovereignty of third-party states and negotiating for their agreement, the effectiveness of the economic statecraft is decreased. Additionally, the states that are most relevant to a specific policy are not always willing to participate. For example, while the United States was able to convince Japan and the Netherlands to join its export control regime on semiconductors to China, South Korea, despite extensive chip trade with China, remains outside the policy.<sup>7</sup>

Imposing American preferences on third-party states increases the potential effectiveness of economic statecraft. The United States Export Administration Regulations, specifically those under the Foreign Direct Product Rule, require third-party firms to receive licenses from the United States to re-export American products or products created with American technology.<sup>8</sup> These export policies impose American preferences on third-parties—consumers of American products are constrained by the United States in what they can do with products they own. Thereby, these measures prohibit the target state from accessing to American products directly and through any other third-party channel. Ultimately, the target loses access to American products from all sources, which increases the effectiveness of the policy, but at the cost of interfering with the economic policies of third-party states.

The two rules announced on 7 October 2022, which imposed new export controls targeting Chinese semiconductor and supercomputing industries, included these prohibitions on re-export. In enacting this regulation, the United States signaled its willingness to hurt its domestic economic interests in order to further its economic statecraft goals. The semiconductor industry, for instance, projected considerable losses from the regulation, which did not seem to faze the government.<sup>9</sup> When Seagate Technology was convicted of breaking export rules, it was fined the single largest penalty for such a violation—\$300 million.<sup>10</sup> While willing to hurt domestic industry with its regulations and taking a “presumption of denial” position with licenses on export, which depresses some trade with China, the government continued to provide licenses for exports.<sup>11</sup>

Of course, re-export controls still leave a lot of economic exchange on the table. Third-party states can fill the missing lacuna of American products with their own. A further step towards a more effective policy would be

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<sup>6</sup> Anne Miers and T. Morgan, “Multilateral Sanctions and Foreign Policy Success: Can Too Many Cooks Spoil the Broth?,” *International Interactions* 28, no. 2 (2002): 117–36, <https://doi.org/10.1080/03050620212099>; Richard Connolly, *Russia's Response to Sanctions: How Western Economic Statecraft Is Reshaping Political Economy in Russia* (Cambridge University Press, 2018), chap. 5.

<sup>7</sup> Mireya Solís and Seong-ho Sheen, “How South Korea Sees Technology Competition with China and Export Controls,” *Brookings*, May 17, 2023, <https://www.brookings.edu/blog/order-from-chaos/2023/05/17/how-south-korea-sees-technology-competition-with-china-and-export-controls/>.

<sup>8</sup> Kenneth Abbott, “Defining the Extraterritorial Reach of American Export Controls: Congress as Catalyst,” *Cornell International Law Journal* 17, no. 1 (January 1, 1984): 79-160; Susan Emmenegger, “Extraterritorial Economic Sanctions and Their Foundation in International Law,” *Arizona Journal of International and Comparative Law* 33, no. 3 (2016): 631-60; Mirko Sossai, “Legality of Extraterritorial Sanctions,” in *Economic Sanctions in International Law and Practice*, ed. Masahiko Asada (Routledge, 2019), 62-79.

<sup>9</sup> Kyriakos Petrakakos, “Updated View On Semi-Cap Export Controls And China Revenues | Seeking...,” Seeking Alpha, May 19, 2023, <https://archive.is/X0dN4>.

<sup>10</sup> <https://www.bis.doc.gov/index.php/documents/about-bis/newsroom/press-releases/3264-2023-04-19-bis-press-release-seagate-settlement/file>.

<sup>11</sup> Rishi Iyengar, “Biden Short-Circuits China,” *Foreign Policy*, October 28, 2022, <http://foreignpolicy.com/2022/10/28/biden-china-semiconductors-chips/>; Kate O’Keeffe, “U.S. Approves Nearly All Tech Exports to China, Data Shows - WSJ,” *The Wall Street Journal*, August 16, 2022, <https://archive.is/UviGG>.



secondary sanctions—coercive threats towards third-parties to prevent them from engaging with the target. Secondary sanctions require that the United States impose its laws on the firms of third-party states. Foreign firms face a choice between engaging in activities deemed legal by their home state and losing access to the American markets or following American law and maintaining their engagement with the United States. The sanctions on Iran, which have been lauded as some of the most effective in recent memory, contributing greatly to forcing Iran to the negotiation table, were based on secondary sanctions measures.<sup>12</sup> This greater effectiveness stems from the imposition of American preferences on third-parties, which denies the target third-party products as well as American ones.<sup>13</sup> This is not received lightly by third-party states.<sup>14</sup> Compared to collective sanctions, where third-parties have a voice in the policy decisions, in secondary sanctions their only choice is to bow to coercion or not. Compared to re-export controls, where the sender restricts what the third-parties can do with the sender's products, in secondary sanctions the sender also attempts to set policy on what third parties produce domestically and independently.

Interfering in the policies of third-party states does not come without consequences. The use of secondary sanctions by the United States has led to blocking resolutions in China and Russia. Blocking resolutions prohibit domestic firms from complying with legal requirements set by a foreign jurisdiction. Chinese companies, for instance, will not be legally permitted to comply with United States sanctions, and China will not recognize any court decision bearing penalties based on American laws. And it is not only rivals of the United States that bristle at such imposition. European states responded to secondary sanctions in much the same way, developing their own blocking resolutions and other tools designed to prevent American infringement on their sovereignty.<sup>15</sup>

While the United States is already hesitant to impose secondary sanctions on either Russia or China, such measures fall considerably short of the effectiveness that could be gained from economic warfare, which would actively restrict transfers of products to the target state by force, through measures such as naval blockades. Greater effectiveness of economic statecraft stems from direct interference in the legal rights of third-party states. Resorting to the use of such measures holds considerable consequences for the sender and for the global economic order—consequences that require considerable stakes for the game to be worth the candle.

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<sup>12</sup> Matthew Moran and Christopher Hobbs, “The Iranian Nuclear Dilemma: Light at the End of the Tunnel?,” *Defense & Security Analysis* 28, no. 3 (September 1, 2012): 202-12, <https://doi.org/10.1080/14751798.2012.703463>.

<sup>13</sup> Baran Han, “Secondary Sanctions Mechanism Revisited: The Case of US Sanctions against North Korea,” in *Research Handbook on Economic Sanctions*, ed. van Bergeijk A.G Peter (Edward Elgar Publishing, 2021), 223-37; Julia Schmidt, “The Legality of Unilateral Extra-Territorial Sanctions under International Law,” *Journal of Conflict and Security Law* 27, no. 1 (April 1, 2022): 53–81, <https://doi.org/10.1093/jcsl/krac005>.

<sup>14</sup> Jeffrey Meyer, “Second Thoughts on Secondary Sanctions,” *University of Pennsylvania Journal of International Law* 30, no. 3 (April 1, 2009): 905.

<sup>15</sup> Tom Ruys and Cedric Ryngaert, “Secondary Sanctions: A Weapon out of Control? The International Legality of, and European Responses to, US Secondary Sanctions,” *British Yearbook of International Law*, September 22, 2020, 1-116, <https://doi.org/10.1093/bybil/braa007>.