

JAPANESE INDUSTRIAL ESPIONAGE, FOREIGN DIRECT INVESTMENT, AND THE DECLINE OF THE U.S. "INDUSTRIAL BASE" IN THE 1980S

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In December 2016, President Obama prohibited the acquisition of the German company Aixtron by the Chinese investment fund Fujian Grand Chip. Aixtron builds equipment for the production of microchips and light-emitting diodes (LEDs) used, for example, in consumer electronics and in the car industry.¹ Even though Aixtron is a German company, it is subject to U.S. law because it has a subsidiary in the United States. And even though Aixtron is not a defense company, the U.S. government cited national security concerns in order to block the takeover.

The Obama administration used the authority given to it by the "Foreign Investment and National Security Act of 2007" (FINSIA) to stop the deal. The act allows for a review of any "merger, acquisition, or takeover that is proposed ... by or with any foreign person" from a national security standpoint.² These reviews are conducted by the Committee on Foreign Investment in the United States (CFIUS). This committee is chaired by the Secretary of the Treasury and composed of representatives from several arms of the executive, including the Departments of Defense, Homeland Security, Commerce and State.

CFIUS assesses the possible risks that foreign direct investments pose to U.S. national security. The final decision to block a merger or acquisition is made by the president, who usually follows CFIUS' recommendation. Presidential decisions are exempt from judicial oversight.³

In the Aixtron case, CFIUS came to the conclusion that "[t]he national security risk posed by the transaction relates, among other things, to the military applications of the overall technical body of knowledge and experience of Aixtron ..., and the contribution of Aixtron's U.S. business to that body of knowledge and experience."⁴

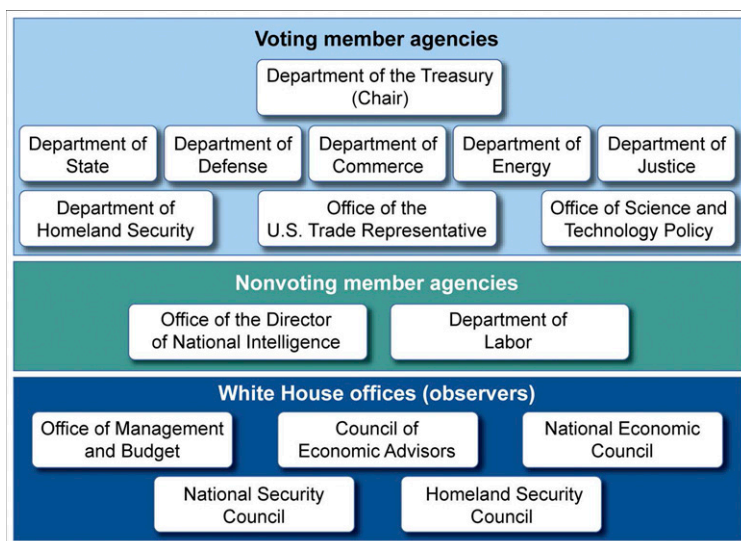
In other words, the United States wanted to deny the company's know-how to China, its biggest geostrategic and economic competitor in the international system. Indeed, both sides, China and the U.S.,

1 "Die Chinesen werden nochmal aufgehalten," *Frankfurter Allgemeine Zeitung*, October 24, 2016, <http://www.faz.net/aktuell/wirtschaft/unternehmen/wirtschaftsministerium-stellt-aixtron-uebernahme-durch-chinesen-in-frage-14495317.html> (accessed April 27, 2018).

2 P.L. 110-49, Sec. 721 (a) (3).

3 For an overview see James K. Jackson, *The Committee on Foreign Investment in the United States (CFIUS)*, Congressional Research Service, January 16, 2018.

4 Department of Treasury, "Statement on the President's Decision Regarding the U.S. Business of Aixtron SE," December 2, 2016, <https://www.treasury.gov/press-center/press-releases/Pages/jl0679.aspx> (accessed April 27, 2018).



have come to understand scientific-technological knowledge as a key resource in their political, military and economic power struggle. Whereas China sees knowledge as a crucial lever to catch up with the United States, the U.S. understands knowledge as the foundation of its position as world leader and superpower. And while China has em-

Figure 1. Membership of the Committee on Foreign Investment in the United States. Source: Government Accountability Office report 18-249, 2018, p. 4.

barked on a vigorous campaign to acquire and absorb technology from the West — not least through illegal methods like economic espionage —, the U.S. tightly controls and regulates the sharing of knowledge in order to keep the technological edge.⁵ In the mindset of the U.S. National Security State, technological superiority and lead time form the bedrock that American global predominance and national security are built upon.

In order to maintain the technological lead, the U.S. has since the 1940s developed a wide array of bureaucratic tools to control knowledge flows that cross national borders. Government secrecy, or classification, is arguably the most rigid and best known of these interlocking and overlapping regimes. But the communication of knowledge is also regulated by a far-reaching, sprawling and highly complex system of export controls that covers not only the movement of physical goods but also the transmission of scientific-technological knowledge in the form of data, printed paper and even oral conversations. Even the U.S. visa system is part of this toolbox. In combination with export controls it regulates the travel of foreign scientists and engineers on the basis of the knowledge they carry in their heads and fingertips.⁶ All these regulations exist alongside and independently of the intellectual property regime. Thus, to a surprising extent, the U.S. government monitors and shapes the international flow of knowledge by bureaucratically keeping tabs on the movement of information, “things” and people.

5 Evan A. Feigenbaum, “Who’s Behind China’s High-Tech Revolution? How Bomb Makers Remade Beijing’s Priorities, Policies, and Institutions,” *International Security* 24:1 (1999): 95-126. Tai Ming Cheung, “Innovation in China’s Defense Technology Base: Foreign Technology and Military Capabilities,” *Journal of Strategic Studies* 39:5-6 (2016): 728-761. Hugo Meijer, *Trading with the Enemy: The Making of US Export Control Policy toward the People’s Republic of China* (Oxford, 2016).

6 See Mario Daniels, “Why and How Borders Matter to the Sharing of Knowledge: The Interplay of U.S. Visa Restrictions and Export Controls in the Cold War,” in *Writing the Transnational History of Technology*, ed. John Krige (Chicago, 2019).

Through CFIUS the U.S. government has added money in the form of foreign direct investment (FDI) to the list of targets of this remarkably creative set of instruments for making something as elusive as knowledge controllable. This is a relatively new development. Despite deeper historical roots, reaching back as far as World War I and the early Cold

War, it was only in the globalizing 1980s that foreign direct investment became a serious concern of the National Security State. When CFIUS was established by Executive Order in 1975 to monitor the impact of OPEC “petrodollars” it only had the authority to review but not to block investments. Moreover, the committee hardly ever met — it was merely a “paper tiger.”⁷ That changed profoundly in the 1980s. Today, CFIUS plays an increasingly prominent role in shaping the tense technological relations between China and the U.S., as the recent Broadcom-Qualcomm case shows.⁸

This article offers some building blocks for an intellectual history of CFIUS as well as of U.S. national security and the crucial role they play in today’s political economy of knowledge. I will tell the complex story of why and how, in the 1980s, foreign direct investment became closely linked to knowledge regulation. In particular, I will shed light on how money spent on technology became framed as a national security issue. I argue that one of the driving forces behind this process was the fear of losing knowledge to another deeply feared competitor who preceded China by two decades: Japan. And I will show that cases of industrial espionage and illegal technology transfer played a special, prominent role in shaping the way the U.S. government and public thought about the international political economy of knowledge in the 1980s. Concerns about illegal knowledge transfers highlighted the challenges that the globalization of knowledge

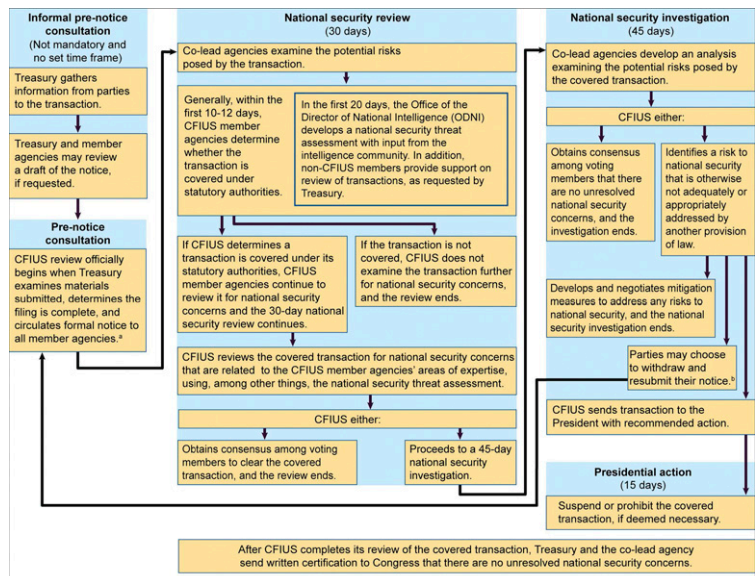


Figure 2. Process of Reviewing Transactions.
Source: Government Accountability Office report 18-249, 2018, p. 8.

7 Souvik Saha, “CFIUS Now Made in China: Dueling National Security Frameworks as a Countermeasure to Economic Espionage in the Age of Globalization,” *Northwestern Journal of International Law and Business* 33:199 (2012): 199-234, at 209. Jackson, *Committee on Foreign Investment*, 3-5.

8 Cecilia Kang, Alan Rappeport, “Trump Blocks Broadcom’s Bid for Qualcomm,” *New York Times*, March 12, 2018, <https://www.nytimes.com/2018/03/12/technology/trump-broadcom-qualcomm-merger.html> (accessed April 27, 2018).

production and dissemination posed to the United States economy and national security. Fears of the loss of knowledge to both communist enemies and longstanding allies fueled political efforts to fill some of the perceived loopholes in the defense perimeter that the U.S. had built since World War II. Classification, export controls and visa policies were not deemed to be comprehensive enough. Controlling the flow of money in order to control the acquisition of knowledge was the latest strategy devised to close a dangerous gap that seemed to open up in the 1980s as Japan laid siege to U.S. markets. And, just like today in the case of China, computer and semiconductor technology was at the heart of the conflict.

I. The U.S. Fight against “Illegal Technology Transfer” and the Hitachi Spy Case

The incoming Reagan administration placed the fight against the uncontrolled and dangerous loss of technology to foe and friend alike at the top of its political agenda. In January 1982 Secretary of Defense Caspar Weinberger alarmed the American public. In an article in the *Wall Street Journal* Weinberger pointed out that the Soviet military was using computer chips that were faithful copies of technology that RCA was building for the Pentagon.⁹ Since export controls tightly regulated the sales of semiconductor and computer technology to the Eastern Bloc, the Soviets had obviously obtained it illegally through unlawful purchase, theft or economic espionage. And this, Weinberger assured his readers, was not an isolated case: The “Soviets have organized a massive, systematic effort to get advanced technology from the West. The purpose is to support the Soviet military build-up.” This effort posed an existential threat to national security because an “important part of our own national defense as well as the security of our allies and friends around the globe is the ‘quality edge’ we have enjoyed for many years.”¹⁰ A widely quoted CIA report from June 1982 concurred and warned of a “steady erosion of the technological superiority on which U.S. and allied security currently is based.”¹¹

9 Caspar W. Weinberger, “Technology Transfer to the Soviet Union,” *Wall Street Journal*, January 12, 1982, 32. *Newsweek*, January 1, 1982, 34.

10 Weinberger, “Technology Transfer,” 32.

11 CIA, “The Technology Acquisition Efforts of the Soviet Intelligence Services: Inter-agency Intelligence Memorandum,” June 1982, 3. <https://www.cia.gov/library/readingroom/docs/CIA-RDP82M00786R000104810001-5.pdf> (accessed April 28, 2018).

Weinberger and the CIA were only two voices in the Reagan administration’s vigorous campaign to fight what was christened “illegal technology transfer.” Using a powerful rhetoric of espionage, treason, subversion and illegality, the Reagan administration profoundly changed the public perception of technology transfers through a flood of policy papers, speeches and newspaper articles. With considerable

exaggeration, unregulated technology transfer was turned into an acute, existential danger to the United States.

The Reagan administration's language was not just rhetoric. It was a central component of an aggressive set of policies that increasingly reined in the circulation of scientific-technological knowledge. By using all components of the national security toolbox, the U.S. was fighting not only for keeping the lead but to win the Cold War — if necessary, even against its own allies. In June 1982, the same month the CIA published its report, the Reagan administration escalated the conflict within the Western alliance over the construction of a new Soviet gas pipeline with the help of Western technology. In a bid to wage economic war, the U.S. government used export controls as a club against Western European companies and their governments in order to stop their technology sales across the Iron Curtain. What followed was one of the most serious crises in the Western alliance since the onset of the Cold War. The Reagan administration left no doubt that knowledge and the question of control over its circulation were at the very heart of U.S. foreign and national security policy.¹²

Only four days after the U.S. government had begun to target U.S. allies with export controls, a major spy scandal hit the front pages of the national newspapers. In what the *Washington Post* claimed was probably “the biggest industrial espionage case ever,” on June 22, 1982, the FBI charged eighteen men, “including several high-ranking executives of Hitachi, the Japanese electronics giant, with paying an undercover agent” more than 600,000 dollars for stolen technical data about IBM's newest computers.¹³ These charges were the result of an elaborate investigation and sting operation that the FBI had begun seven months earlier in the context of geared-up efforts to protect technology, mainly against Soviet bloc spies. The FBI had cooperated closely with IBM in setting up a shell company that conducted undercover negotiations not only with Hitachi but also with Mitsubishi about the illegal purchase of information about, among other things, the hard- and software of IBM's newest mainframe computer 3081. Since both Japanese companies built and sold IBM-compatible computers, the illegal acquisition that the sting operation dangled before them was designed to reduce IBM's lead time by six months or even a year, save R&D expenditures and secure market shares.¹⁴ Worthy of a Hollywood movie, the FBI caught the final and most incriminating transaction with Hitachi representatives on video.¹⁵

12 Patrick J. DeSouza, “The Soviet Gas Pipeline Incident: Extension of Collective Security Responsibilities to Peacetime Commercial Trade,” *Yale Journal of International Law* 10:1 (1984): 92-117. Angela E. Stent, “East-West Trade and Technology Transfer: The West's Search for Consensus,” *The World Today* 40:11 (1984): 452-462. Bruce W. Jentleson, “From Consensus to Conflict: The Domestic Political Economy of East-West Energy Trade Policy,” *International Organization* 38:4 (1984): 625-660.

13 Mark Potts, Mary Thornton, “Plot to Steal IBM Data is Charged to Japanese,” *Washington Post*, June 23, 1982, A1.

14 David A. Vise, “Pressure to Learn IBM Plans,” *Washington Post*, June 24, 1982, B1, B 10.

15 Michael S. Malone, “Hitachi-F.B.I Tapes Are Released,” *New York Times*, May 16, 1983.

The spy case hit the news and stirred intense emotional reactions on both sides of the Pacific at a time of deepening tensions between the United States and Japan. Two close Cold War allies now found themselves increasingly at odds in their trade relations. In 1982 the U.S. was struggling with a deep recession that appeared to be a seamless continuation of the disturbing crisis experience of the 1970s. The unemployment rate of 10.8% at the end of the year was the highest in the U.S. since the Great Depression. Especially hard hit was the American manufacturing sector, not least the car industry.¹⁶ Even though this economic crisis was part of a global recession, it fed into growing worries about a perceived decline of “competitiveness” of the U.S. national economy in the world markets.

Indeed, competitiveness became *the* buzzword of U.S. economic policy for the entire 1980s and well into the 1990s. It captured the painful experience of a relative decline of the U.S. as the predominant power in the international system of the postwar era. As the geopolitical weight of the U.S. was reduced in the wake of the Vietnam War, its economic clout seemed to be diminished by the catching-up of Western Europe and Japan. This could have been interpreted as a predictable re-equilibration of a world capitalist system that had been shaped by the preponderance of American power at the end of World War II and in the early Cold War. Instead the U.S. public saw it as an existential crisis and threat. The rhetoric of competitiveness implied fears of a nation losing its grip and growing weak and impotent. In this narrative, infused with the ideology of American exceptionalism, other nations were about to fill the vacuum created by American power in decline and would ultimately push aside the U.S. as world leader. It appeared to be a bitter irony that the most threatening economic adversaries were political friends. Even worse, the U.S. itself had enabled their rise after 1945 as part of its Cold War strategy of shoring up the West economically in order to contain Communism militarily and ideologically. It seemed that after having given generously for decades, the U.S. was being taken advantage of by ungrateful allies and had ended up with the short end of the stick.

The growing U.S. trade deficit became the political symbol of this decline. Since the mid-1970s, the gap between imports and exports had widened constantly, from 9.3 billion dollars in 1976 to 36.4 billion dollars in 1982 — and it was about to triple in the following two years. Almost 50% of the 1982 deficit (17 billion dollars)

16 Michael A. Urquhart, Marilyn A. Hewson, “Unemployment Continued to Rise as Recession Deepened,” *Monthly Labor Review* 106:2 (1983): 3-12.

resulted from trade relations with Japan. Even more disconcertingly, the Japanese exports to the United States had grown disproportionately in the manufacturing sector, the former pride of the U.S. economy.¹⁷

But the U.S. economy was not just losing its grip — it was under attack. Many U.S. pundits and politicians argued that the Japanese successes were not just based on a smart industrial policy, superior management techniques or higher product quality alone. In their view, Japan made inroads into U.S. markets because of unfair trade practices. Japan shielded its markets with protectionist measures, used price dumping to hurt U.S. competitors and doled out subsidies to its companies. In short, Japan took advantage of American open markets without reciprocating, thus tilting the economic playing field in its favor.¹⁸

In this tense climate, the Hitachi industrial espionage case seemed to embody everything that was wrong with Japanese-U.S. relations. There had been suspicions about Japanese industrial espionage in the U.S., and especially in Silicon Valley, at least since the late 1970s, and the computer industry had complained for quite a while about Japan's widespread product piracy and disregard for intellectual property. But now, for the first time, two of the largest Japanese companies had been caught red-handed, and a House subcommittee that held hearings on unfair trade practices in 1983 was certainly not alone in assuming that the Hitachi case could well “just be the tip of an iceberg.”¹⁹ Even worse, Hitachi had targeted IBM, the crown jewel of the U.S. computer industry, with the very same instruments that the Soviet intelligence services used to steal American technology. While there was much talk about a U.S.-Japanese trade war, in 1982, Japanese-American relations began to look strikingly similar to a cold war.

II. The Defense Industrial Base and the Globalization of Technology

However, this similarity ran deeper than this brief analysis of the perception of industrial espionage in the early Reagan years suggests. The very concept of “competitiveness” was Janus-faced and as much about the Soviet Union and military and political power as it was about Japan, economic competition and market dominance. In fact, the two strands of the industrial espionage discourse were two sides of the same coin. In the 1980s, market competition became

17 Stephen E. Haynes, Michael M. Hutchison, and Raymond F. Mikesell, “Japanese Financial Policies and the U.S. Trade Deficit,” *Essays in International Finance* 162 (1986): 3 (Tab. 1).

18 See e.g. Clyde. V. Prestowitz, Jr., *Trading Places: How We Allowed Japan to Take the Lead* (New York, 1988).

19 *Unfair Foreign Trade Practices: Hearings before the House Subcommittee on Oversight and Investigations of the Committee on Energy*, June 27 and July 27, 1983, Washington, D.C., 1984, 7 (Representative Doug Walgren), 59 (Representative Gerry Sikorski).

increasingly “securitized,” and the issues of Cold War security became increasingly “economized.” An example of this fusion is the concept of the “defense industrial base.” Far from being an esoteric idea relevant only to the Pentagon’s war planners, the notion of the “defense industrial base” (and its variations like “industrial base” and “technology base”) played a key role in the competitiveness debates well into the 1990s — and is still influential today. It is rooted in a set of assumptions about how high technology, national security and the national economy interact.²⁰

First, the maintenance and improvement of modern military capabilities rely heavily on a constant infusion of high technology into weapons systems. Indeed, the concept of deterrence — at the very heart of Cold War relations between the Soviet Union and the United States — was based on the constant mobilization of cutting-edge technology. It functioned as a force multiplier to offset the quantitative advantage of the much larger conventional forces of the Warsaw Pact. In the context of an incessant arms race, military power thus depended on staying technologically ahead of the enemy. As the final report of the Defense Science Board on “The Defense Industrial and Technology Base” summed it up: “Our national security is based on a strategy of deterrence. ... The effectiveness of our deterrent depends upon our ability to maintain ... technological superiority”.²¹

Second, research and development pursuing the most advanced military technology is the result of a complex public-private partnership. The American postwar system of innovation forged close contractual relations between the federal government (especially the military), universities, and the private business community. Hence, industrial innovation and military power are closely intertwined, so much so that in a large segment of the U.S. economy they form a powerful “Military-Industrial Complex.”²²

Third, the state’s military capabilities depend on a healthy, strong and reliable economic system that — despite the key role of the federal government — is firmly anchored in free-market and free-enterprise ideology and practices. U.S. companies can only be strong partners for the military if they do well, generating revenue needed for the investment in innovation and modern production facilities. In an increasingly internationalized economic and technological system the health of high-tech companies depends on exports and international market shares.

20 The following arguments are derived from *Final Report of the Defense Science Board 1988 Summer Study on the Defense and Industrial Base*, Vol. 1 and 2, Washington, D.C., 1988. <http://www.dtic.mil/dtic/tr/fulltext/u2/a202469.pdf>; <http://www.dtic.mil/dtic/tr/fulltext/u2/a212698.pdf>; *Report of the Defense Science Board Task Force on Defense Semiconductor Dependency*, Washington, D.C., 1987. <http://www.dtic.mil/dtic/tr/fulltext/u2/a178284.pdf> (all accessed August 14, 2018).

21 *Final Report of the Defense Science Board 1988 Summer Study*, Vol. 1, 1.

22 Alex Roland, *The Military-Industrial Complex* (Washington, D.C., 2001). Paul A.C. Koistinen, *State of War: The Political Economy of American Warfare, 1945-2011* (Lawrence, 2012). James Ledbetter, *Unwarranted Influence: Dwight D. Eisenhower and the Military-Industrial Complex* (New Haven, 2011).

Fourth, despite the importance of global markets, including international technology transfers, there is a need for a strong *national* economy. Since the international trading system might break down in the event of war, only national resources can be reliably and quickly mobilized to meet the needs of modern warfare. In other words, because economic globalization generates (technological) dependencies, it diminishes the predictability that military planners seek.

In short, the concept of the “defense industrial base” that became current in the 1980s intertwined economic competitiveness and military power, and the main link between them was high technology. The Defense Science Board boiled this complex relationship down to one paragraph:

The National Technology Base is the essential foundation of our national industrial base. The competitiveness of our national industrial base depends on a continuous creation and infusion of technology just as our national security relies on technology to give our military forces the capability to defeat adversaries who can muster numerically superior forces.²³

Of course, none of this was entirely new in the 1980s. This set of assumptions has been at the very heart of the idea of “total war” and has therefore been an integral part of economic and national security thinking at least since World War I. One could even argue that the intimate relationship between economics and the military is an essential characteristic of the Cold War. I argue, however, that the U.S. discussion about the “defense industrial base” in the 1980s recalibrated and rebalanced this relationship between national security and the national and international economy. Only by shedding light on this recalibration is it possible to fully understand the U.S. fears of industrial espionage — and the Aixtron case mentioned at the outset.

I argue that this recalibration of national security and national economic policies was a reaction to several closely connected challenges posed by profound structural changes that had accelerated in the 1970s. These challenges are usually referred to as “globalization” and “technological change.” I want to use the example of the computer industry to discuss what these terms mean in the context of my story.

23 *Final Report of the Defense Science Board 1988 Summer Study*, Vol. 1, Appendix A, “Draft Presidential Directive: The National Industrial and Technological Base”, A-1.

Computers and their beating hearts, semiconductors, or “chips,” are children of war. In the 1940s and 50s, they were predominantly developed for military purposes and with military money, and for a quarter of a century or so the military was arguably the most important customer of the computer industry. Therefore, the U.S. federal government was the key player in this technological field, forging tight public-private partnerships with U.S. companies such as IBM. Clearly, this is also a story of U.S. dominance. Without denying the contributions made in other countries, the rapid technological progress in computing was driven by U.S. government funding and by U.S. companies, which were the pacemakers and held the largest global market shares for decades.²⁴

All this changed in the 1970s and 1980s. In the computer industry, the big push towards globalization was tied to technological diffusion, the spread of technological know-how, research and development and production to ever more regions of the world. Not only did Japan and several Western European countries catch up and reach production more or less on par with U.S. standards.²⁵ The larger trend was also the establishment of global assembly lines that internationalized computer production. American computers included more and more parts built in other countries, fostering complex networks of technological and economic interdependence. The relative weight of the U.S. in the computer world shrank.

At the same time computer technology became thoroughly commercialized, diminishing the role of the U.S. military. In the first postwar decades computer development had been driven by the logic of “spin-off”: the military had pushed for cutting-edge technology that then slowly migrated into civilian applications. Beginning in the 1970s, this relation was inverted. More often than not the most advanced technology was now the result of civilian research and development, and the military reaped the advantages of new products and processes, developed on the outside. Increasingly, the military bought technology off the shelf like any other customer. Computers were “dual use” technologies — meaning they were put to military as well as civilian uses — but, starting in the 1970s, the boundaries between these spheres were becoming more and more blurred.

24 Kenneth Flamm, *Creating the Computer: Government, Industry, and High Technology* (Washington, D.C., 1988).

25 On Japan see Marie Anchordoguy, *Computers Inc.: Japan's Challenge to IBM* (Cambridge, Mass., 1989).

By the late 1980s, globalization, commercialization and technological diffusion had not only civilianized computer technology; they had

also turned the Pentagon into a customer on civilian *international* markets. Thus the “defense industrial base” had become increasingly dependent on commercial technology that was developed, produced and traded globally. Even though these structural shifts helped the Pentagon to cut costs and were also arguably beneficial for its keeping up with rapid technological change, they had worrisome implications for U.S. national security.

A typical study of April 1982, titled “The Threat of Foreign Competition to U.S. High Technology Industries: National Security Considerations,” prepared for Reagan’s newly established “Cabinet Council on Commerce and Trade,” discussed some of the disconcerting implications of these structural changes. It dealt specifically with Japan, classifying the ally frankly as “by far the most formidable challenger to U.S. technological and economic leadership,” a competitor for political power and a danger to national security.²⁶ The basis of political leadership was, according to this report, a national lead in access to and control over technological knowledge. Stating that this lead was eroding due to Japanese competition, the report warned of nothing less than the decline of U.S. hegemony, presenting a kind of natural law in the guise of a historical argument:

Recent history indicates that leadership in what were high technology industries at the time was critical in the rise of nations to power, in their vitality in peacetime, and survival in wars. Crucial, little opposed, and sometimes not clearly perceived, changes in the world distribution of power and security of nations took place in peacetime as a result of the ability of some nations to capitalize on advanced technology in the development of their industrial base. The outcome of wars often merely reflected the change which had taken place beforehand.²⁷

On a less holistic level the erosion of U.S. technology posed two more immediate dangers. One was the scenario that dependence on Japan would give it the lever to deny militarily vital technologies to the U.S., thus impairing the American ability to make independent political decisions and to mobilize for war.²⁸ The report claimed that in the field of semiconductors the U.S. “surge capability for war” had already been “curtailed” because “current U.S. defense production has become extensively dependent on imports of electronic components.”²⁹

26 [Victor Basiuk], “The Threat of Foreign Competition to U.S. High Technology Industries: National Security Considerations: A Study Prepared under Contract with the U.S. Department of Commerce,” April 1982, iv. <https://www.cia.gov/library/readingroom/docs/CIA-RDP-85T00153R000300070005-7.pdf> (accessed April 29, 2018).

27 Ibid., I-1.

28 Ibid., v.

29 Ibid., iii.

In the second scenario, the rise of Japanese technological leadership had another serious effect on the U.S. stance in the Cold War: it would strengthen Communism. It was presumed that the use of export controls against the Soviet bloc was most effective in fields in which the U.S. was the main or only source of technology. Bluntly assuming that Japan would do business with the common enemy, the report warned that by losing leadership to Japan “the United States will lose direct control over the transfer of the most advanced technologies to the Soviet Union ... As a technological and economic superpower, Japan will be considerably more independent from U.S. influence with regard to technology transfer to the Soviet Union. When transferred to the USSR, Japanese technology could augment Soviet military power. The United States would thus be squeezed between the economic pressure of Tokyo and enhanced military pressure of Moscow.”³⁰ In short, forfeiting leadership, independence and control over technological knowledge posed an existential danger to the United States.

Less than half a decade later, both of the report’s scenarios seemed to have become reality. In the spring of 1987, American national newspapers reported that Toshiba and the Norwegian company Kongsberg had secretly sold high-performance computer-controlled milling machines to the Soviet Union in violation of export controls. These machine tools were used to produce propellers for nuclear submarines that generated less noise and were therefore more difficult to detect, potentially allowing the Soviets to sneak nuclear rockets into the backyard of the United States. The deal had all the trappings of a Cold War espionage case as the KGB was the direct trading partner in a deal consummated in the style of a covert action. The Toshiba-Kongsberg case created an uproar, especially in the U.S. Congress.

As a result, Congress discussed a series of bills with the specific intent to punish Toshiba’s and, by extension, Japan’s “traitor trade” that endangered U.S. national security. In the same vein, the Reagan administration put diplomatic pressure on the Japanese government to tighten up its export control system in order to forestall further technology transfers to the enemy.³¹

At the same time, another conflict raged over the planned acquisition of the U.S. semiconductor producer Fairchild by its competitor Fujitsu, Japan’s leading computer company. American concerns about the growing trade deficit, Japan’s unfair trade practices and the loss

30 Ibid., v.

31 Beverly Crawford, “Changing Export Controls in an Interdependent World: Lessons from the Toshiba Case,” in *Export Controls in Transition: Perspectives, Problems, and Prospects*, ed. Gary K. Bertsch and Steven Elliott-Gower (Durham, 1992), 249-290. Stephen D. Kelly, “Curbing Illegal Transfers of Foreign-Developed Critical High Technology from Cocom Nations to the Soviet Union: An Analysis of the Toshiba-Kongsberg Incident,” *Boston College International and Comparative Law Review* 12:1 (1989): 181-223.

of U.S. competitiveness had only grown since the Hitachi spy case in 1982. Added to this explosive mix were fears of Japan's foreign direct investment in the United States and its ostensible effect of deepening American technological dependency.



NATION/ WORLD

Lawmakers Take Swing At Toshiba

WASHINGTON (AP) — Outrage over Toshiba Corp.'s transfer of submarine technology to the Soviet Union has prompted members of Congress, labor leaders and others to urge a boycott of the Japanese electronics firm.

The anger was more concretely expressed Wednesday when Rep. Helen Delich Bentley and other members of Congress used sledgehammers to smash a Toshiba portable radio-cassette recorder on the Capitol grounds.

"Treachery by any other name is still treachery," Bentley, R-Mt., said. "But if it had another name, it would be Toshiba."

"Now this is what we feel ab-

out Toshiba products," she said before taking a swing.

The members of Congress, representatives of the International Longshoremen's Association and the Teamster's union, and retired Rear Adm. Mark Hill Jr. of the Association of Naval Aviation called for a "total boycott" of color televisions, video recorders, personal computers and other products manufactured by Toshiba.

The American Conservative Union, recalling the prediction by Vladimir I. Lenin, founder of the Soviet state, that capitalists are so greedy they "will sell us the rope with which to hang them," awarded Toshiba a "Golden Rope Award."

Anti War Criminal Lines

III. Yet Another Challenge to U.S. Power: Japanese Foreign Direct Investment

At once a driver and an effect of globalization, foreign direct investment (FDI) in the U.S. expanded at a pace not previously seen in the postwar era. After 1945, the outflow of FDI from the U.S. to foreign countries was generally much higher than the influx. As late as 1977, the overall amount of foreign direct investment in the U.S. (inward FDI stock) was relatively small at \$51.5 billion, whereas U.S. companies had invested \$146 billion abroad. But the year 1977 marked a historical turning point. From then on, FDI in the U.S. grew markedly faster than outgoing U.S. investments, even though the latter always exceeded the inward flows. Fueled by the liberalization, in countries such as Britain and Japan, of state controls over the movement of capital across borders,³² in the following one and a half decades, the FDI stock in the U.S. expanded rapidly to \$83 billion in the early 1980s and to \$185 billion in 1985. In 1986, the year of the Fairchild controversy, its growth sped up even more, with the FDI stock swelling to \$220 billion (and subsequently reaching \$403 billion in 1990 and \$1.5 trillion in 2004).³³ By the end of the 1980s, this powerful surge had turned the U.S. into the "world's largest host of incoming foreign direct investment."³⁴

Even though FDI in the U.S. was relatively small compared to the national economy as a whole (10.5% of the total net worth of all U.S. nonfinancial corporations) and far below the levels in France (27%), West Germany (18%) or Britain (20%), the developments of the 1980s caused a debate about the benefits and dangers of foreign economic

Figure 3. "Lawmakers Take Swing at Toshiba." *The Kerville Times*, July 2, 1987, p. 6. AP Photo/Lana Harris.

32 Bill Emmott, *Japanophobia: The Myth of the Invincible Japanese* (New York, 1993), 57.

33 Edward M. Graham and David M. Marchick, *US National Security and Foreign Direct Investment* (Washington, D.C., 2006), 21-22. Edward M. Graham and Paul Krugman, *Foreign Direct Investment in the United States*, 3rd ed. (Washington, D.C., 1995), 14-15. Edward M. Graham, "Foreign Investment in the United States and U.S. Interests," *Science* 254:5039 (1991): 1740-1745, at 1740-1741.

34 Jonathan Crystal, *Unwanted Company: Foreign Investment in American Industries* (Ithaca, 2003), 1.

influence in the United States.³⁵ Indeed, in the 1980s, for “the first time since the nineteenth century, foreign-owned subsidiaries were becoming a significant presence on American soil.”³⁶

Much more of the FDI came from Western European countries, mainly the United Kingdom and the Netherlands, than from Japan.³⁷ And even among critics there was no doubt that most of the money flowing in had many beneficial effects on the U.S. economy. Yet against the backdrop of deteriorating U.S.-Japanese relations, investments by companies like Fujitsu or Sony took center stage in the public discourse. The battle lines between opponents and supporters of Japanese FDI ran right through the Reagan administration, Congress, the business community, academia and the national press. Although it oversimplifies a complex debate, one can say that the question of Japan’s investment pitted international-minded free traders against nationalist and protectionist “hawks” who called for great caution, citing national security, the national interest, the national economy and the national technological base. This was a clash of opposing philosophies of how international relations and the global economy worked, roughly following the fault line between liberalism and realism. This clash shaped the interpretation of the empirical facts of the Japanese multinationals’ entering the U.S. market. On the one hand, the liberal free traders argued that the international mobility of money was a key aspect of the global division of labor that would be advantageous to all trading partners by fostering competitive advantages. They pointed, for example, to the creation of new jobs in the U.S., the positive effects of FDI on the deteriorating U.S. balance of payments and also the transfer of new technologies from abroad which made the U.S. economy more competitive. In their understanding, the national origin of money did not (and should not) matter. In theory, but also in their actions, Japanese investors were not any different from, say, British ones. To claim otherwise only betrayed a hostile, even xenophobic double standard directed against Japanese FDI, they felt.³⁸

35 Graham, “Foreign Investment,” 1741-1742.

36 Crystal, *Unwanted Company*, 1.

37 Graham, “Foreign Investment,” 1741, Table 1.

38 See e.g. Emmot, *Japanophobia*, 1-64.

The “hawks,” on the other hand, described Japanese investment as a Trojan horse that carried aggressive trade competition into the United States, further hollowing out American competitiveness. Japanese companies, the story went, were taking control of a large segment of the U.S. national economy and of a great number of American workers, thus exerting growing influence within the United States and curtailing U.S. sovereignty as well as economic and political power.

Whereas the liberals argued for an understanding of trade and FDI as an international win-win scenario, the hawks tended to describe them as a zero-sum game. Every Japanese success was a loss to the United States.

The hawks' arguments were at the center of a powerful wave of economic nationalism that drove much of the debate about Japanese FDI in the U.S. Even though outnumbered by the liberals, the realist advocates of economic nationalism and protectionism — foremost among them the polemically dubbed “Japan-bashers” such as Clyde Prestowitz — wielded enormous influence on the public discourse, Congress and the Reagan administration, not least through a veritable cotton-industry of books critical of Japan.³⁹

Many of the economic nationalists' fears revolved around technology and the danger of the United States losing its technological lead and superiority. To the hawks FDI allowed foreign investors to acquire American know-how by means of the check book, circumventing the existing mechanisms of knowledge regulation such as export controls, classification or, in the private sector, intellectual property laws. Against this backdrop, buying a company seemed to be a way of acquiring technology that was equivalent to industrial espionage. The perceived challenge of FDI came to a head when Fujitsu announced in October 1986 that it wanted to buy the American semiconductor company Fairchild.

IV. The Fairchild-Fujitsu Case and the Problem of Knowledge Dependency

As they took a stance against the Fairchild-Fujitsu deal, the national security hawks in the Reagan administration, as well as representatives of the economically embattled U.S. semiconductor industry, did not mince words. They described Fujitsu's offer as an act of war. Stephen Bryen, the Department of Defense's Deputy Undersecretary for Trade Security, an especially vociferous hardliner, likened the Fujitsu offer to the “opening gun” of a battle, adding: “If one of the flagship companies of our semiconductor industry could fall into the hands of the Japanese, we could end up with no U.S. semiconductor industry. We could lose the technology race by default.” Similarly, industry representatives feared, in finest Cold War rhetoric, that selling Fairchild would have a “domino effect” or, with reference to another American war, would be “like selling Mount Vernon to the redcoats.”⁴⁰ The strident language reflected not only Fairchild's

39 See Norman J. Glickman and Douglas P. Woodward, *The New Competitors: How Foreign Investors are Changing the U.S. Economy* (New York, 1989), 13-19. Prestowitz, *Trading Places*. For another example of anti-Japan literature see William R. Nester, *American Power, the New World Order and the Japanese Challenge* (Houndsmills, 1993).

40 William C. Rempel and Donna K.H. Walters, “Trade War: When Chips were Down,” *Los Angeles Times*, November 30, 1987, 1.

symbolic significance as one of the founding fathers of Silicon Valley but also the protectionist lobbying skills of an industry that was in dire straits and appeared to be losing more and more ground to Japanese companies. Moreover, since Fairchild was a major defense contractor many observers feared Fujitsu would gain access to classified technologies.⁴¹

The Fairchild case coincided with two momentous turning points in Japanese-American trade relations. In 1986 FDI from Japan began to grow much faster than that from any other nation.⁴² And this was also the year in which Japan's global market share of integrated circuit exports was for the first time on par with the U.S. share. The curves of American decline and Japan's rise finally crossed. In this context, Fairchild's crisis conjured up all the negative implications to be feared from the erosion of the defense industrial base. These implications were spelled out in a report by the Defense Science Board (DSB) that was put together for the Department of Defense (DoD) almost at the same time as the public debates about Fairchild were heating up. It apparently provided and reinforced the arguments about imminent technological dependency the DoD fielded against the Fujitsu-Fairchild acquisition.⁴³

This DSB report, titled "Defense Semiconductor Dependency" and published in February 1987, was a sophisticated analysis of the role that scientific-technological knowledge played in U.S. technological leadership and competitiveness. The DSB stated that the erosion, or potentially even the loss, of the national knowledge base was the principal reason for U.S. economic and military decline. At the same time, production and national control over knowledge were touted as key to future U.S. power.

The report began with an alarm call. After repeating the creed that U.S. military capabilities relied on technological superiority, the DSB stated: "The United States has historically been the technological leader in electronics. However, superiority in the application of innovation no longer exists and the relative stature of our technology base in this area is steadily deteriorating."⁴⁴ With a distinct sense of urgency, Charles A. Fowler from the Office of the Secretary of Defense pointed out in his cover letter that this was not just a military problem. The DSB report, he wrote in a dramatic gesture, "focuses on a critical national problem that at some time in the future may be looked upon in retrospect as a turning point in the history of our nation. The implications of the loss of semiconductor technology and

41 Jose E. Alvarez, "Political Protectionism and the United States International Investment Obligations in Conflicts: The Hazards of Exon-Florio," *Virginia Journal of International Law* 30:1 (1989): 1-187, at 61, fn. 331 and 334.

42 Graham, "Foreign Investment," 1741.

43 Jackson, *The Committee on Foreign Investment*, 5.

44 *Report of Defense Science Board Task Force on Defense Semiconductor Dependency*, 1.

manufacturing expertise, for our country in general and our national security in particular, are awesome indeed.”⁴⁵

Focusing on the most important and most sophisticated kind of chip, the dynamic random access memories (DRAMs), the DSB took stock of the American position vis-à-vis Japan. The picture was disconcerting indeed: In “slightly over a decade the U.S. share of the most advanced generation of DRAM has fallen from near 100 percent to less than 5 percent.” Japan had become the dominant producer because of unfair trade practices, the close cooperation of government and high-technology companies, superior capital market structures and a larger “technical manpower base” (i.e. a higher share of engineers among the population). Moreover, Japan had outspent the United States in regard to R&D expenditures. The trend was unmistakable: in one technological sub-field after another, the United States’ technological lead was slipping or had already been lost to Japan.⁴⁶

The consequences were far-reaching. If the DoD wanted to buy state-of-the art chips it had to turn to Japanese producers. Even though, in relative terms, the Defense Department had lost its role as a key customer of the semiconductor industry, in absolute terms it still represented a huge demand for computer chips. It bought about three percent of all semiconductors produced worldwide — in sales dollars its share was in the vicinity of ten percent.⁴⁷ How much weapons systems of the latest generation depended on foreign technology was not exactly clear, but the DSB estimated that it was a “significant fraction [...] — up to several tens of percent.”⁴⁸ Especially worrisome was the situation in the field of the most advanced supercomputers. Dual-use high-performance computers played a prominent role in military command and intelligence functions, weapons design and nuclear weapons testing and were therefore among the most tightly export-controlled technologies. In 1986, a hundred percent of the memory capacity and ten percent of the logic elements of U.S. supercomputers were “derived from Japanese manufactured semiconductors.”⁴⁹

The loss of leadership also meant reduced American control over technology flows to the Soviet Union with incalculable effects on the U.S. military technological lead in the arms race.⁵⁰ But more importantly, there was the distinct danger that the United States and not the Soviet Union might be the target of technology denial. The DSB reasoned that “it would not be an illogical strategic business

45 Ibid., cover letter: Charles A. Fowler: Memorandum for the Secretary of Defense, February 9, 1987.

46 Ibid., 2-3, 5-9, 60, quotes at 5, 9.

47 Ibid., 4.

48 Ibid., 2.

49 Ibid., 66.

50 See *ibid.*, 3.

policy to delay release of the most advanced chips to competitors ... , including the United States. Even if foreign manufactured chips are to be available to U.S. manufacturers, it would appear likely that these chips will be a generation behind those” the Japanese would use in their products.⁵¹ Indeed, the fear of technological denial — in peace as well as in wartime — was one of the most disturbing scenarios articulated in the DSB report.⁵² Not only was the United States losing the lead — there was the distinct danger that it would be kept behind indefinitely.

To counter this threat and to “reverse the trend toward the export of semiconductor manufacturing and technology leadership,” the DSB advocated stabilizing and expanding the national technology base. The dangers of technological denial were “not a critical problem as long as the U.S. has the knowledge and the resources to substitute domestic sources in a timely fashion should the supply of foreign products and technology be interrupted.”⁵³ Knowledge retained by individuals working for U.S. companies was seen as the decisive weapon to fight Japanese competition and American decline: “In order to retain infrastructure for ... industries as those of computers and telecommunications, which supply DoD needs, action must be taken to maintain a strong base of expertise in the technologies of device and circuit design, fabrication, materials refinement and preparation, and production equipment.”⁵⁴ The DSB understood “expertise” as a complex field of different kinds of knowledge developed and shared within national collectives of engineers and scientists. Applied know-how, used and acquired in production processes, not just theoretical knowledge, was central. The shop floor in a semiconductor production facility was at least as important as a lecture hall or laboratory at a university. Face-to-face interaction was key: “In Japan, many engineering techniques are learned in the company, where engineers can acquire a deep, but narrow, expertise.”⁵⁵ Here the DSB was referring to accumulated experience, which consists not only of the entirety of acquired information, but also of “bodily” coded knowledge that can only be gained through individual practice. This experience can be communicated in written form to a limited extent only; sharing of such knowledge requires the physical presence and direct communication of people. Historians of science call this “tacit knowledge.”⁵⁶

This meant that the “industrial base” was not simply about building technological products — it was also a repository of national

51 Ibid., 66.

52 See *ibid.*, 2, 10.

53 Ibid., 3.

54 Ibid., 4.

55 Ibid., 9.

56 Donald MacKenzie and Graham Spinardi, “Tacit Knowledge, Weapons Design, and the Uninvention of Nuclear Weapons,” *American Journal of Sociology* 101:1 (1995): 44-99. Michael Polanyi, *The Tacit Dimension* (Garden City, NJ, 1966).

knowledge. If this repository was depleted and lost, the United States would lose its technological superiority and its chance to catch up with Japan. Without skilled engineers there would be no semiconductor industry. But without a semiconductor industry there would also be no skilled workforce: “A competitive semiconductor industry is therefore essential in order to attract individuals necessary for maintaining a competitive technology base in the area. Further, the reservoir of human skills and expertise developed in the semiconductor industry is necessary not only for this industry, but also for new and perhaps not-yet-invented industries related to it. These skills cannot be retained and developed in academia alone.”⁵⁷ The DSB therefore advocated funding research and development in the field of industrial semiconductor *production*.

Conclusion: Exon-Florio, “National Economic Security” and Knowledge Control

Because of the massive criticism in the U.S. Fujitsu withdrew its bid to buy Fairchild in March 1987. But that did not stop the debate about the central problem: What could the United States do to avoid losing technological knowledge to competitors and enemies — which would equal losing both the Cold War and the economic battle against Japan. In contrast to the Toshiba submarine case that could be addressed by tightening up the time-tested tool of export controls, only limited legal instruments were available to stop foreign investors from acquiring knowledge by simply buying U.S. companies. In the fearful climate of 1986/87, the rapid growth of FDI in the 1980s and the increasing number of Japanese acquisitions in the U.S. high technology industries pointed at a supposedly glaring gap in the national security toolbox of knowledge control.

In 1988 Congress closed this loophole by passing the Exon-Florio amendment, which provided the new statutory basis for CFIUS and is the direct predecessor of the “Foreign Investment and National Security Act of 2007” (FINSIA) whose effect on Aixtron I discussed at the beginning. The Exon-Florio amendment made it possible to go beyond the mere review of FDI and prohibit acquisitions, takeovers and mergers outright by a presidential decision. In practice, up until the present, CFIUS’s national security risk assessments have been explicitly shaped by considerations of how to preserve U.S. technological leadership and the defense industrial base. The Committee’s reviews ask if FDI would give foreign companies — and

⁵⁷ *Report of Defense Science Board Task Force on Defense Semiconductor Dependency*, 10-11.

especially companies partially or completely owned by foreign governments — access to classified scientific-technological information, technologies covered by export control regulations and so-called “critical technologies” deemed to be crucial to U.S. technological prowess or part of the national “critical” infrastructure (for example cyber technologies). Invariably, the nationality of the individuals involved in the business transaction is a key criterion. Thus, CFIUS complements all the other instruments in the national security toolbox of knowledge control.⁵⁸

Because CFIUS works in secrecy, it is difficult to assess the impact it has had on technology transfers in the last two decades. But it is also all too easy to underestimate the effects of this national security review process. Since, in addition to the Aixtron case, presidential decisions have blocked FDI in only four other cases between 1988 and 2018, the regime appears to be negligible. Yet from 1988 to 2010 CFIUS reviewed a total of 2380 cases,⁵⁹ and in all these reviews the national security risk assessment does not follow a binary logic of approval or denial. In many cases, CFIUS negotiates so-called “mitigation measures” with the investor. One of the aims of these agreements is to limit foreign control over American technology by excluding classified information from the business transaction, curtailing the access of foreign citizens to technologies or even forcing companies to divest themselves of parts of the company that are seen as too sensitive to be transferred to foreign parties.⁶⁰ These mitigation measures are a powerful tool of technology and knowledge control that is used quite often — between 2011 and 2013 in twenty-seven instances, and in eleven cases in 2013 alone.⁶¹ Moreover, companies may cancel FDI deals because they fear the negative political publicity that a CFIUS review can cause. Fujitsu is not the only example in which FDI failed because of intense political opposition. Moreover, we do not know how often companies withdraw because they do not want to accept CFIUS’s technology control measures or even refrain from engaging in FDI because of the prospect of dealing with CFIUS. But of the 2380 cases mentioned, 117 ended prematurely due to withdrawal.⁶²

Clearly, the Exon-Florio amendment and its later renditions up to FINSA share a deliberately open and very broad understanding of “national security.” This understanding reflects the developments since the 1980s towards an increasing securitization of economics and economization of security. In fact, the 1980s saw the rise and

58 Jackson, *The Committee on Foreign Investment*, 18–19. Graham and Marchick, *US National Security*, 53–56. Brandt J.C. Pasco, “United States National Security Reviews of Foreign Direct Investment: From Classified Programmes to Critical Infrastructure, This is What the Committee on Foreign Investment in the United States Cares about,” *ICSID Review* 29:2 (2014): 350–371.

59 Graham and Marchick, *US National Security*, 57. “Committee on Foreign Investment in the United States,” https://en.wikipedia.org/wiki/Committee_on_Foreign_Investment_in_the_United_States (accessed August 16, 2018).

60 For some examples see Graham and Marchick, *US National Security*, 59–73.

61 Mary Ellen Stanley, From China with Love: Espionage in the Age of Foreign Investment, *Brooklyn Journal of International Law*, 40:3 (2015): 1033–1079, at 1044, fn. 76.

62 Graham and Marchick, *US National Security*, 57. Committee on Foreign Investment in the United States, https://en.wikipedia.org/wiki/Committee_on_Foreign_Investment_in_the_United_States (accessed August 16, 2018).

ubiquitous use of the term “economic security” or, in the rendition of the U.S. PATRIOT Act of 2001, “national economic security.”⁶³ This controversial concept, conflating national security and economics, has shaped the U.S. policies that regulate international knowledge flows up to the present day.⁶⁴

All the cases presented in this article, from the Hitachi industrial espionage case, the Toshiba-Kongsberg export control scandal and the Fujitsu-Fairchild FDI controversy to the Aixtron acquisition have in common that they stirred fears about the loss of American scientific-technological knowledge to competitors and enemies. Today, the concerns about FDI from China are infused with intense fears of economic and military espionage and the circumvention of U.S. export controls.⁶⁵ Whether it was about Japan, the Soviet Union or China — the losses of technology were and are always seen as endangering national security by weakening the national economy through giving access to dual use technologies. Indeed, the continued blurring of the boundaries between military and civilian technologies is the main reason why the idea of “economic security” has exerted such a powerful influence on U.S. policy in the last forty years.

The concept of “economic security” also grapples with the challenges of globalization. Global trade, international science, research and development, world-spanning assembly lines, the ever-growing global flows of foreign direct investment all put strains on national security. While economic activity appears to be stripped of national characteristics, American security not only remains in an emphatic sense “*national* security,” it is based on the notion that national economic prowess is the basis of national power in the international system. Consequently, as much as the U.S. technological system has been globalized and internationalized since the end of World War II and even more after the end of the Cold War, in political terms, it has never lost a distinct techno-nationalist streak. It is the American conviction that both national economic welfare and military might rest on technological leadership, on the U.S. being ahead of everybody else, friend or foe. Hence, the free global flow of technology has been, and still is, seen as inherently dangerous and in need of government control in order to monitor and, if it seems necessary, prohibit the mobility of information, things, people and money, all of which are carriers of knowledge.

63 See the Critical Infrastructure Protection Act of 2001 which is part of the USA PATRIOT Act. 42 U.S. Code § 5195c, section c (definition of critical infrastructure), <https://www.law.cornell.edu/uscode/text/42/5195c> (accessed April 30, 2018).

64 Ellison F. McCoy, “The Reauthorization of Exon-Florio: A Battle Between Spurring the U.S. Economy and Protecting National Security,” *Georgia Journal of International and Comparative Law* 22:3 (1992): 685-700, at 690. Graham and Marchick, *US National Security*, 40-56.

65 Stanley, “From China with Love.” Graham and Marchick, *US National Security*, 95-121. Saha, “CFIUS Now Made in China.”

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