REPORT

U.S. Export Controls: Emerging Consensus On Increasing Risk[1]

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EXECUTIVE SUMMARY

On August 13, 2009, President Barack Obama directed the National Economic Council and the National Security Council (NSC) to conduct a broad interagency review of the U.S export control system, including the dual-use and defense trade procedures. According to a statement released that day by the White House, "the aim of the review is to consider reforms to the system to enhance the national security, foreign policy, and economic security interests of the United States."[2] The statement noted that the current system is outdated.

The export control regime has been a concern for some time, with many worried about its inability to keep pace with new threats and globalization. Presidents George W. Bush and Bill Clinton attempted substantial reforms of the export control system in their respective administrations, but both were thwarted by interagency disagreements, bureaucratic lethargies, and Congressional opposition. Industry officials have voiced concerns for decades about export controls eroding the competitiveness of U.S. companies and the strength of the U.S. defense industrial base. They have been joined by foreign policy and defense officials concerned about the negative effects of export controls on defense cooperation with allies and partners.

Most executive branch and industry officials agree that the export control system is in need of an overhaul. The former group is inundated by expanding licensing, oversight, and enforcement requirements as the list of controlled items continues to grow—raising concerns that in the flood of routine requests, important items that should be restricted may be missed. The latter group believes the delays and uncertainty endemic in the current system have a negative impact on American competitiveness. But most

1 The author wishes to thank Christine Bartolf, Tigran Mikaelian, and Lindsey Ross for their research and contributions to the successful completion of the project.

2 The White House, Office of the Press Secretary, "Statement of the Press Secretary," August 13, 2009. http://www.whitehouse.gov/the_press_office/Statement-of-the-Press-Secretary/ (accessed March 3, 2010).

troubling is the fact that the government lacks a clear, detailed, and automated picture of what is actually being exported, to where, by U.S. exporters. Without this data, and a good understanding of the global marketplace, it is hard to assess the extent to which U.S. export controls contribute to American national security and the achievement of foreign policy goals.

While many executive branch officials and representatives of industry believe the export control system is ripe for change, other analysts, including important members of Congress, argue that the system is basically sound and only requires additional funding and enforcement authorities to overcome its weaknesses. Still others point to the lack of systematic data on the current regime's impacts as a reason to be cautious about implementing dramatic changes to a system that has worked reasonably well for the past several decades.

This paper examines the current export control regime and its weaknesses, as identified by the major stakeholders. It will assess the ongoing administration review of the system, and the possible interaction between executive branch decision making and legislative activity. This study is the result of dozens of interviews with administration officials—from the White House; the Departments of State, Commerce, Defense and Energy; staffers from the relevant committees and select personal offices in the Senate and House; the Congressional Research Service (CRS) and Government Accountability Office (GAO); as well as representatives of industry and industry associations. While some agreed to be quoted on the record, most did not. For subjects in the latter group, insights and statements are cited in generic terms.

Ultimately, the United States should work to strengthen the international export control regime, within which a streamlined and more efficient U.S. export control system can better protect national security.

More data is required to demonstrate definitively the impact of the export control system on national security, but in the meantime, the U.S. government needs to minimize the risks identified in the current system. It must:

- Ensure that the U.S. export control system prohibits the transfer of critical military and dual-use technologies to countries, entities, and individuals that pose a real or potential threat to the United States;
- Protect the technological edge of the U.S. military;
- Foster a strong defense industrial base; and
- Facilitate interoperability and cooperation with U.S. allies and foreign partners.

Such a system will be predicated on regulations that are predictable, transparent, efficient, and designed—explicitly—to advance the administration's international security policy.

Threats and International Context

Since the 1917 Trading with Enemies Act, the United States has been actively working to prevent trading with certain countries and to prevent foreign countries or entities from acquiring technologies developed in the United States that are critical to national security. Today's export control regime was largely created over 50 years ago, in the midst of the Cold War, in order to maintain America's military and technological edge and to keep goods and technologies away from the Soviet Union and other adversaries. The system evolved gradually, beginning in the 1960s as the United States and the Soviet Union entered a period of détente. It has undergone slight alterations since then, but there has been no major restructuring of the system since the fall of the Soviet Union almost 20 years ago. Today, the threats we face are different: we are concerned about a mix of rising powers, nuclear aspirants, and non-state actors or terrorists.

Perhaps more importantly, the nature of technological change and innovation has been transformed. Where once we developed the technology in Department of Defense (DOD) labs or in DOD-funded corporations, today, new technologies come from the commercial sector—and not all the players are American corporations. Unlike even 20 years ago, corporations are truly global today, to the point where some have no clear nationality. Technologies can be shared within minutes by multiple parties of different nationalities via the Internet. American companies can easily partner with foreign companies to skirt export controls, and commercial technology continues to develop far more rapidly than in the past. The truth is, the United States no longer leads the world in developing technology. Instead, we face both niche- and near-peer-technology competitors at every turn.

We have left the era of the military-industrial complex and entered a new reality of military-industrial complexity. Today, many cutting-edge technologies, such as encryption and software in general, are developed in the private sector and sought by the government. This means the list of dual-use items is growing, while at the same time globalization is ensuring that new items and services that were once only available in the U.S. market are now readily available from foreign sources.

In addition, the United States is no longer unchallenged in the global marketplace either in terms of market share or quality, even in militarily critical technologies.[3] Today, for example, the Netherlands and Japan are the leaders in the manufacture of lithography equipment, which is

3 Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, Report of the Defense Science Board Task Force on the Technology Capabilities of Non-DOD Providers (June 2000). http://permanent.access.gpo.gov/websites/dodandmilitaryejournals/www.acq.osd.mil/dsb/reports/technondod.pdf (accessed March 4, 2010).

critical to making semiconductors.[4] In terms of market share in the defense arena, as one journalist has observed, "The United States' position as the world's dominant military exporter since the Cold War-era is swiftly being eroded by the growth in Russian and European supply."[5] The U.S. share of the global arms market has declined from about 40% in 2000 to approximately 27% in 2008.[6]

The United States is no longer head and shoulders above the rest of the world in terms of its scientific, technical, and military capabilities.

Whereas American-made semiconductors used to be 10 years ahead of their Chinese competitors, the GAO reported that by 2002 the U.S. lead had been reduced to two years. Over the ensuing six years, the gap narrowed further to about one generation—or one to two years.[7]

In short, the 21st century reality is that the United States is no longer head and shoulders above the rest of the world in terms of its scientific, technical, and military capabilities. In fact, we risk losing that edge to countries such as China and India. Clearly, export controls are not responsible for this development, but they do cut both ways. They are intended to limit the spread of technology, but in some cases they also appear to damage the defense industry's ability to make business decisions that support the innovation on which future military advances depend.

One House staffer spoke of multiple studies, all of which conclude that "[current export controls] are impeding the survival of the defense industrial base. This is new; the reports are consistent."[8] As Ashton Carter, Undersecretary of Defense for Acquisition and Technology, put it, a strong defense industrial base is not a "birthright."[9] The United States must be willing to invest in it.

The national security implications of this trend are potentially grave because U.S. military strategy, as one GAO report explains, "is premised on technological superiority on the battlefield." Each year, the United States invests billions of dollars in high-tech weaponry and systems to maintain that superiority—and the technologies developed by DOD "continue to be targets for theft, espionage, reverse engineering, and illegal export."[10] Yet an export control regime focused

4 U.S. Government Accountability Office, *Export Controls: Challenges with Commerce's Validated End User Program May Limit Its Ability to Ensure That Semiconductor Equipment Exported to China is Used as Intended,* GAO-08-1095 (September 2008), p. 16. http://www.gao.gov/new.items/d081095.pdf (accessed February 24, 2010).

5 Fenella McGerty, "The Evolution of Defence Trade," *Jane's Defence Weekly*, February 22, 2010.

6 Ibid.

7 U.S. Government Accountability Office, *Export Controls*, p. 15.

8 House Foreign Affairs Committee staff, January 26, 2010.

9 Vago Muradian and John T. Bennett, "Carter: Protect US Industrial Base," *Defense News*, September 7, 2009. http://www.defensenews.com/story.php?i=4266169 (accessed February23, 2010).

10 U.S. Government Accountability Office, *High-Risk Series: An Update*, GAO-07-310 (January 2007), p. 20. http://www.gao.gov/new.items/d07310.pdf (accessed February 24, 2010).

exclusively on protecting technology ignores the legitimate motivations of the U.S. government and corporations to sell such systems abroad, whether for profit or broader foreign policy purposes.

International defense cooperation helps maintain a vibrant U.S. defense industrial base because added contracts keep product lines open, decrease unit costs, and provide the opportunity for defense contractors to make investments in research and development. Such investments are critical to ensuring future advances in quality and competitiveness. In addition, using the same military platforms—aircraft, ships, land-based or other vehicles—also fosters interoperability between the U.S. and allied militaries, a critical element of NATO and other combined military operations.

The export control system can no longer just be about denying access to our adversaries. It must instead balance the risks associated with the spread of technology against the reality of a globalized economic order in which technology is widely available, and where the challenge of maintaining an American lead in militarily relevant technology is increasingly difficult.

The Current System[11]

The United States restricts the export of: 1) defense items or munitions; 2) goods or technology that have dual civilian or military use; and 3) items that might be used in nuclear, chemical, or biological weapons proliferation or missiles used to deliver such weapons of mass destruction (WMD). Exports can be restricted based either on their characteristics or on the end-user or recipient country.

The U.S. Constitution grants the power to regulate foreign commerce to Congress, which has delegated this authority to the executive branch through various laws. The export of military or defense items is covered by the Arms Export Control Act of 1976 (AECA) and is administered by the Department of State. The regulation of dual use exports was delegated via the Export Administration Act of 1979 (EAA) and is the purview of the Department of Commerce. The AECA is implemented by the International Traffic in Arms Regulations (ITAR) and the EAA by the Export Administration Regulations (EAR).[12]

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11 The description of the existing system is derived largely from papers authored by Ian Fergusson, including "The Export Administration Act: Evolution, Provisions and Debate," CRS Report for Congress, August 14, 2009.

12 The ITAR defines defense items as those "specifically designed, developed or configured, adapted or modified for a military application," with no predominant civilian application or performance equivalent to an item with civilian application, or something with significant military or intelligence application, which necessitates control.

The executive branch is required to maintain a U.S. Munitions List (USML) and the ITAR stipulate the licensing policy for the sales of these items. Much of the work and controversy surrounding ITAR has to do with the definition of a munition. The definition is not entirely clear and rests upon whether an item was designed for a military purpose. Thus, a simple bolt designed originally for a tank is classified as a munition according to the USML.

The State Department's Directorate of Defense Trade Controls (DDTC) administers the AECA, in consultation with DOD, by processing the licenses that authorize the export of defense items. DDTC decisions are final and exempt from judicial review. At DOD, munitions experts in the Defense Technology Security Administration (DTSA) review licenses referred to them by the Department of State or Commerce (BIS)—as required by ITAR—and provide recommendations to those agencies. Nuclear exports are regulated by the Nuclear Regulatory Commission. DTSA also maintains the munitions list.

The president must inform Congress of government-to-government and commercial arms sales. Congress must be notified 30 calendar days in advance of any military sales of defense equipment, defense articles and services, or design and construction at values over $14 million, $50 million or $200 million, respectively. For sales to NATO countries (and Japan, South Korea, Australia, and New Zealand) with no sales or transfers to countries outside of this group, the notification must occur 15 days prior, but the threshold sales amounts are higher.[13] In practice, the executive branch informally notifies Congress of U.S. government sales to other governments 20 days before the formal notification. After formal notification, if Congress does not block a proposed government or commercial military sale, it may proceed.[14]

The only country with an exemption from the ITAR is Canada. However, the Obama Administration, like its predecessor, is seeking exemptions for the United Kingdom and Australia through two separate defense cooperation treaties currently under consideration by the U.S. Senate.

The AECA was enacted without a termination date, unlike the EAA, which requires renewal as stipulated in each successive version of the law. During periods when the EAA has lapsed without reauthorization by Congress, successive presidents have utilized the International Economic Emergency Powers Act (IEEPA). Under the IEEPA, the president can renew the EAR for an indefinite time of "economic emergency." While the EAR are extended by the IEEPA, the police powers provided to enforcement agents under the EAA are absent, as is the president's authority to deny judicial review.

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13 The threshold amounts are $25 million for major defense equipment, $100 million for articles or services, and $300 million for design and construction services.

14 The informal and formal Congressional notification processes—and the constraints inherent in them—also apply to defense sales negotiated through the Foreign Military Sales program.

The licensing process established by the EAR is managed by the Department of Commerce through its Bureau of Industry and Security (BIS). The EAA mandates the Secretary of Commerce to create the Commerce Control List (CCL), which details non-defense goods, technology and software. The CCL includes items that are not on the munitions list but could have defense uses, and any items controlled for reasons of national security, foreign policy or short supply. The CCL contains 10 categories of items, such as "electronics," and each of the 10 categories contains five functional groups, such as "software."[15] There are well over 2,000 controlled dual-use items.[16] However, the EAR applies to all items, in theory, because exports may be restricted not only by their category but also because of the destination, recipient (or end-user) or end-use of the item.[17]

Often, however, the most problematic issue is which agency should have jurisdiction over an item—a determination that depends on the definition of a munition or dual-use item.

Items controlled for national security or foreign policy reasons may be subject to U.S. policy—for example, anti-terrorism controls that prohibit almost all trade with the five designated state sponsors of terrorism—or to multinational controls, including the non-proliferation Nuclear Suppliers Group, the Australia Group (which controls chemical and biological precursors) and the Missile Technology Control Regime. The 40-member Wassenaar Arrangement was established in 1996 to replace the Cold War-era Coordinating Committee for Multilateral Export Controls. It maintains dual-use and munitions lists similar to the U.S. lists and operates on a voluntary basis to ensure transparency.

The EAR licensing process has a timeline to try to discipline the agencies. For dual-use licenses, the Department of Commerce has nine days after a company applies for a license to either deny it, grant it, seek additional information, refer the request to other agencies (State, Defense, or the Nuclear Regulatory Commission), or return the request to the applicant. If a license is referred to another agency, the latter must recommend approval or denial within 30 days. An interagency dispute should be resolved within 90 days.

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15 The 10 categories include: 1) nuclear materials, facilities, and equipment; 2) materials, organisms, microorganisms, and toxins; 3) materials processing; 4) electronics; 5) computers; 6) telecommunications and information security; 7) lasers and sensors; 8) navigation and avionics; 9) marine; and 10) propulsion systems, space vehicles, and related equipment. The five functional groups include: 1) equipment, assemblies, and components; 2) test, inspection, and production equipment; 3) materials; 4) software; and 5) technology.

16 Interview with Commerce Department official, February 18, 2010.

17 The control of nuclear items is authorized by the EAA, AECA, and the Atomic Energy Act, with controls divided among State, DOD, Energy and the Nuclear Regulatory Commission, which regulates exports of nuclear facilities and materials, including core reactors.

Often, however, the most problematic issue is which agency should have jurisdiction over an item—a determination that depends on the definition of a munition or dual-use item. If a company is unsure whether the item it intends to export is a munition or not, it will seek a commodity jurisdiction determination from the government (specifically the State Department). This process can take weeks, months, or—in one case involving camera technology cited by a Commerce official—over four years and counting. However, even when an exporter does not consult with the government, an agency can independently invoke jurisdiction. This is most likely to occur when State or DOD officials become concerned that an export request may involve an item that is a munition or may have a defense (or dual-use) purpose. Commodity jurisdiction and interagency licensing disagreements are notorious for causing delays.

Enforcement of the AECA and EAA is the responsibility of the State and Commerce Departments, respectively, in conjunction with the customs and immigration units of the Department of Homeland Security (DHS). U.S. embassy officials conduct end-use monitoring of military and dual-use items, to ensure that items are not illegally diverted or re-exported to entities and individuals.[18]

System at Risk

Critics of the current system identify two broad areas of risk that need to be addressed. The White House stresses the national security rationale for reform. The administration's concern is that all of the time spent looking at the growing stack of "hay"—the redundant and zero to no-risk licenses—is distracting officials from finding the "needles"—exports that would endanger U.S. national security. By contrast, industry officials are more concerned about international competitiveness. In a globalized world with a large number of alternative sources of technology and manufacturing, an inefficient and unpredictable export control system means lost business opportunities and a diminished competitive position. The White House captured these dual concerns in its statement last year announcing its reform effort:

> The U.S. export control system itself today, however, poses a potential national security risk based on the fact that its structure is overly complicated, contains too many redundancies, and tries to protect too much. As a result, the system encourages foreign customers to seek foreign suppliers and U.S. companies to seek foreign partners not subject to U.S. export controls. Furthermore, the United States Government is not adequately focused on protecting those key technologies and

18 Within Commerce, the Office of Export Enforcement (OEE), a component of BIS, conducts domestic and (in conjunction with DHS) international investigations. OEE is also responsible for pre-license and post-shipment verification. The State Department's Office of Defense Trade Compliance within DDTC enforces in conjunction with DHS.

items that should be protected and ensuring that potential adversaries do not obtain crucial technical data for the production of sophisticated weapons systems.[19]

National Security Concerns

The agencies involved in administering the export control system are spending too much time on cases that pose no threat, increasing the risk that they will not notice or address exports that might be detrimental to national security. Even worse, by focusing on the licensing process, the government may be missing compliance and enforcement issues and fail to recognize broader trends that could threaten national security.

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Key members of Congress appear to concur. Representative Howard Berman, Chairman of the House Foreign Affairs Committee, recently declared, "There is a growing consensus among security experts that due to legal and technological developments in recent years, our current export-control regime...needs to be modernized in order to continue protecting sensitive technologies while also maintaining U.S. technological leadership."[20] As noted earlier, the 1979 EAA, regulating dual-use items, expired in 2001, and Congress has failed to extend or replace it. However, Representative Berman has announced his intention to pass new legislation in 2010. With the departure of a few key Representatives from Congress, the political landscape on Capitol Hill has changed sufficiently to permit export control reform, though it remains to be seen how broad in scope and effect any such legislation will be.

The concern that the export control regime is not keeping pace with national security threats and globalization is not new. Presidents George W. Bush and Bill Clinton each attempted substantial reform of the export control system, but were thwarted by interagency disagreements, bureaucratic lethargy, and Congressional opposition.

At the core of the problem—from a national security perspective—are the two lists upon which the entire export control system rests: one for defense and the other for dual-use items. The lists have become almost a cumulative, historic litany of products, services, and technologies. They fail to account for technological improvements and obsolescence and the reality that many controlled items are now available from foreign sources anyway.

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19 The White House, Fact Sheet on U.S. Export Control Reform Announced on August 13, 2009. http://www.millerchevalier.com/portalresource/2010-01-27FactSheet (accessed March 3, 2010).

20 Howard Berman, "U.S. Export-Control Policy in Dire Need of an Update," *The San Jose Mercury News*, January 15, 2010.

Both industry and government officials recognize that the lengthy—and often redundant—agency license review process contributes to national security risk. The scope of the challenge is daunting. In 2008, the Commerce Department issued 21,000 dual-use licenses (double the number from 10 years earlier) and the State Department currently processes about 80,000 license requests each year. All the while, the number of dual-use and defense licenses increases annually.[21] At the same time, over 99% of all license applications from 2003 to 2007 were approved.[22] According to a senior State Department official, recent investments in staff and computerization will eventually be outstripped again by future demand for licenses.

Most troubling, however, is the fact that the government lacks a clear, detailed, automated picture of what is actually being exported, and where, by U.S. exporters. Without this data, and a good understanding of the global marketplace, it is hard to assess the effectiveness of U.S. export controls.

Industrial Competitiveness Concerns

Across the defense industry, interview subjects maintained that the current regime causes their businesses delays and uncertainty—and threatens their competitiveness. However, there are still many questions about the precise impact of export controls on industry. Congressional staffers and independent analysts repeatedly stressed that industry and the executive branch need to provide more data to make a definitive case that current export controls are adversely affecting the defense industrial base, and, as a result, national security. The existing process is clearly flawed, and there is evidence—anecdotal at least—to suggest negative impacts on the defense industrial base from the current export control regime.

The extended review periods so common to the current system present both taxpayers and businesses with direct and opportunity costs. For munitions sales, timelines are often further attenuated by the Congressional notification process. Since there is no set deadline for the informal notification period, it can stretch on for months and result in lost sales due to delays or customers finding increasingly advanced foreign substitutes that do not require U.S. export licenses.

Industry and government officials are also concerned about the uncertainty in the current system—in particular, the lack of transparency about why licenses are approved or denied and why a given item is deemed a munition by the government. The current system does not require the government to provide detailed justifications to companies seeking licenses or determinations about which jurisdiction—State or Commerce—applies to a given item. However, according to industry officials, decisions are sufficiently inconsistent—even in cases where a license is requested

21 Ibid. Interview with senior State Department official, February 17, 2010.

22 U.S. Government Accountability Office, *Defense Trade: State Department Needs to Conduct Assessments to Identify and Address Inefficiencies and Challenges in the Arms Export Process*, GAO-08-89 (November 2007), p. 23. http://www.gao.gov/new.items/d07310.pdf (accessed February 24, 2010).

for the same item for the same end-user—to place business deals in jeopardy and cause industry to question the fairness and integrity of the system.[23]

The need to make the licensing and review processes more efficient and predictable has historically received the greatest attention by government, business, and independent experts examining the export control system, and has been accompanied by a push to exempt trusted foreign partners from most licensing requirements. The move to control less has, in turn, elevated the significance of compliance and enforcement—an area that has received less scrutiny, but is critical to improving the export control system.

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The foreign availability of technology—together with ongoing, global technological advances—is one of the major causes of the growing irrelevance of the export control system. In cases where the same items and services are available for sale by U.S. and foreign companies, but U.S. firms need a license to sell them, U.S. businesses state they are losing contracts to their foreign competitors. As one industry representative put it, "If the Turks say, 'I need something in 30 days', the Israelis can do it," and U.S. companies often cannot.[24] Increasingly, because the Commerce and munitions lists are not updated frequently, this loss of revenue to foreign entities is unnecessary, and its cumulative effect may be to make U.S. goods less competitive. It is a matter of basic economics: lower global sales volumes limit potential economies of scale, thus increasing production costs and sales prices and permitting foreign competitors to gain a greater market share and volume relative to their U.S. counterparts.

The impact of foreign availability on industry—in the form of lost business opportunities, revenue, and markets—is unknown. Neither the GAO nor the CRS has access to such data from industry, and industry officials cannot point to such data except in the case of satellites, where the loss of business in China has been documented.[25] One official gave an example of a German company that decided to make a substantial investment in qualifying its foundry in Germany to make a satellite component that had previously only been available in the United States. "The danger is..." that European companies will buy the "French argument for autonomy..." because "the experience is accumulative. There [are] 30 years of these cases, cases where our European allies have been denied access to a particular critical component or part."[26]

23 Interview with industry official, February 24, 2010.

24 Interview with industry official, February 24, 2010.

25 Center for Strategic and International Studies, *Health of the U.S. Space Industrial Base and the Impact of Export Control*, February 19, 2008. http://csis.org/event/health-us-space-industrial-base-and-impact-export-control (accessed March 4, 2010).

26 Interview with industry official, February 23, 2010.

There are increasing reports of foreign companies avoiding any U.S. items—no matter how small—that are subject to the ITAR to avoid their products becoming subject to U.S. export controls. This reflects a rational business calculation, because most non-U.S. companies—including NATO allies—are more oriented towards the global market than the U.S. market.[27] Thirty percent of French arms exports over the last several years, for example, went to the United Arab Emirates.[28] A small U.S. company that makes a component used in thermal imaging systems recently lost a contract to sell its product to a European manufacturer when the latter discovered that the item was under a jurisdiction review for possible control on the munitions list. The European firm feared that the State Department would classify the component as a munitions item, which would render its final product (with no other U.S. components) subject to the ITAR. The U.S. company lost the business, impacting its employment; now the component is manufactured abroad.[29]

Worse, however, according to administration officials, is the fact that concerns about the impact of export controls on business—delays, uncertainty, and resulting loss of business—has motivated some U.S. firms to move manufacturing and other work overseas. These firms never intend to import or export items to the United States, instead orienting their business entirely towards the international market, out of the regulatory reach—but also out of the sight of—the U.S. government.

Foreign Policy Impacts

Government and industry officials also cite concerns that the export licensing process may not sufficiently support U.S. foreign policy or national security goals. Indeed, without proper oversight by officials responsible for foreign policy, decisions made by technical or scientific experts may run counter to U.S. interests. As others have noted, there is risk inherent in balancing the export of technology with broader policy goals.[30] Managing that risk is the objective of an effective export control regime.[31]

Defense Cooperation with Allies

In 2007, the U.S. government fined a Georgia-based company for supplying electronic circuit boards to Mayrow General Trading, a Dubai-based company, which re-exported the boards to Iran. The boards were integrated into improvised explosive devices (IEDs), or roadside bombs, that were

27 Defense Trade Advisory Group Plenary Minutes, December 4, 2009. http://www.pmddtc.state.gov/DTAG/documents/plenary_minutes_12_09.pdf (accessed February 24, 2010).

28 McGerty.

29 Interview with administration official, February 24, 2010.

30 See, for example, Department of Commerce, *Deemed Export Advisory Committee, The Deemed Export Rule in the Era of Globalization*, December 20, 2007.

31 One industry official asserted that the decisions by technical staff within both the Department of State and the Department of Defense require more direct supervision by the respective undersecretaries responsible for policy.

used in Iraq against U.S. forces. In another case, export controls prevented the U.S. government from sharing counter-IED technology with British forces in Afghanistan, technology that may well have originated in the United Kingdom.[32] U.S. laws placed allied lives at relatively greater jeopardy to U.S. lives in a case where the two forces were operating in the field together.

Our ability to operate and cooperate with allies and foreign partners is contingent upon flexible, transparent, and efficient export controls. At various times defense cooperation has been threatened by U.S. regulations. For example, the United Kingdom threatened to withdraw from the multi-nation F-35 Joint Strike Fighter (JSF) program over its concern that it was not receiving access to technology it needed to maintain and modernize the system. This concern, according to a Center for Strategic and International Studies report, "is growing into a major tension and now threatens the closeness of the bilateral relationship. The issue revolves around the limits and restrictions that the United States imposes upon UK access to U.S. defense technologies."[33] Given the valuable UK contributions to the United States, such as the vertical/short takeoff and landing engine and counter-IED technologies deployed in Iraq and Afghanistan, there is—in addition to the strategic and economic stakes—a scientific stake for the United States in this relationship.

As one administration official explains, the current system "harms interoperability and our ability to deploy systems with our allies. We harm ourselves by making it too difficult so we end up encouraging even our closest allies to work together without us. We see it in the ITAR-free campaign and the JSF [program]."[34]

Foreign Availability and the Spread of Technology

U.S. and foreign companies today have alternative sources for many dual-use, and even military, items in other countries and are developing mechanisms for skirting U.S. regulations—partnering with foreign entities that can export items the U.S. companies cannot and developing sophisticated "ITAR-free" products, including satellites.

When foreign companies and entities avoid purchasing U.S. goods, services, and technology because of the delay, uncertainty, and costs of the U.S. export control process, this harms U.S. economic interests and can, over time, erode the U.S. defense industrial base. However, according to one administration official, the national security concern is that "more immediately we have no visibility and certainly no control."[35]

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32 Tigner Brooks, "NATO Report Urges Action to Improve Interoperability," *Jane's Defence Weekly*, November 28, 2007.

33 Pierre Chao and Robin Niblett, *Trusted Partners: Sharing Technology within the U.S.-U.K. Security Relationship*, Center for Strategic and International Studies Working Paper, May 26, 2006, p. 4.

34 Interview with administration official, February 24, 2010.

35 Interview with Commerce Department official, February 18, 2010.

Export controls reportedly have not impeded Beijing's efforts to gain access to technology. The GAO states, "Through joint ventures or incentive programs to encourage international companies to locate to China, China has gained access to more advanced technology than it previously had or could produce on its own."[36]

According to the GAO, the export control system is hampered by vulnerabilities and inefficiencies, which together with weaknesses in other government programs (such as the Foreign Military Sales program and reviews of foreign investments in U.S. companies) place U.S. critical technologies at risk of "theft, espionage, reverse engineering and illegal export."[37] The GAO asserts that the U.S. government has been unable to weigh competing U.S. national security and economic interests in large part because of interagency coordination challenges, inefficient administration of the programs, and the lack of systematic evaluations of program effectiveness. Neither State nor Commerce can identify weaknesses in the current system because they have not conducted systematic assessments of the effectiveness of their programs. As one example of a vulnerability that is not being measured, the GAO points to the lack of DOD oversight of foreign-owned or influenced contractors to ensure that they are preventing unauthorized access to U.S. classified information.[38]

In the case of export controls on satellites, foreign availability has thwarted U.S. policy objectives vis-à-vis China. Foreign suppliers have stepped in to replace U.S. satellite companies prevented from exporting to China since Congress passed legislation in 1999 moving satellites under AECA jurisdiction (a response to the discovery that Chinese companies had received technical information from Loral-Hughes that helped them improve their space-launch capability).[39] Being excluded from the Chinese market has left U.S. industry in a position of relative disadvantage to their foreign competitors.

Lack of Transparency

Apart from the length of time it takes for licenses to be processed, industry is concerned about the lack of transparency in licensing and commodity jurisdiction issues. ITAR exemptions are not used consistently either within DOD or between DOD and the State Department.[40] This situation can be exploited by U.S. adversaries or competitors, but it also undoes the benefits of exemption. This is most obvious in the case of the JSF program, which should be exempt from licensing requirements, but because of interagency disagreements, the contractors are "playing it safe," filing (often redundant) license requests.

36 U.S. Government Accountability Office, Export Controls, p. 13.

37 Ibid., p. 22.

38 Indeed, it cites a case where a foreign-owned company had access to U.S. classified information for six months before any preventative action was taken. U.S. Government Accountability Office, *High-Risk Series*.

39 For a history of export control of satellites, see http://www.thespacereview.com/article/528/1.

40 U.S. Government Accountability Office, *Defense Trade: Clarification and More Comprehensive Oversight of Export Exemptions Certified by DOD are Needed*, GAO-07-1103 (September 2007).

Within DOD, the military services and programs differ regarding what constitutes militarily critical technology, which means some DOD offices require anti-tamper security measures on an item while others do not. This inconsistency could provide adversaries or business competitors the ability to reverse engineer technology. Beyond that, the lack of transparency within DOD leads some industry officials to assert that licensing decisions often appear "capricious."

Apart from the length of time it takes for licenses to be processed, industry is concerned about the lack of transparency in licensing and commodity jurisdiction issues.

The lack of transparency in the DOD process is compounded by the special considerations given to low-observable (stealth) and related technologies. In these cases, export licenses are reviewed not simply through the DTSA-coordinated process, which involves technical experts from the services, but also by the office of the Undersecretary of Defense for Acquisition, Technology and Logistics. This additional review does not always occur concurrently with the DTSA process, so it can further delay the licensing decision, especially if the two offices disagree about whether to approve a license.

Furthermore, one industry representative explained that a license from the State Department may be approved within 60 days, but it will be rejected if an associated technology transfer review has not been completed first at DOD; this can take up to two years. This DOD technology transfer review process is "the precursor to the State licensing process," but is probably "not understood," by agency officials and "the part that remains to be touched" by export control reform.[41]

In the case of commodity jurisdiction decisions—according to the GAO—Commerce and State have failed to resolve questions about which agency controls certain missile technology items, leaving leeway for the exporters to decide, "which increases the risk that these items will fall into the wrong hands or creates an unlevel playing field for U.S. companies."[42] From an industry perspective, the problem with commodity jurisdiction decisions is a lack of transparency—there is not even a loose precedent established though a public history of licensing decisions—that increases the risk to companies that they will inadvertently run afoul of export control law. According to one industry official, "The trouble is that without rules or cases to look at, you end up with companies making decisions themselves and not knowing what to do because [the system is] not rational."[43] This problem may motivate companies and individuals to circumvent the law.

Rapidly changing technology—and increasing foreign availability—compounds the problem. According to one industry official, "right now with night vision goggles, there is no standard and

41 Interview with industry official, March 4, 2010.
42 U.S. Government Accountability Office, *High-Risk Series*, p. 22.
43 Interview with industry official, February 23, 2010.

they [State Department officials] are saying, send it to us and we'll tell you."[44] This ad hoc approach, however, erodes trust in the government's implementation of the law and regulations, sometimes leading industry to view the process subject to the determination of technical experts in the government rather than driven by clear foreign or national security policy guidance. It also, of course, threatens to overwhelm State Department licensing officials.

It is not only industry that suffers from the lack of transparency. Because the government does not have a linked automated system, agency officials also lack critical information, which provides opportunities for companies to "game the system." Officials from one agency may be unaware of an identical or associated license for a company pending with another agency. In one instance, a Commerce official received a phone call from a company informing him that a license identical to one he had denied had been approved by the State Department. If not for that call, he would not have known about the other license.

Previous Attempts at Reform

Successive administrations have attempted to update the export control system, and have encouraged or asked Congress to reauthorize the EAA. After an interagency review towards the end of his second term, in May 2000, President Clinton approved the Defense Trade Security Initiative, 17 proposals aimed at streamlining and shortening the export licensing process for NATO allies, Australia, and Japan.[45] It provided for the awarding of licenses for entire weapons systems, licenses to cover spare parts, expedited licenses in certain cases, and doubled the time licenses would remain valid. The initiative remained unimplemented at the end of the Clinton presidency, but provided much of the basis for the defense cooperation treaties signed with the United Kingdom and Australia in 2007.

In 2002, the Bush White House announced National Security Presidential Directive (NSPD)-19, which ordered a review of defense trade policies including the export control system, a process that resulted in a set of recommendations that were largely unimplemented. It was followed in January 2008 by NSPD-55 on dual-use export controls. It reportedly called for a system more geared towards denying specific technologies to specific end-users rather than regulating a broad range of technologies. NSPD-55 aimed to improve transparency reportedly by requiring the Department of Commerce to publish more advisory opinions and guidelines on commodity jurisdiction and licensing. It also called for sunset provisions, which would require the government to ensure that justifications for retaining items on the USML and CCL were current. The directive designated the NSC as the final arbiter of interagency disputes and called for an appeals board to provide recourse

44 Ibid.

45 Daniel Arnaudo, "U.S., UK Sign Defense Trade Cooperation Treaty," Arms Control Association, September 2007. http://www.armscontrol.org/act/2007_09/USUKTreaty (accessed February 24, 2010).

for the private sector.[46] NSPD-56, also issued in January 2008, dealt with defense trade reforms; among other things, it directed that all defense licenses be reviewed and adjudicated within 60 days.

The Bush Administration also streamlined the State Department DDTC's processes and negotiated, signed, and submitted to the Senate defense cooperation treaties with the United Kingdom and Australia. These agreements would essentially provide ITAR and EAR exemptions for "trusted entities" or companies within those countries. The Senate Foreign Relations Committee has not voted the treaties out of committee yet due to concerns about their enforceability and Congress' role in approving arms exports.

The main hurdle to implementing major reform is that Congress, on the whole, is not convinced it is needed.

Finally, the Obama Administration increased the FY2010 budget for BIS' efforts by 25% (a decision for which it received praise from at least one conservative Senate staffer).[47] And in the aftermath of the earthquake in Haiti, according to one industry official, the State Department issued an export license for helicopter parts in 30 minutes—something unprecedented—that he attributed to the Obama Administration: "in the past it would have been bogged down in bureaucracy."[48]

The main hurdle to implementing major reform is that Congress, on the whole, is not convinced it is needed. Instead, Congress remains more focused on making the current system work, with some increased funding for government operations and better intelligence to track violations.

Congress has attempted to reauthorize the EAA several times, most recently in 2001. In 2004, the Senate passed legislation that would have amended the AECA to provide exemptions for the United Kingdom and Australia, but it was defeated in the face of House opposition—the same opposition that blocked the implementation of NSPD-19. In addition, at various times there have been provisions of bills that would have raised the Congressional notification thresholds—to keep up with inflation and defense costs—but these also failed to be enacted. In the 110th Congress, Senator Christopher Dodd introduced S. 2000, a bill to bolster the enforcement of export controls,

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46 National Council on International Trade Development, March 11, 2009 Compliance Committee Meeting Minutes, March 11, 2009. http://www.ncitd.org/Meetings/March%202009/NCITD%20compliance%20meeting%203.11.09.pdf (accessed February 24, 2010).

47 U.S. Department of Commerce, Budget in Brief: FY 2010, p. 61. http://www.osec.doc.gov/bmi/BUDGET/10BIB/2010%20budget%20in%20brief%20final.pdf (accessed March 4, 2010).

48 By comparison, he stated that under the Clinton Administration it took a diplomatic intervention with the State Department and then 24 hours to get a license for Dutch peacekeepers going to Haiti in the early 1990s via Miami.

and in the House, Representative Brad Sherman introduced similar legislation.[49] Neither bill has moved out of committee.

Senate banking and finance staffs are concerned about enforcement and breaking up multi-national black-market weapons networks, asserting, "lots of the problems [with export controls] could be solved with more money for enforcement and compliance."[50] In addition, "rather than focus on lists, we should also increase our focus on verifying end-use" and in cases where unilateral U.S. controls will not work, "we should bolster our intelligence-gathering capabilities."[51] Armed with intelligence, Washington can put pressure on countries, such as the United Arab Emirates (that are a concern because they are a hub for diversion of items to end-users to whom the United States bans exports) to beef up their controls. Stationing additional U.S. enforcement personnel overseas and working with industry to share information on illicit networks and diversions are two specific measures that would improve U.S. enforcement efforts.

Current Reviews and Proposals

According to DOD officials, too much time is spent on no- or low-risk exports, leaving insufficient time to detect and respond to risks and to foster interoperability and U.S. security objectives. The administration insists it is time to erect "higher fences around fewer items." The fewer items are presumably a "small core set of key technologies and items that are capable of being used to pose a serious national security threat to the United States, which includes items related to global terrorism and the proliferation of WMD, their delivery systems, and conventional weapons."[52] The higher fences would be enforced by the additional attention and resources available to control fewer items.

According to administration officials and Congressional staffers, Defense Secretary Robert Gates has been the most energetic proponent of export control reform. Originally a member of the National Academy of Sciences panel that recently published its report on the negative impact of export controls on science and technology, he is reportedly concerned about the risks that the current system entails.[53] He has urged the interagency task force on export control reform to start with "a blank piece of paper." The White House directed that the review should focus on foreign availability, streamlining and updating the licensing lists, transparency, enhancing enforcement, and ensuring that controls are compatible with counterterrorism and homeland security policy and priorities.

49 Export Control Improvements Act, 111th Congress (2009), H.R. 3515.
50 Senate staffer, February 16, 2010.
51 Senate staffer, February 3, 2010.
52 The White House, Fact Sheet on U.S. Export Control Reform.
53 National Academy of Sciences, *Beyond 'Fortress America': National Security Controls on Science and Technology in a Globalized World*, January 2009.

The administration task force considered options ranging from small fixes within existing authorities to creating a new agency that would manage the implementation of one set of regulations and one list of items to be regulated either because they are military or dual-use. The task force completed its report, which includes a laundry list of government action items, "a roadmap of where we want to go," according to one official, but not specific directions on how the administration intends to get there, or achieve its objectives. That will be worked out in coordination with Congress.[54]

The single agency option would involve merging the DDTC and BIS functions and personnel, and could potentially even include DOD personnel (though this appears unlikely). It is unclear where this agency would be located—the State Department is most likely. It is clear, however, that there would only be one list of items to be controlled—divided into categories based on whether or how militarily critical or sensitive they are. The system would provide for "cascading," the ability to move items from the most-controlled category to lesser-controlled categories, and then out of the system entirely, based on technological advances. At the same time, the administration would have to develop tiers of countries, or end-users, to scale the level of scrutiny given to an item under consideration for export. This would be similar to a proposal made several years ago directing the administration to "develop a matrix approach to ranking requests based on both technology and nationality of applicants. A system should be in place for identifying and ranking the sensitivity of technologies and friendliness of countries. The system should also be able to assess to what countries these technologies may be ultimately passed."[55]

The clear advantage of this option would be that both U.S. industry and policy makers would have one bureaucracy, one form and, ideally, one computer system to track everything from license or commodity jurisdiction requests, to shipment, and finally to end-use.

Meanwhile, the House Foreign Affairs Committee staff is rewriting the EAA. This effort has been ongoing for several months; a bill is expected to be filed in the spring. According to committee staff, they "are not preparing a decontrol bill," but rather working to establish national security policy.[56]

The committee will keep the administration apprised of its efforts, but the timing of the rollout of the legislation will not necessarily be coordinated with the White House review. If the legislation wins the approval of key Republicans, including the ranking member of the House Armed Services Committee, Chairman Berman is likely to be able to pass a bill out of committee. If the bill is perceived by House Republicans as an effort to bolster national security (not as a vehicle for simply

54 Interview with White House official, February 24, 2010.

55 Hudson Institute, *Turning Obstacles into Opportunities: Export Controls and Technology Transfers*, ed. Maria Farkas, 2007. http://www.hudson.org/files/pdf_upload/export_controls.pdf (accessed February 24, 2010).

56 House Foreign Affairs Committee staffer, January 26, 2010.

loosening export controls to mollify industry) he will have succeeded, and House Speaker Nancy Pelosi may well conclude that it is politically safe—or at least not costly to Democrats—to bring the bill before the House for a vote. Republican staffers who are open to some reform believe that new legislation is more likely in the 112th Congress, next year. On the Senate side, this year the Banking Committee would likely offer their enforcement-oriented bill to conference with the House EAA legislation; given more time, the committee might tackle broader EAA reform.

On satellites, the FY2010 defense authorization bill directed the Secretaries of Defense and State to conduct an assessment of the national security risks of removing satellites and related components from the munitions list. It is likely that this is the prelude to repealing the provision in the FY2000 defense authorization act that moved satellites onto that list. A stand-alone bill, H.R. 3840, was filed by Representative Dutch Ruppersberger to accomplish the same objective.

Most government and industry officials assert that while wholesale reform is desirable, substantial reform can be achieved without creating a new agency or entity to oversee the system, or new legislation. The consensus is that the most important changes can already be made by the administration within its existing authorities. When asked what would constitute reform, one Congressional staffer focused on dual-use issues asserted, "If they just keep the foreign availability lists and the CCL up to date, that's half the battle."[57] Re-evaluating and shortening the lists is an obvious urgent first step, but one that is potentially fraught with interagency tension and controversy with Congress—the reasons that successive administrations have failed to achieve this objective. If policy makers in the administration lack sufficient political leadership or if the lack of trust between Congress and the administration continues, it may be necessary to create an independent commission to streamline the lists.[58]

The administration is expected to release its report in the very near future and the House Foreign Affairs Committee EAA legislation should be filed within the next several months, but it does not appear as if either effort depends on, or is inexorably linked to, the other. This is mainly because a White House legislative proposal will apparently not accompany the report's release.

Even without a definitive case that export controls are not sufficiently protecting national security or that they are harming national or economic security, there is sufficient cause for action to make the current system more efficient, properly resourced, and to reduce current risks to U.S. national security. A substantial reform may not be necessary if government and industry can work together to take the actions outlined below.

57 Interview with Senate staffer, February 3, 2010.

58 This idea was suggested by Eric Sterner, a former NASA and Defense Department official and former House Armed Services Committee staffer.

The Executive branch should:

- Assess the current threats and how the existing export control system is addressing those threats. Include in this assessment the effectiveness of the licensing process in prohibiting exports; what mechanisms, if any, are used to circumvent the licensing process and the extent to which they are successful; the extent to which end-use agreements are being enforced; and whether enforcement in general is effective.
- Review the USML and CCL and remove items that are widely available from foreign sources (restrictions based on end-use/user may still apply).
- Establish a process for regular systematic review of the lists and/or sunsetting (without timely documented justification, an item would move off either list) of items in order to remove and add items and allow munitions to migrate to the CCL.
- Develop clear guidance about licensing requirements based on end-user or end-state (especially critical in cases where the items are not on the USML or CCL but their export to certain countries or entities should be prohibited).
- Continue to improve the speed with which license reviews and commodity jurisdiction requests are completed.
- Provide clear definition of what constitutes a defense item, and require that decisions—and justifications for these decisions—about commodity jurisdictions and licensing be made public.
- Establish a transparent, time-delineated process for appealing commodity jurisdiction decisions.
- Establish a single export control computer system, which includes automation of the licensing process, linking or merging State and Commerce data and connecting that data with all enforcement agency databases, including those of DHS components and embassies.
- Streamline the DOD license review process by requiring any multiple reviews to take place simultaneously and for clear guidelines and timelines to elevate disputes to the Undersecretary of Defense for Policy, the Secretary of Defense, or the National Security Advisor.
- Designate a legislative liaison at the State Department to manage defense sales notifications.
- Provide the resources needed to implement and regularly enforce end-user agreements.
- Work with multilateral organizations such as NATO and the Wassenaar Arrangement, and with specific allies, to coordinate revisions to export control lists and improve information-sharing and enforcement efforts.
- Establish a new public-private partnership with industry to bolster compliance and share intelligence about real and potential export control violations, especially WMD-related items.

Congress should:

- Raise the thresholds for Congressional notification of defense sales.
- Establish a 30-day deadline for informal, or "pre-consultation," Congressional reviews of defense sales.
- Pass the U.S.-UK and U.S.-Australia Defense Cooperation Treaties.
- Reauthorize the EAA.
- Provide the necessary resources to streamline and systematically review the export control lists and improve licensing efficiency and transparency.
- Repeal the legislation directing that satellites be placed on the USML, giving the executive branch the responsibility to decide on the appropriate licensing jurisdiction.
- Provide sufficient authorities and resources for enforcement, including of end-user agreements.

Industry should:

- Collect data to support the impact of export controls on U.S. competitiveness and the defense industrial base, including loss of contracts and relocation of manufacturing or services.
- Participate (e.g., volunteer information) as part of a new public-private partnership to bolster compliance and share information about real and potential export control violations, especially in items related to WMD.

Almost a century has passed since the Trading with Enemies Act was signed into law, well over 50 years have passed since the Cold War began, and almost 20 years since it ended. The export control system is ripe for a thorough review and reform so that it best protects U.S. national security interests—keeping technologies, articles, and services from our real or potential adversaries. Based on that assessment and what we know today, government and industry can undoubtedly improve their efforts to reduce the risk to U.S. national security inherent in the international system while preserving, or even strengthening, American industrial competitiveness.

About the Author

Dr. Evelyn N. Farkas is a former Senior Fellow at the American Security Project. She was also Executive Director of the congressionally-mandated Commission on the Proliferation of Weapons of Mass Destruction Prevention and Terrorism which issued the report *World at Risk* in 2008. From 2001 to 2008, she served as a Professional Staff Member of the Senate Armed Services Committee. Her issue areas included foreign and defense policy in Asia Pacific, Western Hemisphere, Special Operations Command, foreign military assistance, the military effort to combat terrorism, homeland defense, and export control policy. Her writing has appeared in journals and newspapers, including *The Washington Post*, *Los Angeles Times* and *Boston Globe.* She is the author of *Fractured States and U.S. Foreign Policy: Iraq, Ethiopia, and Bosnia in the 1990s* (Palgrave/St. Martin's Press, 2003 and 2008).

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