



HE FOLLOWING IS AN EXCERPT from testimony given before the Senate Committee on Banking, Housing, and Urban Affairs on February 28, 2023. Kevin was asked to prepare remarks on how to make export controls more effective and less counterproductive, particularly with respect to those involving China and Russia.

Export controls were once a relatively obscure regulatory compliance area focused on nonproliferation objectives. They are now at the center of the geopolitical universe and daily news coverage, particularly with respect to issues involving China and Russia. Export controls are the rules that govern:

- (i) the export, reexport, and (in-country) transfer
- (ii) by U.S. and foreign persons
- (iii) of commodities, technology, software ("items"), and, in some cases, services
- (iv) to destinations, end users, and end uses
- (v) to accomplish national security and foreign policy objectives.

Most discussions about export controls are about which technologies should or should not be controlled to which countries and which entities should or should not be sanctioned. My recommendations and comments, however, are mainly about the structures, systems, and resources

that need to be in place in the United States and, more importantly, with our allies to make any such new controls both effective—actually able to deny their export to end users of concern, and not counterproductive—not harming U.S. industry to the benefit of its foreign competitors in allied countries or their national security and foreign policy objectives. Implementing these recommendations will be hard. Success will require inspired, inspirational, and ambitious long-term, fact-based, and bipartisan U.S. leadership. All the other alternatives are worse.

BACKGROUND

The first rule of legislation and regulation is clearly defining the problem to solve. The Export Control Reform Act of 2018 (ECRA), passed with broad bipartisan support, sets out in general terms the national security and foreign policy objectives of U.S. export controls. These include controlling the items that the four multilateral export control regimes identify annually as having an inherent or clear connection to the development, production, or use of conventional weapons or weapons of mass destruction. I refer to these as "classical" or "traditional" national security objectives for export controls. Classical foreign policy-based controls are largely unilateral and include those specific to addressing human rights concerns (ex., controlling instruments of torture) and supporting U.S. sanctions programs against, for example, Iran, Cuba, North Korea, and Syria.

TABLE 1: THE FOUR MULTILATERAL EXPORT CONTROL REGIMES

Regime Name	Date Established	Items Controlled
Australia Group	1985	Chemical/biological weapons and related tech
Missile Technology Control Regime	1987	Missiles and related tech
Nuclear Suppliers Group	1992	Nuclear weapons and related tech
Wassenaar Arrangement 1	1996	Conventional weapons and dual-use goods/tech

Source: U.S. Department of Commerce

The national security threats facing the U.S. in 2018 were broader than they were when the current, post-Cold War-era non-proliferation-focused multilateral regime system was established.

In passing ECRA, a bipartisan Congress and the Trump administration were clear that the national security threats facing the United States in 2018 were broader than they were when the current, post-Cold War-era non-proliferationfocused multilateral regime system was established.⁵ I agreed and was a public proponent of ECRA's and FIRRMA's passage. Because the post-Cold-War-era export control system was narrowly-focused⁷ on WMD and conventional military proliferation issues, it was not designed to address broader, contemporary national security and foreign policy issues, such as those pertaining to:8

- (i) strategic competition issues;
- (ii) military-civil fusion policies;
- (iii) human rights abuses using commercial technologies;
- (iv) supply chain security; and
- (v) the need to promote democracy over authoritarianism.



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The rise of military-civil fusion policies is particularly significant because the classical "dual-use" system was premised on the regular ability to distinguish between civil and military applications for the same items.9 Also, when the essence of the current export control system was built in the 1990s, critical foundational technologies necessary to develop advanced weapons were less likely to come from the commercial sector and were more likely to be developed by traditional defense contractors.10

When passing ECRA, Congress did not define the national security objectives concerning items outside the classical mandates of the four multilateral regimes. Although the Trump administration took a series of individual classical and novel unilateral export control actions under its ECRA authorities, including asking the public for comments on how to define "emerging" and "foundational" technologies, it did not set out a unified, coherent, administration-wide



Bucha main street after Russian invasion of Ukraine Oleksandr Ratushniak I CC BY-SA 4.0 DEED

definition of what non-classical national security objectives of export controls should be.¹¹ During its first year, the Biden Administration did not either.

RUSSIA'S INVASION OF UKRAINE AND CHANGING DYNAMICS AROUND EXPORT CONTROLS

The absence of a coherent, administration-wide official and public definition of national security objectives changed with the U.S. and allied countries' responses to Russia's invasion of Ukraine in March 2022.12 As the Biden administration has described in multiple settings, the strategic intent of these controls is to degrade Russia's ability to wage its unjust war against Ukraine and prevent Russia from projecting military force beyond its borders. 13 The sanctions and export controls aim to have significant and long-term impacts on Russia's defense industrial base, which relies extensively on foreign-sourced items.¹⁴ By restricting Russia's access to broad categories of commodities, software, technology, and services—including commercial semiconductors and civil aircraft parts—the U.S. and its allies have and will continue to degrade the Russian defense industry's ability to replace weapons destroyed in the war.

The controls' strategic intent is not to impose undue harm on the Russian people for universally needed items. This is why exports of food, medicine, and most non-luxury consumer goods are not within the scope of the controls. Indeed, one of the reasons the controls are complex and need regular tweaking is that it is quite difficult to identify and control the otherwise commercial items the Russian defense industrial base needs to produce and repair its military equipment without capturing basic consumer items' importance to the civilian population.¹⁵

In September 2022, National Security Advisor Jake Sullivan further refined the need to expand the role of export controls to address strategic objectives when he stated that "computing related technologies, biotech, and clean tech are truly 'force multipliers' through the tech ecosystem, and leadership in each of these is a national security imperative." With respect to export controls, he argued:

We have to revisit the longstanding premise of maintaining 'relative' advantages over competitors in certain key technologies. We previously maintained a 'sliding scale' approach that said we need to stay only a couple of generations ahead. That is not the strategic environment we are in today. Given the foundational nature of certain technologies, such as advanced logic and memory chips, we must maintain as large of a lead as possible.¹⁷

The first regulatory implementation of this policy vision was in October 2022, unilateral export controls on semiconductors and related components. More specifically, these controls were designed to limit the development and production in China of: 19

By restricting Russia's access to commodities, software, and technology – including commercial semiconductors and civil aircraft parts – the U.S. and its allies will degrade the Russian defense industry's ability to replace weapons destroyed in the war.



- (i) advanced node semiconductors;
- (ii) semiconductor production equipment;
- (iii) advanced computing items, which are of significance to artificial intelligence applications; and
- (iv) supercomputers.

The Biden administration determined that the existence of indigenous capabilities to develop and produce such items in China is a per se national security threat. The stated policy basis for the new controls reflects the administration's significant concerns about China's development and production of WMD and conventional military items and the use of these technologies to enable human rights abuses.

Although addressing WMD-related concerns are classical policy bases for export controls, the October 2022 rule differs in scope from most previous export controls because it is unilateral, targeted at one country, and designed to achieve strategic objectives regarding the ability of the Chinese economy to function in these areas.²⁰ It is also applied to essentially commercial items that are several stages earlier in the development and production supply chain than the types of items traditionally subject to export controls.²¹ In other words, the new controls essentially apply to:

- (i) the advanced computers needed to design the items needed to modernize a military;
- (ii) the semiconductors needed to produce the advanced computers and the military items;
- (iii) the production equipment needed to produce the advanced semiconductors;
- (iv) the items needed to produce the production equipment; and
- (v) the assistance by U.S. persons in developing, producing, and repairing the production equipment. The controls are directed at the entire supply chain and use a combination of controls over specific items (both U.S.-made and foreignmade), specific end uses, specific end users, and activities by U.S. persons and corporations.

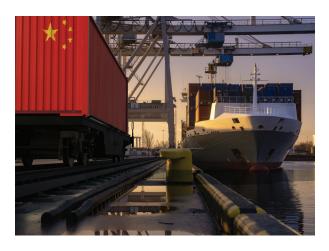
NAVIGATING THE QUESTION OF EFFECTIVENESS WITH EXPORT CONTROLS

If the first rule of export control regulation is to define clearly the problem to be solved, the second, with some exceptions, is to ensure that the rule is both effective and not counterproductive.²² By "effective," I mean that the rule actually stops or hinders the end users of concern from getting the items at issue from any source. My reference to "not counterproductive" means ensuring that foreign

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competitors of U.S. companies do not gain outsized advantages in markets to which U.S. firms no longer have access thanks to export controls. The income gained in these instances could allow the foreign competitors to out-innovate, out-compete, or even displace entirely the U.S. company.²³ The exceptions pertain to situations where the U.S. should impose a unilateral control to express objection to and not otherwise support human rights violations or move quickly when the issue to be addressed is urgent, particularly if there is a threat to the warfighter.²⁴ In both cases, the point remains that the eventual adoption of multilateral or plurilateral controls will make them more effective.²⁵



These are not just my personal views. ECRA's core statement of policy states, in essence, that unilateral controls are usually eventually ineffective and counterproductive. ²⁶ Section 4811(6) states that multilateral controls: a) are generally more effective at denying controlled items to countries of concern, and b) create a more level playing field for U.S. industry against their foreign competitors in allied countries. ²⁷

It is rare that the U.S. will have, or could keep long, a monopoly over commercial technology. Thus, the obvious answer to ensuring that the controls the U.S. imposes are as effective as possible and not counterproductive is for our allies to impose the same controls and licensing policies over:

- (i) commodities, software, and technologies on the multilateral regime lists and on lists created outside the regime process;
- (ii) activities of their citizens involving unlisted items and unlisted end users, and
- (iii) exports of unlisted items to specific end users of concern.

The first example of this point in practice is the plurilateral controls the U.S. and more than 30 other countries began imposing in March 2022 in response to Russia's continued invasion of Ukraine.²⁸ The rules reflect an extraordinary

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amount of export control and sanctions cooperation and coordination among close allies and partners that have not been seen since the end of the Cold War. Because the allies and other countries are imposing controls under their laws on the same items, the controls are more effective. ²⁹ The issue now is ensuring compliance with them. Success here will be a function of using all available U.S. investigation and enforcement resources and ensuring that there is well-staffed international and intracountry coordination of allied enforcement resources. ³⁰

The second example is the reported near-final trilateral deal among the U.S., Dutch, and Japanese governments to impose controls over specific types of semiconductor production equipment destined for China. 31 Although the details are not public, it will likely nonetheless be a significant accomplishment. It is likely the first time since the end of the Cold War that allies have come together to impose export controls over specific items against a particular country outside the multilateral regime system in an instance not involving an invasion of another country.³² The nearly-daily media coverage of the topic involving the U.S. working to get the Dutch and Japanese on board with these semiconductor-related has also been a good education in the basic point that unilateral controls are eventually ineffective and counterproductive and that plurilateral/multilateral controls tend to be more effective and less counterproductive. Here, it is clear that the Biden administration understands that these controls will only be effective if the items in question are controlled plurilaterally.

Although an eventual victory for the Biden administration and proof that the plurilateral concept can work, an eventual deal will still not be completely effective or create a level



Word SANCTION on Chinese yuan note. U.S. has imposed sanctions on China due to trade tensions, human rights concerns, and national security issues, influencing global diplomatic and economic dynamics. William W. Potter I Adobe Stock

playing field for U.S. industry. The deal does not apply to the other elements of the October 2022 rule.³³ That is, it will not include controls on the activities of Dutch or Japanese citizens in support of advanced node manufacturing in China. It will not involve any ally imposing end-user controls such as those related to the Commerce Department's Entity List. It will also allegedly not have controls specific to the supercomputers or the production of semiconductor production equipment in China. Thus, Japanese and Dutch companies will still be able to export to China items and services that U.S. competitor companies cannot. But, again, the deal is just the start of an ongoing process, I expect and hope.

THE MEDIUM- AND LONG-TERM SOLUTIONS – A NEW, 5TH MULTILATERAL EXPORT CONTROL REGIME

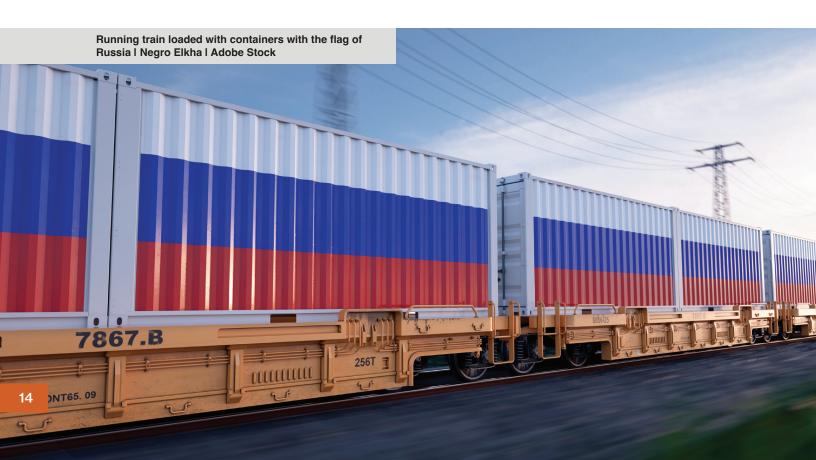
A year ago, my CSET colleague Emily Weinstein and I wrote an article in which we argued that the significant response by the U.S., its allies, and partner countries to Russia's continued invasion of Ukraine created an opportunity for a core group of allies to develop a new multilateral export control regime.³⁴ In the article titled "COCOM's Daughter," we stated that the need for an additional regime is urgent due to the four primary multilateral export control regimes' inability to manage the contemporary national security, economic security, and human rights issues that can be addressed through coordinated export controls.³⁵ Although the Russia-specific cooperation among allies is a plurilateral arrangement, the spirit, effectiveness, and urgency of the ad hoc effort risks fading away if not somehow locked into the allies' laws, policies, schedules, and export control cultures. The opportunity, we noted, exists because, for the first time since the Cold War, U.S. allies and partners have collectively responded to a broad-based threat from a major authoritarian power by amending their export control laws to achieve strategic objectives beyond those of the four primary export control regimes. The allies have proven willing to enter into plurilateral arrangements if the mission and the common security threats to be addressed are clear.

In essence, the mandate of the new regime—which would be in addition to the existing regimes, not as a replacement for the Wassenaar Arrangement—would be to:

- (i) advance classical export control objectives of an existing regime that cannot be advanced but for the disruptive memberships of Russia and its allies; and
- (ii) address together the contemporary non-traditional national security, economic security (however defined), and human rights issues that could be addressed through coordinated export controls.

Since we published the article, we have received general support for the idea in the policy community, and others are making similar points.³⁶ In particular, Jim Lewis, one of the architects of the Wassenaar Arrangement, published a good list of requirements for creating a new export control regime.³⁷ Most of the informal and polite responses we have received, however, are about why efforts to create a new regime would be too difficult or are not necessary, including some of the following arguments:

- (i) No resources. The U.S. and the allied export control officials and staff are already too stretched in dealing with existing issues and the Russia-specific plurilateral arrangement. No one has the time or resources to do the hard work to get consensus on the structure or mandate of a new regime.
- (ii) No clear vision. No country has a clear vision of the



types of technologies that would be within the scope of a new regime or the countries that would be the charter members.

- (iii) Gives the PRC more talking points. Work on creating a new regime would give the Chinese government an easy (albeit false) talking point to use with non-aligned countries that an elite group of countries is trying to horde advanced technology to the economic and developmental detriment of other countries. These talking points would be used to drive wedges between the United States and its other allies and partners.
- (iv) Harms arms control. Working to develop a new regime would harm the arms control efforts of existing regimes.
- (v) No incentives. There is no incentive for any country to join because it would only result in more controls and, thus, economic harm to its domestic industry. It is best (say foreign commentators) to let the U.S. impose unilateral controls against its companies to create economic opportunities for their non-U.S. competitors.
- (vi) Consensus fades. Consensus on general principles does not last, and common security interests evolve quickly. It is, therefore, best to use ad hoc plurilateral arrangements on technology-by-technology and country-by-country bases.
- (vii) **PRC retaliation.** Countries more economically exposed to China will not want to join out of concern for retaliation against their companies by the Chinese government.
- (viii) Naming and shaming. Allied country political and staff-level export control officials are generally averse to "naming and shaming" particular countries or end users and thus prefer to continue the country- and end-user-agnostic structure of the existing regimes.
- (ix) **Just reform Wassenaar.** For all these reasons, the better use of time would be to reform the regimes, particularly the Wassenaar Arrangement.



The administration needs to do what it can to ensure that the allies in the producer nations impose the same controls to enhance effectiveness.

Future work by Emily and myself will work to address these themes. In the interim, we agree that these concerns are valid and should be taken into consideration. However, we do not view these challenges as insurmountable.

THE NEED FOR EXPORT CONTROLS STANDARDS: A PLURILATERAL APPROACH

Whether the United States or an allied country takes the lead on creating a new export control regime, the allies will, at a minimum, need sufficient legal authorities, resources, and mandates to implement plurilateral controls. I do not think most people in the policy community calling for more controls realize how far behind the (well-intentioned and dedicated) allies are to the U.S. system with respect to authorities to impose new controls, resources to conduct policy analyses, and investigative and enforcement capabilities.

Indeed, for example, the European and most of the other allies had to shoehorn their new export controls against Russia into their sanctions authorities because they generally do not have the legal authority to impose unilateral or plurilateral export controls, even in response to an invasion of another country. The allies need new authorities regardless of whether (i) the status quo remains in place with respect to China and other countries of concern, or (ii) there needs to be a dramatic increase in China-specific controls to respond, for example, to hostile action against Taiwan or another country, or the provision of lethal support to Russia. Benefiting from lessons learned in the lead-up and implementation of the allied response to Russia's continuing invasion of Ukraine, the Allied systems need to be much nimbler.



A precursor step to ensuring such nimble systems are created could be to use the 2023 G7 Trade Ministers' Meetings as an opportunity to develop and announce standards identifying the authorities, resources, and mandates an allied country's export control agency should have to implement plurilateral controls that are effective and not counterproductive.³⁸ More details on these proposed standards are available in Appendix 1.

CONCLUSION

Many recent U.S. export control policies have stemmed from using unilateral, extraterritorial action via foreign direct product rules. The common denominator of all the foreign direct product rules is that the foreign-made item is produced from certain types of U.S.-controlled technology, software, or equipment.³⁹ However, these foreign direct product rule tools become ineffective if and when foreign companies outside the United States swap out the U.S.-controlled software, technology, or equipment they were using that "tainted" their foreign-produced products for foreign-origin software, technology, and equipment.⁴⁰ Also, there are some types of critical topics where extraterritorial controls will not work well. How, for example, can the United States create a foreign direct product rule for artificial intelligence software, data sets, or algorithms where there is no U.S. chokepoint?⁴¹

Thus, the United States needs to be judicious in using these tools or any unilateral or extraterritorial policies. It is and can be effective for some number of years; however, for most foreign-made items, it will have a short shelf-life—and, by definition, create structural incentives for foreign producers to design out U.S.-controlled content in favor of that produced by their foreign competitors. This means that the administration, with as much Congressional support as possible, needs to do what it can to ensure that the allies in the producer nations impose the same controls to enhance their effectiveness and to level the unlevel playing field for U.S. industry.



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APPENDIX A: PROPOSED EXPORT CONTROL STANDARDS

Standard 1

Export control agencies should have sufficient legal authorities, resources, and mandates to effectively address and enforce through coordinated plurilateral action both (i) classical export control issues that cannot be addressed through the existing multilateral regime process; and (ii) contemporary common security and human rights issues outside the scope of the regimes' mandates. These legal authorities should include both civil and criminal penalties for violations, which are critical to deterrence and motivating compliance.

Standard 2

To implement Standard 1, export control agencies must take whatever actions necessary to ensure that they have clear and broad legal authorities to create and impose quickly plurilateral controls outside the multilateral regime process:

- (i) over commodities, software, and technology not identified on any existing multilateral regime list;
- (ii) against end uses and related activities by their citizens and companies, even if not directly related to the production or development of WMD;
- (iii) against specific end users and entities;
- (iv) that are country-specific; and
- (v) that address strategic objectives of common security and human-rights interests, not just objectives focused on inherent capabilities of specific items.

Standard 3

Export control agencies should have sufficient resources to effectively implement the policy objectives in Standard 1 and the controls in Standard 2.

Standard 4

Export control licensing officials in G7 and other participating allied countries will create systems to coordinate, to the extent possible, licensing policies for plurilateral controls. In particular, this must include some mechanism to share de-classified versions of relevant classified information.

Standard 5

Export control enforcement officials in G7 and other participating allied countries will create systems to coordinate, to the extent possible, the sharing of enforcement-related information and intelligence.

Standard 6

Intra-governmental coordination between export control policy officials and export control enforcement officials should be seamless.

Standard 7

Export control agencies will do all the work necessary to reduce unnecessary regulatory burdens on controlled trade by and among G7 members and other allied countries that adopt the same standards.

Standard 8

G7 and other allies that are standards adherents will not use export controls to achieve purely trade protectionist or mercantilist policy objectives.

Standard 9

Export control agencies will work with all relevant subject matter experts in industry, government, and academia to ensure that any new controls are clearly written, technically accurate, and effective given the complexity of technology, supply chain, and foreign availability issues.

Standard 10

Export control agencies will provide resources and incentives for companies to create and enhance their internal compliance programs, particularly those affected by the new controls.

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