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Introduction

For close to 100 years, foreign direct investment (FDI) has been a vital and beneficial part of the US economy. The US economy depends on FDI for its vibrancy and vitality today more than ever, yet FDI has often created bitter and emotional debates about its implications for US national security. During World War I, FDI from Germany raised national security concerns, and goaded by the Navy, Congress passed sector-specific prohibitions on FDI as well as the Trading with the Enemy Act (TWEA), which gave the president broad powers to block or expropriate foreign investment. In 1985 FDI in the United States, which had been building up since the 1970s, began to draw public attention. Shortly thereafter, there was a surge of foreign acquisitions of US companies and assets, particularly by Japanese companies. In response, in 1988 Congress gave the president a powerful new tool to address the national security implications of FDI: the Exon-Florio Amendment, which authorized the president to block a foreign acquisition of a US entity if the acquisition threatened US national security. The amendment has been at the center of debate about FDI and its effect on national security ever since.

The post-1985 surge of FDI in the United States stimulated concerns in Congress that the resulting loss of domestic control to foreign investors might harm US economic and security interests. These concerns waned during the early 1990s, as the rate of growth of FDI into the United States slowed, and perhaps more important, the economic growth of Japan, a significant and symbolic investor nation, came to a virtual halt. This ended widespread fear that Japan would soon overtake the United States as the world's preeminent economic power. Simultaneously, the US economy entered a sustained period of faster economic growth than had been seen since the 1950s. This boom bolstered US confidence and reduced anxiety and uncertainty about foreign control of US assets.

But as Yogi Berra, the famous catcher and manager for the New York Yankees, once said, it is "déjà vu all over again." Today the debate in the 1980s over Japan is being repeated with respect to China as a rising economic and military power. The proposed takeover of Unocal, a US publicly traded energy company, by the state-owned China National Offshore Oil Corporation (CNOOC) during the summer of 2005 is just one impetus for the fears generated by the prospect of more Chinese FDI entering the United States. This fear persists even though Chinese direct investment in the United States has been to date quite limited, and even though it is doubtful that most Chinese investment is detrimental to US interests. In early 2006 the political eruption in Congress over the proposed acquisition of the Peninsular and Oriental Steam Navigation Company (P&O) by Dubai Ports World, a company owned and controlled by the government of the United Arab Emirates, made the CNOOC controversy look like small potatoes. In the chapters that follow, we examine these fears and concerns in some detail.

FDI occurs when a foreign investor exerts direct control over domestic assets. Technically speaking, it is the book value of the equity held by the foreign investor that is attached to the asset. In most cases, the asset is a US firm, and the equity consists of two components: ordinary (common) stock and retained earnings. If both foreign and domestic investors own the common stock, then only the portion held by foreign persons is considered to be FDI, and only if a threshold percentage is attained that is deemed to give the foreign investor control of the business. In the United States, for most purposes, this threshold stands at 10 percent.[1] As already suggested, foreign investment can take place in one of two ways. First, foreign investors can establish new firms in the United States, which they control, or they can enlarge their holdings in firms that they already control. Second, foreign investors can acquire controlling interests in previously established domestic firms, or spin-offs of such firms. Both forms of FDI have raised and continue to raise national security issues in particular transactions.

FDI in the Early 20th Century

FDI has played a significant role in the development of the US economy since at least the 1870s. In the late 19th century, the vast majority of foreign investment in the United States originated in Europe. In some cases, this investment changed from foreign to domestic when major shareholders became US citizens. Carnegie Steel (later, US Steel), which for some

1. In this instance, FDI would also include a share of retained earnings in proportion to the foreign investor's share of the common stock. If the foreign investor held 50 percent of the stock, 50 percent of retained earnings would be considered FDI along with that stock, at book value.

time was the largest US industrial corporation, changed from being a foreign investment to a domestic holding when the Scottish-born Andrew Carnegie became a US citizen.

Apart from steel, in the late 19th and early 20th centuries, FDI contributed to the development of a number of emerging and important US industrial sectors, including chemicals, radio broadcasting, telecommunications, and transport machinery. Several foreign firms started plants to produce automobiles in the United States in the early 1900s. The FDI that helped foster the development of these sectors in the United States also gave rise to US government national security concerns, particularly in the early 20th century.[2] Although records of FDI flows during those years are sketchy, data indicate that in the early 1900s, there was substantial inward and outward FDI. FDI in the United States—again, most of which was from Europe—totaled $1.3 billion in nominal terms in 1914. US direct investment abroad was twice this amount, or $2.6 billion.[3] Comparing the number of affiliates established in Europe by US firms with affiliates established in the United States by European firms also suggests that the US direct investment presence in Europe exceeded that of Europe in the United States (Graham 1974, table 2.1). In addition, there was a significant stock of portfolio investment in the United States:[4] In 1914, the stock of all foreign investment in the country was $7.1 billion, equal in value to about 20 percent of annual GDP.[5] One reason this large amount of foreign investment, particularly in relation to GDP, raised few concerns was that systematic data were rather scant at the time. Data on foreign investment in the United States during that period are mostly scholarly "educated guesses." In 1915, when the US government began to investigate the amount of foreign investment in the United States, its size and extent startled policymakers. The quantitative data generated by this investigation triggered concern about how much of the US economy was under foreign control; these data were one reason a number of measures to restrict or regulate this investment were soon to be enacted.

US national security concerns regarding foreign investment in the early 20th century were triggered by the onset of World War I. It is safe to say

2. For very detailed histories of FDI in the United States, see Wilkins (1989) and Wilkins (2004). Much of the history recounted in this chapter is derived from the latter source, supplemented by other sources.

3. See Hymer (1960, table 1.1); original data from US Department of Commerce, Bureau of Economic Analysis (BEA). For a history of US business activity abroad, see Wilkins (1970).

4. While government and international agencies differ in the precise definition of portfolio versus direct investment, they agree in general that portfolio investment occurs when an equity investor exerts no managerial control over the investment, whereas a direct investor exerts such control.

5. See note 1, table 1.1, and accompanying text in Wilkins (2004).

that these concerns were more pronounced at the time of World War I and its aftermath than at any other time in US history, including the 1980s, when Americans became preoccupied with Japanese investment in the United States. German companies had made significant direct investments in the United States early in the 20th century, but it was only after hostilities broke out in late 1914 that questions were raised about the level of German involvement in the US economy. US concerns regarding foreign investment reached new heights after 1915, simultaneously with the growing antagonism between the United States and Germany that culminated in the United States entering the war. Public and official attention to German investment intensified following a 1915 incident in which a German diplomat accidentally left a briefcase on New York's elevated transit (Wilkins 2004, 31). Materials found in the briefcase indicated that some German-controlled operations in the United States were aimed at, or at least useful for, enhancing German war capabilities, reducing Allied capabilities, or spying on the United States. This revelation confirmed the suspicions of certain members of Congress that at least some German investment in the United States was meant to achieve sinister ends, even for cases in which the apparent purpose of the investment was purely for commercial gain.

The war years (1915–16) saw significant disinvestment from the United States, but some new FDI still entered the country, mostly from the United Kingdom, but also from Germany. Certain of these foreign investments helped create domestic production of dyestuffs, potash, and refined tin, much of which was imported from the United Kingdom and Germany before the war. By 1915 the conflict had extended into the North Atlantic, and shipments of these materials to the United States were disrupted. Thus the capacity to produce dyestuffs and other chemical products, including pharmaceuticals, in both British- and German-controlled plants in the United States was expanded during this time. This benefited the United States when it later entered the war: Because of foreign investment, the United States had the capacity to make these products that it might have lacked otherwise. The operations, including German-controlled ones, also benefited from inward technology transfer that would aid the American war effort a few years later.

The experience of World War I establishes an important point regarding direct investment. Such investment, even when it comes from antagonistic nations, does not automatically harm the defense or security interests of the nation that receives it. To the contrary, the investment can actually serve the interests of the receiving nation.

As World War I progressed, the United States sided increasingly with the nations allied against Germany. Finally, in the spring of 1917, the United States entered the war on the side of the Allied nations. With the United States at war, concerns about the security risks posed by German-

controlled firms in the United States led to the passage of the TWEA in 1917.[6] The TWEA authorized the president, in times of war or declared national emergency, to take a number of measures affecting transactions between US subsidiaries of foreign companies and their parent organizations. Section 5(b) of the TWEA empowered the president to

> investigate, regulate, direct and compel, nullify, void, prevent or prohibit, any acquisition, holding, withholding, use, transfer, withdrawal, transportation, importation or exportation of, or dealing in, or exercising any right, power, or privilege with respect to, or transactions involving, any property in which any foreign country or any national thereof has any interest.[7]

This section and other TWEA provisions gave the president very broad but rather ambiguous powers to take action against foreign-controlled subsidiaries operating in the United States. Until the passage of Exon-Florio in 1988, the TWEA and International Emergency Economic Powers Act (IEEPA) remained the main laws by which the US government could regulate direct investments in the United States by foreign companies for national security reasons.

In 1917–18 President Woodrow Wilson invoked the TWEA to sequester and take title to US assets held by all German companies, as well as some non-German assets that were determined to be effectively under German control.[8] These assets were then administered by the US Government Office of the Custodian of Alien Properties. In practice, President Wilson's action meant that US subsidiaries of German firms were nationalized under legal provisions that would allow for their return to their original owners following cessation of hostilities. However, following the Treaty of Versailles in 1919, which brought the war formally to an end, most of these assets transferred to US ownership instead.

The main beneficiary of this transfer was the chemical industry,[9] which, at the time, was viewed by the US government as perhaps the most im-

6. *Trading with the Enemy Act*, Public Law 65-91, *US Statutes at Large* 40 (1917): 411, codified at *US Code* 50 (2000), App. § 1 et seq. In 1976, the TWEA was supplanted by the International Emergency Economic Powers Act (IEEPA). The changes effected by the IEEPA are discussed later in this chapter.

7. *Trading with the Enemy Act*, App. § 5(b)(1)(B).

8. Beginning in 1915, some German interests had attempted to acquire strategically important US firms via Denmark. Also, some German investments in the United States were jointly held with British investors. When these were seized in 1917, it affected British as well as German investments, even though the United States was allied with the United Kingdom.

9. In what follows, the reader should be aware that the technologies associated with dyestuffs, ammonia, and aniline film production were very close to those used to make high explosives. Moreover, German high explosives first used in war in 1914 were of much greater potency than explosives used in earlier conflicts.

portant industry to national security. As a result, forced transfers of chemical assets from German to US companies were especially prevalent. Except for dyestuff operations, US businesses held by the large German chemical company Bayer were sold to the US firm Sterling Products. The assets included the right to the Bayer name in the United States, which is why Sterling sells aspirin under the Bayer trademark to this day.

The massive postwar transfer of assets from German to US ownership was not limited to tangible property; it also included important intellectual property assets. In 1919 the alien properties custodian sold some 4,500 patents previously held by German chemical firms—excluding those of Bayer, which were already sold to Sterling Products—to the Chemical Foundation, a nonprofit US corporation established specifically to receive those patents. The Chemical Foundation then licensed the patents to US firms. This transfer resulted in important benefits for a number of US firms, including perhaps the biggest winner, E. I. du Pont de Nemours, which later acquired a number of other firms that had also purchased rights to intellectual property from the alien properties custodian.[10]

While certain US firms benefited economically from the transfer of physical and intellectual property, the US government's main justification for appropriation was that US ownership of these assets was needed for national security reasons.[11] German high explosives, unmatched in lethality, had wreaked havoc on Allied forces in the early months of the war, and for a time, the Allies could not reciprocate. To have the key technologies needed to produce such explosives within US-owned firms, and to do so efficiently, was seen as an American national priority. Even after the German defeat in 1918, the fear remained that German companies, which had dominated the chemicals sector prior to the war, would quickly regain their former strength because of their comparative technological advantage.

In 1920 a number of US chemical firms, including those that were former US affiliates of foreign firms, merged to form the Allied Chemical Company. For a time, Allied Chemical was the largest US chemical firm. After expropriating technology previously under German ownership, in 1921, Congress and the Warren Harding administration moved to protect the US chemical industry by adopting steep tariff increases. The Fordney-McCumber tariff of 1922 raised tariffs further for organic chemicals.

Although DuPont, Allied Chemical, and other US-owned chemical firms benefited from acquiring German patents, they soon found that there were missing links in the technology they had acquired. Thus as early as 1919, beginning with exchanges of technology for production of nitrates of ammonia between DuPont and the German firm Badische Anilin und

10. For an account of how DuPont benefited from transfer of intellectual property following World War I, see Zilg (1974, chapter 9) and Wilkins (2004, note 1, chapter 2).

11. *Federal Register* 7, no. 55 (March 18, 1942): 2165.

Soda Fabrik (BASF),[12] major US chemical firms that had acquired US operations of German firms began to establish ties with many of the same German firms from which the properties and technologies had originally been expropriated. The US firms used these alliances to buy additional technology. Although German firms were initially reluctant to sell the very technologies that had enabled them to dominate the market, in the circumstances following the war, they were in no position to refuse outright, and the management of German firms soon realized that significant profits could be earned from technology sales. Thus licensing technology to US firms became a major business activity for German companies as the 1920s progressed.

Within a few years, German companies began to reenter the US market, often in partnership with the same US firms that had acquired the German firms' former US assets. Bayer reentered the United States in 1923, setting up an alliance with Winthrop Chemical Company, a subsidiary of Sterling Products. Bayer's primary role in this joint venture was to supply technology to Winthrop. But as noted earlier, most of Bayer's US assets, except its dyestuff operations, had earlier been sold to Sterling Products, a US-owned firm, and Winthrop Chemical Company thus controlled former Bayer operations. Bayer made a similar arrangement with the Grasselli Dyestuff Corporation, a subsidiary of the US-owned Grasselli Chemical Company, which was merged later into DuPont. The US government sold Bayer's US dyemaking operations to Grasselli Chemical Company in 1918, immediately after the armistice ending World War I. Grasselli Dyestuffs was the subsidiary established for these operations. Thus by 1923, in effect, Bayer had entered into alliances with all of its former US affiliates, now under control of two different US-owned firms. A second large German firm, Hoechst, had lost its US assets in 1918. Many of these assets were sold to the US-owned National Aniline and Chemical Company. But in 1925 Hoechst reentered the United States by creating the General Dyestuffs Corporation in the United States, which then worked as a partner in a number of undertakings with National Aniline and Film.

In 1926 much of the German chemical industry, including the three biggest firms, Bayer, Hoechst, and BASF, was consolidated into one firm, I. G. Farbenindustrie, or I. G. Farben. This prompted similar consolidations in the United Kingdom, creating the firm known as Imperial Chemical Industries (ICI) (Hardie and Pratt 1966). US firms thus had to compete with very large European groups that wielded significant market power. In an effort to further increase its own power, I. G. Farben attempted but failed to merge with Allied Chemical in 1926. A year later, I. G. Farben entered into an agreement with Standard Oil of New Jersey (SONJ, today Exxon), through which I. G. Farben gave SONJ access to its hydrogenation

12. The British firm Brunner, Mond and the Belgian firm Solvay were also involved in this exchange (Wilkins 1974, 125–26).

technology for increasing oil-refining yields. The agreement also specified that SONJ would not enter the chemical businesses that I. G. Farben dominated. In 1928, DuPont acquired Grasselli Chemical, but Grasselli Dyestuffs was spun off to I. G. Farben, which named its new subsidiary General Aniline Works (later General Aniline and Film, or GAF). In turn, GAF acquired a 50 percent interest in Winthrop Chemical. In 1929 I. G. Farben took further steps to enlarge its US presence by combining all of its US operations into I. G. Chemical Corporation, a holding company. This reemergence of German interests in the US chemical sector would have important national security implications during the 1930s, as discussed later in this chapter.[13]

Interestingly, and unlike in several other sectors discussed below, Congress did not pass legal restrictions on foreign investment in the chemical sector. Thus by the late 1930s, the chemical sector was the leading industrial sector for FDI in the United States, and with a major German presence. Doubtless, despite the industry's perceived importance to US national security, Congress did not impose restrictions in the chemical sector because unlike in 1914, German firms operating in the United States did so in alliance with US-owned firms, which welcomed those alliances and the technology enabled by them. Even so, German participation in the sector came under some scrutiny by the US military following the rise of Hitler in Germany, and the sector would again become a focus of US national security concerns when World War II broke out, as discussed later in this chapter.

In World War I, as mentioned above, the chemical sector was identified as strategically the most important sector to the US war effort. But the US government identified other sectors as critical to US military efforts as well, and German-owned US assets, as well as assets owned by investors seen as German allies, were seized and effectively nationalized. As a result, by the end of World War I, the stock of overall FDI in the United States had fallen by more than one-third from prewar levels, from $1.3 billion in 1914 to about $0.9 billion in 1919 (Hymer 1960, table 1.1).

Even after the war ended, and despite the reemergence of foreign investment in the chemical industry, overall FDI flows did not return to their prewar levels for some time. In 1930 the stock of foreign FDI in the United States was only $1.4 billion, only slightly more in nominal terms, and significantly lower in real terms, than it was in 1914. The expropriation of German assets was one important reason for the drop in the real value of FDI. Moreover, in the eyes of German and other foreign investors, the US government had simply failed to protect foreign investment according to the standards required by international law, or even US domestic law. The

13. The events in the chemical sector in the 1920s are complex, and the above paragraphs highlight only a few of the events most relevant to the topic of this book. Bäumler (1968) gives a more complete account.

US investment environment was thus seen as fraught with political risk. FDI stagnated because of other factors as well, including significant economic imbalances—in particular, a large current account deficit—in the United Kingdom following the war, which led Her Majesty's government to take measures to restrict capital outflow. Although the United Kingdom had been the largest source of FDI in the United States prior to the war, UK-based firms were hard-pressed after the war to resume investment abroad. In addition, even without the expropriations, significant amounts of German investment in the United States would have been unlikely after 1918, because post–World War I Germany was in economic ruin. France, another source of FDI in the United States, was in even worse shape than Germany was, having suffered substantial physical destruction during the war. Some of the largest French investments in the United States had been in the oil industry; these assets were mostly sold to US interests in 1919 and 1920. However, an important reason for low postwar FDI was that, in the years immediately following World War I, Congress passed a number of sector-specific restrictions on foreign investment in the United States. As a result, 1919–23 were anemic years for foreign investment in the United States (Wilkins 2004, chapter 3).

Unlike the United Kingdom and continental Europe, the United States economy was not disrupted by the physical destruction of World War I. In fact, the United States had been a net international debtor nation at the outset of the war, but emerged as an international creditor nation, a position it maintained until Reaganomics brought the nation back into net international debtor status in the late 1980s. Accordingly, during the 1920s, US firms expanded their international presence, including in Europe (Wilkins 1974). By 1930, the stock of US direct investment abroad had risen to about $8 billion, from $2.6 billion in 1914 (Hymer 1960, table 1.1). US direct investment abroad in 1930 was almost six times greater than FDI in the United States.

But as noted above, despite the relatively small amounts of FDI entering the United States immediately following World War I, foreign control of business activity in certain sectors remained a security concern, and this deterred foreign investment. Perhaps the best example of this can be seen in the interrelated sectors of radio broadcasting and telecommunications, which were heavily affected. Security concerns in the radio broadcasting sector began to surface right after conflict broke out in Europe, well before the United States entered the war. In late 1914, the US Navy became concerned that espionage activities were being conducted over foreign-owned radio stations located in the United States. This concern led to action when, following the sinking of the British ship *Lusitania* in 1915, the United States seized, through executive order, the broadcasting facilities of the German electronics firm Telefunken and placed their assets under Navy control. At the time, the Telefunken seizure was seen as a temporary measure; indeed, it took place before the TWEA had established a legal basis for such action.

When the TWEA later came into effect, the Telefunken assets were transferred to the Custodian of Alien Property established under the Act, and employees of German ancestry, including US citizens, were barred from working at the facilities it formerly owned.[14]

The Telefunken seizure turned out to be the tip of the iceberg in the broadcasting sector. In 1917, after the United States entered the war, President Wilson seized all foreign-owned radio stations under the Radio Act of 1912, which authorized government control of all radio facilities in time of war. The largest seizure involved the broadcasting assets of the firm American Marconi, which was one-third owned by and under the effective control of British interests.

Not satisfied by the seizure of Telefunken's and Marconi's broadcasting assets, the US Navy later pressured Congress to pass a law restricting all foreign ownership of radio broadcasting facilities in the United States. Indeed, a bill to do so—the so-called Bullard bill, named after its drafter, Captain W. H. G. Bullard—was drafted by the Navy and introduced into the House of Representatives.[15] However, by that time, such a law was not needed and none was passed, because all radio broadcasting facilities were under US naval control.

With the Allied victory in World War I, one might have thought that the rationale for such restrictions would expire. However, in 1919, with the strong encouragement of the Navy, US General Electric (GE) bought the radio patents formerly held by American Marconi. This transaction, executed under threat of action by Congress to force the sale if Marconi did not enter into it voluntarily, effectively put American Marconi out of business.[16] GE subsequently transferred these patents to a newly formed company, the Radio Corporation of America, or RCA. At the time of its formation, RCA was effectively under US Navy control. With the US government's blessing, RCA proceeded to establish a monopoly over domestic wireless operations. Thus by 1919 the US Navy finally obtained what it had wanted since 1914: domestic, albeit not Navy, control over all radio broadcasting activity in the United States.

These actions alone did not preclude all future foreign investment in US broadcasting. That was largely achieved when Congress passed the Radio Act of 1927,[17] which prohibited foreign control of radio broadcasting activity, including by US corporations under foreign control. Control was

14. Sidak (1997) is the primary source for this subsection on telecommunications.

15. HR 19350, 64th Congress, 2nd sess., §§ 7, 9 (1916).

16. In 1918 Representative Joshua Alexander drafted a bill to nationalize all radio transmitters and put them under US Navy control. The bill was never introduced because of the sale described above.

17. *Radio Act of 1927,* Public Law 69-632, *US Statutes at Large* 44 (1927): 1162, codified at *US Code* 47 (1927), § 87.

found if either a director of the company was an "alien," a person not holding US citizenship, or if one-fifth or more of the voting stock of the company was held by aliens or could be voted by aliens. With the Radio Act of 1927, foreign-controlled firms could not effectively challenge the RCA monopoly. Although it was directed at the radio industry, the Radio Act also effectively precluded foreign ownership of telecommunications operations in the United States because the telecommunications sector increasingly relied on radio and, later, microwave transmissions (also covered under the law) for transmission of traffic. Most of the restrictions on foreign ownership in the Radio Act were incorporated into the Communications Act of 1934 and remained in place for more than 60 years.[18]

Thus in the name of national security, British radio and telecommunications interests were subject to almost the same treatment as the German chemical industry. Their US assets, including patents, were effectively expropriated by American interests, largely through US government intervention. As mentioned above, unlike in the radio or telecommunications industry, Congress never acted to preclude foreign investment in the chemical industry.

Why would FDI restrictions enacted during the 1920s have been directed toward British interests, as was the case in radio broadcasting and other sectors? The United Kingdom and United States had been allies during World War I, but after the war ended, there was some sentiment within both the US and British militaries that US and British interests were bound in the future to collide. During the 1920s, each military drew up contingency plans for a war with the other.[19] How much this sentiment affected US direct investment policy is difficult to ascertain after so many years. However, it seems to us unlikely to be a coincidence that most restrictions on FDI in the United States during the 1920s affected sectors of particular interest to the US Navy, and were directed toward British interests.

Other sectors besides radio broadcasting and telecommunications were also affected by measures restricting direct investment into the United States in the aftermath of World War I, including transportation, energy (mainly oil), and banking. In each of these sectors, with the exception of banking, security concerns played a major role in bringing about the restrictions.

In marine transport, as in radio broadcasting, the US Navy was a leading advocate of restricting foreign investment. As the war demonstrated

18. *Radio Act of 1927*, §§ 310(a), (b).

19. On these plans, see Peter Carlson, "Raiding the Ice Box," *Washington Post*, December 20, 2005, C1. The US plan, entitled "Joint Army-Navy Basic War Plan Red," was completed in 1930. It is now declassified, and a photocopy can be obtained from the National Archives of the United States; see also "Did the United States Have a Plan to Invade Canada During the 1920s?" at www.straightdope.com.

the need for shipping capacity, the Navy wanted to ensure that the United States maintained a sizable shipping fleet under US control. In response to goading from the Navy, Congress passed Section 27 of the Merchant Marine Act of 1920, or the "Jones Act,"[20] which required coastal shipping between American ports to be handled by ships built in the United States, registered in the United States, and owned by US citizens. Under the act, a firm was considered to be owned by US citizens if 75 percent of its common stock was held by US citizens.

In 1926 Congress passed the Air Commerce Act, regulating the airline industry.[21] In some ways, the Air Commerce Act mirrored the Jones Act. Once again, the Navy took a lead role, arguing that the United States should have a fleet of aircraft under its domestic control that could be used in the event of war to transport both personnel and material.[22] Under the act, only US citizens could register aircraft in the United States, and foreign aircraft had to obtain permission to fly over US territory. Commercial flights between any two points in the United States were reserved for US-registered aircraft. Certain provisions of the Air Commerce Act were more lenient than equivalent shipping provisions under the Jones Act. A firm was deemed to be controlled by US citizens only if a majority of common stock was held by persons holding US citizenship, although the act allowed only 25 percent of the voting power to be held by foreign persons. However, the Air Commerce Act also specified that the president of a firm holding US-registered aircraft had to be a US citizen, as did two-thirds of the officers and members of boards of directors. Many of the Air Commerce Act's foreign ownership restrictions were later incorporated into the Federal Aviation Act of 1958, the law that restricts foreign investment in airlines today.[23]

In 1926 Congress also passed the Air Corps Act,[24] which regulated the production of aircraft. The Air Corps Act stipulated that the US Army Air Corps could buy aircraft only from companies in which all of the directors were US citizens, with all manufacturing facilities located in the United States, and of which at least 75 percent of common stock was owned by US citizens. A special provision, however, allowed the US government

20. *Merchant Marine Act of 1920,* Public Law 66-261, codified at *US Code Annotated* 46 (West 1975 and Supp. 2005), App. § 883.

21. *Air Commerce Act,* Public Law 69-254, *US Statutes at Large* 44 (1926): 568.

22. In 1926 there was no US Air Force and, indeed, it was unclear which branch of the military would operate military air transport. In advocating this legislation, the Navy might have thus been hoping that it would get this role.

23. *Aviation Act of 1958,* Public Law 85-726, *US Statutes at Large* 72 (1958): 731, codified as amended at *US Code Annotated* 49 (West 1997 & Supp. 2005), § 40102.

24. *Air Corps Act*, Public Law 69-446, *US Statutes at Large* 44 (1926): 780.

to buy aircraft from a "domestic firm" listed on a US stock exchange. This seemed to be designed to benefit operations controlled by the Dutch-controlled Fokker interests (Wilkins 2004, 292).

Thus by 1926 exactly what constituted a US firm varied substantially from sector to sector: As discussed above, 80 percent US ownership was required for radio broadcasting; only majority ownership for commercial air transport; 100 percent for marine shipping, but holding companies with no more than 25 percent foreign ownership were deemed to be controlled by US citizens; and 75 percent for aircraft manufacturing if the product was to be sold to the US military, subject to the aforementioned exception. Congress did not rule out minority foreign participation in these sectors altogether, because it recognized that American entrepreneurs could in some cases benefit from raising equity abroad. What Congress sought, rather than 100 percent US ownership of the relevant activities, was US control over them (Wilkins 2004, 294).

Security considerations also played a significant role in enacting restrictions on foreign investment in the energy sector, mostly related to oil and gas production. Once again, the US Navy was the prime mover behind the legislation. However, the specific concerns over oil and gas were quite distinct from those in other sectors. In 1919, the Navy worried that the United States might eventually run out of oil and gas, even though at that time, the United States was by far the largest producer of both, and also held the largest proven reserves in the world. The Navy was concerned about the need to keep US warships fueled around the globe, and was intensely aware that the United Kingdom had near-exclusive rights to explore and develop oil in the Middle East, where the existence of petroleum reserves was well known. Accordingly, the Navy encouraged US oil firms to invest overseas. There was also significant foreign investment in the US oil industry in 1919, particularly by the Royal Dutch/Shell group, based jointly in the United Kingdom and the Netherlands. Among other assets, Shell owned significant tracts of oil-producing land in California. The Navy, however, did not see foreign ownership of oil reserves in the United States as a security concern; rather, it worried about the lack of US presence in, for example, Iran, where Royal Dutch/Shell held exclusive rights.

In response to Navy and other pressures, in 1920, Congress passed the Mineral Lands Leasing Act,[25] limiting foreign participation in leasing US public land to extract or transport oil (e.g., through pipelines) to only those companies from countries that allowed US investment in their oil sectors. The intent of the law was not to prevent foreign investment in exploration within the United States, however, but rather to assist expansion

25. *Mineral Lands Leasing Act*, Public Law 66-146, *US Statutes at Large* 41 (1920): 437, codified at *US Code* 30 (2000), § 181 et seq.

overseas of the US oil industry. The concept of reciprocity, unique among US foreign investment laws of the era,[26] provided that if the government of the foreign investor allowed US access to petroleum under its jurisdiction or control, then investors from that country could participate in leasing US public land. Meanwhile, the overseas industry would improve the Navy's ability to refuel its ships abroad (Wilkins 2004, 101–102).

In contrast to the sectors discussed above, foreign ownership of banking in the United States had been restricted since the 19th century. Since 1864, federal law had required that directors of US national banks be US citizens. Under New York law, foreign banks could not establish branches or take deposits in New York, forcing foreign banks wishing to operate in the dominant US capital market to operate as nondepository institutions. In 1919, Congress passed the Edge Act[27] to stimulate US bank participation in international trade finance, but even "Edge Act banks" required US citizens to own a majority of the bank and comprise a majority of its directors.

As noted, FDI, particularly portfolio investment, in the United States was making something of a comeback in the late 1920s, a time of robust economic expansion. However, that expansion would soon come to an abrupt end with the onset of the Great Depression in the 1930s. Portfolio investment in the United States was heavily affected; the stock of this investment plummeted during the Depression years. In contrast, the stock of FDI in the United States increased during this period, albeit only slightly, from $1.4 billion in 1930 to $2.0 billion in 1939.[28] US direct investment abroad, however, declined over the course of the decade, from $8 billion in 1931 to $7 billion in 1939.[29] Even so, by that year, US direct investment abroad was about three and one-half times greater than FDI in the United States.

Some of the FDI that flowed to the United States during the 1930s did not develop from normal economic circumstances, but from the creation

26. While the statutory framework governing investment in the US airline industry does not include concepts of reciprocity, the US Department of Transportation (US DOT) has given much more flexibility to foreign investors from countries with which the United States has liberal air services agreements and which provide US investors with similar opportunities to invest. See US DOT (2005).

27. *Edge Act,* Public Law 66-106, *US Statutes at Large* 41 (1919): 378, codified at *US Code* 12 (2000), § 611 et seq.

28. See Hymer (1960, table 1.1). However, Wilkins (2004) questions the accuracy of the data, noting that there were some foreign entries into the United States in the early 1930s, apparently in response to the very high Smoot-Hawley tariffs of 1930, but also a significant number of exits, in response to the poor economic conditions that prevailed after the onset of the Great Depression.

29. Hymer (1960, table 1.1). Specific cases of disinvestments by US firms are detailed in Wilkins (1974).

of a number of large-scale international cartels (Edwards 1944, Hexner 1945) that covered a wide range of sectors, but were especially significant in the chemical, steel, oil and gas, electrical equipment, and precision instrument industries—all sectors then considered "strategic" from a security point of view.[30] Some cartelization had begun during the 1920s. Indeed, as noted earlier, the agreement between I. G. Farben and SONJ contained cartel-like provisions, by which I. G. Farben agreed to stay out of the oil business if SONJ stayed out of the chemicals business. Where the two sectors overlapped in the "petrochemical" sector, the agreement delineated exclusive marketing territories (Hexner 1945). The Depression motivated further and more extensive cartelization of world markets for numerous industrial products. Cartelization occurred because the worldwide depression substantially reduced global demand for industrial products, creating worldwide overcapacity in many sectors. This, in turn, led to price-cutting, as firms sought to maintain their market shares. In sectors characterized by large fixed costs, price cuts often drove prices below average cost, a situation that could prove ruinous for all firms in a particular sector. Under these circumstances, firms had a strong incentive to collude, holding prices constant and monitoring others' activities. During the Great Depression, conditions were ripe for collusion.

In most cases, the cartels aimed to coordinate output reduction among competitors and prevent prices from falling. Much of the FDI entering the United States in cartelized industries during the 1930s amounted to "listening posts" within territories assigned under cartel agreements to operations by other firms. The listening posts monitored activities of rival firms, ensuring that output reduction agreements were not broken. In the early 1930s, DuPont entered into a number of agreements with ICI, effectively dividing world markets. But even so, each firm often created or maintained small operations in territories reserved for the other.

Because of cartelization, not only did FDI into the United States not dry up entirely, but some FDI of a "listening post" variety even entered the United States from Germany. [31]

During and following World War II, a number of international cartels were prosecuted under US antitrust laws and were found to be illegal. The arrangements between ICI and DuPont came under scrutiny as possible violations of US antitrust laws; both firms later were party to large-scale litigation that affected the entire chemical industry. Despite prose-

30. Senate Subcommittee on Scientific and Technical Mobilization, Committee on Military Affairs, *Hearings on Cartel Practices and National Security Before the US Senate, Subcommittee on Scientific and Technical Mobilization, Committee on Military Affairs*, 78th Congress, 2nd sess., August 29 and September 7–8, 12–13, 1944.

31. Graham (1974). Entry into the United States by the German electrical firm Siemens might be classed as of this nature.

cution, evidence emerged as late as the 1950s indicating that some cartel activity still persisted, for example, in the electrical equipment industry.

As noted earlier, there was some US scrutiny of the chemical sector after Adolph Hitler's rise to power in Germany in 1933. Under the Nazi government in Germany, a close relationship developed between Farben and the rearming German state. Such a relationship had existed earlier between the state and the predecessor firms of I. G. Farben, but it had grown somewhat cold after World War I. As a military power, Germany was particularly vulnerable to being cut off from its supplies of vital raw materials. But I. G. Farben's vast expertise in the chemical industry during the 1930s proved capable of providing the reemerging German war machine with domestic alternatives to many raw materials that Germany had before been forced to import. Since World War I, I. G. Farben had developed processes for manufacturing synthetic rubber and making gasoline out of coal, a product found in abundance in Germany. Because of I. G. Farben's growing ties to the German war machine, its businesses in the United States after 1934 came under increased scrutiny, from both the US and German governments. As noted earlier, much of the focus of I. G. Farben's US operations involved the sale of technology. But following the Nazi government's rise in Germany, under German government pressure, I. G. Farben began to withhold technology sharing, and thus effectively reversed its earlier strategy: It sought to become a net acquirer of technology. Under its agreement with SONJ, I. G. Farben should have shared its synthetic rubber technology. But it did not, even though SONJ made its own studies into synthetic rubber available. By the late 1930s this withholding of technology created concern for US military leaders, although no formal action was taken.

In 1941 after hostilities resumed between the United States and Germany, President Roosevelt invoked the TWEA, allowing the US government to seize German and Japanese assets in the United States. However, because German investment in the United States between the two world wars had been quite modest, there were fewer German assets to be seized. The alien properties custodian, charged with investigating the extent of German-controlled holdings in the United States, concluded that these holdings were considerably less significant in 1942 than they were in 1917.[32] The most substantial assets seized were, once again, held by the

32. Wilkins (2004, 518–19). Wilkins also reproduces the results of a US Treasury census of firms in the United States under foreign control as of June 14, 1941. At that time, there were reported to be 2,816 such firms, 1,985 of which were under the control of European investors. But the total value of these firms was reported as a rather modest $2.316 billion, and the value of enterprises under European control at $1.569 billion. The total number of enterprises under German or Swiss control—the latter of importance because, in many cases, Swiss holding companies masked German holdings—was 416, with a total value of $242.9 million. The small average size of the firms under foreign control supports the hypothesis that many of these firms were essentially listening posts.

German chemical industry, especially the already suspect I. G. Farben. Beginning in December 1941, the US government seized I. G. Farben's assets, including those of its main US subsidiary, General Aniline Works. Assets of other Axis nation firms were also seized, including those of the Harvard Brewing Company (owned by a German family), American Bosch, American Potash and Chemical, General Dyestuff, Schering, Mitsubishi Trading Company, and four Italian bank agencies. Patents held by German, Italian, and Japanese interests, most of which were in the electrical, pharmaceutical, and chemical sectors, met the same fate.

During World War II, US antitrust law remained a key weapon in the US government's arsenal against foreign firms and their US investments. In fact, the antitrust "weapon" had been deployed before the United States actually entered the war. In 1939 the United States brought suit against Allied Chemical and Dye and 41 foreign firms, including I. G. Farben and ICI, alleging anticompetitive activity in nitrogen fixation. The case against the "nitrogen cartel" was settled by consent decree in 1941. In addition, the United States launched a series of cases in 1941 targeting various other I. G. Farben activities, including one challenging its alliance with SONJ. After the United States entered the war, the number of cases expanded. Not all cases were directed against German firms and the US companies with which they had business relations, but a great many were. In 1943 the antitrust division of the US Department of Justice (DOJ) claimed to have uncovered more than 160 agreements by I. G. Farben alone that it deemed illegal and detrimental to the interests of the United States (Wilkins 2004, 536).

The question remains whether the US war effort was negatively affected by German ownership of US firms, or by the alliances entered into by US firms and later deemed by the DOJ to be detrimental to US interests. It is very difficult to make an overall judgment on this issue, but in certain cases, it is clear that during both world wars, certain former German subsidiaries made positive contributions to the war effort, as did US subsidiaries of other foreign firms, including some whose home nations were under Axis occupation. Under their new American owners, American Bosch Corporation, GAF, and American Potash and Chemical Corporation all received Army-Navy "E" awards ("E" was for excellence) for substantial wartime contributions (Wilkins 2004, 541).

One issue that has received considerable attention is whether or not I. G. Farben, by virtue of its pre–World War II activities and arrangements with US firms, impeded US development of synthetic rubber. From the record, the consensus within the US government during the wartime years appears to be that it did (see, e.g., Edwards 1944). But Mira Wilkins, who has investigated the issue intensively, concludes that I. G. Farben's holding back of synthetic rubber technology, if anything, actually stimulated US development of synthetic rubber, so that rubber supplies proved adequate even after the Japanese occupied Malaysia and its large rubber

plantations, greatly restraining the supply of natural rubber in 1942 (Wilkins 2004, 542–43). I. G. Farben's withholding of certain aspects of the relevant technology led to the development of independent US research and development (R&D) needed to offset the omissions. Had it been otherwise, on the eve of the war, the United States might not have had independent capability to develop this technology. Meanwhile, the possibility of technology exchange by I. G. Farben hurting any future German war effort had also concerned the German government during the 1930s.

European affiliates of US firms located in Germany, or in countries occupied by German forces, also contributed to the German war effort. In one memorable raid, Ford Motor Company's German works, at the time producing German military trucks, was bombed extensively by the US Army Air Corps, using bombers that themselves largely came from Ford's US plants (Wilkins 1974). Wilkins indicates that there is little evidence that breaking corporate ties between Ford US and Ford Germany reduced the capacity of the latter to produce for the German war effort. One lesson, therefore, from the impact on the war of US subsidiaries in Germany, and German subsidiaries in the United States, is that the physical presence of an investment is frequently much more important from a national security perspective than the national affiliation of capital.

It might have been expected that World War II would cause FDI flows to dry up entirely. However, between 1939 and 1946, FDI in the United States increased modestly, from $2.0 billion to $2.5 billion. US direct investment abroad similarly increased modestly, from $7.0 billion to $7.2 billion (Hymer 1960, table 1.1). Some of this growth reflected asset exchanges between companies in the United States and Canada, or the United States and the United Kingdom. Rather than expanding FDI, these exchanges had more to do with consolidating and rationalizing wartime production. However, excepting government seizures, there was little retrenchment of FDI out of the United States. Most firms from Allied nations holding assets in the United States, and those from the United Kingdom in particular, retained these assets, and often expanded capacity to meet wartime needs.

Postwar Trends in FDI

In the years following World War II, the economies of nations that had been or would become major sources of FDI to the United States were, to an even greater degree than they were after World War I, in bad shape, if not in ruins. These poor economic conditions were present not only in the three foes of the United States—Germany, Italy, and Japan—but also in the United Kingdom, the largest source of inward FDI in the United States.

Rebuilding these economies began in earnest during the 1950s, and proceeded into the 1960s. Some FDI entered the United States in the early 1950s, but at modest levels, such that the stock of FDI in the United States

increased only from $2.5 billion to $4.0 billion between 1946 and 1956 (Hymer 1960, table 1.1). FDI flows then grew steadily in the 1960s and 1970s, to $51.5 billion in 1977 (data obtained from US BEA, www.bea.gov). Thus between 1956 and 1977, particularly as European economies rebounded, FDI in the United States grew quite quickly, at an annual compound rate of about 13.5 percent. This high rate of growth, of course, was built upon a very small base, and partly reflects both US inflation and the significant depreciation of the US dollar against European currencies during the 1970s. Therefore, despite some growth, relative to the size of the US economy, foreign investment remained quite small. In 1977 the ratio of the stock of FDI to the net worth of all US nonfinancial corporations was about 2.6 percent (Graham and Krugman 1994, table 1.2). Relative to the size of the US economy, the foreign investment presence in the United States was almost surely lower in 1977 than it was in 1914, though this is difficult to confirm, given the limited amount and questionable accuracy of 1914 data.

US direct investment abroad, by contrast, grew throughout the 30 years or so following World War II, at rates as fast as or even faster than the rate of growth for FDI in the United States. Moreover, this rate of growth was built on a base that was three and one-half times larger than that of the stock of FDI in the United States. Beginning in the mid-1950s especially, direct investment abroad accelerated rapidly, creating over the next 20 years a significant US commercial presence throughout much, but not all, of the world. The vast majority of this presence was established in developed countries—Canada, most of Western Europe, Australia, and New Zealand—but not Japan or the then Communist world.

In Europe in particular, the multinational spread of US enterprise triggered fears of US domination via its commercial presence,[33] which was indeed quite large. By 1969, the stock of US direct investment abroad was close to $68 billion, of which almost $22 billion was in Europe (Hymer 1960, table 1.1). During the late 1960s, a project at the Harvard Business School identified 187 US industrial corporations that held major operations in Europe, many of which were established after 1955 (Vaupel and Curhan 1969, Vernon 1971). With few exceptions, these firms were among the top 200 of *Fortune* magazine's list of the 500 largest US industrial firms (Vernon 1971). By today's standards, in which FDI stocks are measured in trillions of dollars, $68 billon in foreign investment might seem like a modest sum. But at the time, this represented a very substantial increase over historical levels of foreign investment.

During the 1970s a number of academic studies addressed what the official US policy should be with respect to inward and outward FDI (Vernon 1971, Dunning 1958, Buckley and Casson 1976). C. Fred Bergsten,

33. In 1967 a best-selling book in Europe, *Le Défi Américain* (The American Challenge), warned of complete US domination if Europeans did not build firms that could match the competitive prowess of the emerging US multinational firms. See Servan-Schreiber (1967).

Thomas Horst, and Theodore Moran (1978) argued that US direct investment abroad, as well as FDI in the United States, largely served US interests but that the benefits could be diminished by government policies, including tax policies, investment incentives, performance requirements, and other government measures. Not all of the studies concluded that the effects of investment were positive, and some authors (e.g., Barnet and Mueller 1974) concluded that the United States should discourage it. But this position did not carry the day. Accordingly, when Bergsten became assistant US treasury secretary in the Carter administration, he successfully pushed for a formal US statement of policy toward direct investment, issued by President Carter in 1977. The statement indicated that US policy should be neutral, without a bias for or against either FDI in the United States or US direct investment abroad. In 1983 the Reagan administration issued a statement strengthening this position, adding that direct investment in the United States was welcome, at least if it was responding to market forces.

Despite the Carter statement on foreign investment, there was some consternation about FDI in the United States during the late 1970s, in particular from the Organization of Petroleum Exporting Countries (OPEC). Major oil price increases in 1974 and 1977, instigated by OPEC countries, caused concerns that the large amount of petrodollars being accumulated by these nations might be used to buy key US assets. Hearings by Congressman Benjamin Rosenthal (D-NY) in 1979, however, revealed that most FDI in the United States originated in Europe, and little investment emanated from OPEC nations. Following these hearings, the furor largely died out.

As previously noted, however, in 1977 Congress amended the TWEA through the IEEPA.[34] The amendments slightly reduced the president's power to seize and take title to foreign-owned assets in the United States. The TWEA gave the president the power to seize and take title to foreign assets in the United States in either time of declared war or any "international emergency," but what constituted such an emergency was vague. The IEEPA stipulated that, for the TWEA's powers to be invoked, the president must declare an international emergency pursuant to procedures stipulated under the National Emergencies Act of 1976.[35] The IEEPA also stipulated that, while the president could seize foreign-owned assets in the United States in time of a declared national emergency, the president could not take title because ownership of the assets would remain in the hands of foreign investors, such that control over them presumably would return to investors when the emergency ended, in contrast to the experi-

34. *International Emergency Economic Powers Act,* Public Law 95-223, *US Statutes at Large* 91 (1977): 1625–26, codified at *US Code* 50 (2000), § 1701 et seq.

35. *National Emergencies Act of 1976,* Public Law 94-412, *US Statutes at Large* 90 (1976): 1255, codified at *US Code* 50 (2000), § 1601 et seq.

ence of German and some British investors following World War I. Apart from the IEEPA limiting the president's authority to take title for foreign-owned assets, most other elements of the TWEA were retained. During a declared emergency, the president could continue to act under the TWEA framework to seize and take control of foreign-owned assets.

Between 1977 and 1984, trends in FDI with respect to inward and outward flows reversed. During the 30 or so years prior to 1977, US direct investment abroad vastly exceeded FDI in the United States, but after 1977, the latter grew sufficiently faster than the former, and the stock of FDI in the United States began to catch up with the stock of US direct investment abroad. As already noted, in 1977 the stock of US direct investment abroad was $146 billion, whereas the stock of FDI in the United States was a third of that total, or $51.5 billion. By the end of 1984, the stock of US direct investment abroad had risen by about 50 percent, to $218 billion, whereas FDI in the United States had risen by 220 percent, to almost $165 billion. US direct investment abroad grew at an annual compound rate of 5.7 percent, a robust figure, but FDI in the United States grew at the significantly faster rate of 16.5 percent.[36] Along with other factors, including international trade in goods and services, growing FDI would contribute to the "globalization" of the world economy—a term barely heard prior to the 1990s—and to increased consternation over the effects of foreign investment in the United States.

The FDI Expansion of 1985–2003

In 1985 a worldwide explosion in FDI began, in large part due to the rapid overseas expansion of multinational firms. This expansionary phase has continued to the present, albeit with some relative lulls. FDI growth and the expansion of multinational firms have been two of the main factors behind the globalization of the world economy. Significant economic interdependence has been created among many of the world's nations, albeit by no means all of them, and though such links have long existed, the recent pace of growth of global integration has accelerated considerably.

The effect of FDI on globalization can be gleaned from table 1.1, which indicates global stocks of inward FDI as reported to the United Nations Conference on Trade and Development (UNCTAD) in 1985, 1990, 1995, 2000, and 2004. This stock stood at somewhat less than $1 trillion in 1985, but at the end of 2004, it had grown to almost $9 trillion. From 1985 to 2004, it grew at an annual compound rate of almost 12 percent, an impressive rate on a high base. This rate of growth is even more significant in that it was sustained over an almost 20-year period. Table 1.1 also shows FDI stocks in developed and developing nations. As the figures indicate,

36. The authors calculated the growth rates using BEA data.

Table 1.1 Worldwide reported inward FDI stock at end of year, 1985–2004 (billions of dollars)

Location of FDI stock	1985	1990	1995	2000	2004
China	6.1	20.7	134.9	346.0	462.1
United States	184.6	394.9	535.5	1,214.3	1,473.9
Developing nations	402.5	548.0	916.7	1,939.9	2,226.0
Developed nations	569.7	1399.5	2,035.8	4,011.7	6,469.8
Total (world)	972.2	1950.3	2,992.1	6,089.9	8,895.3

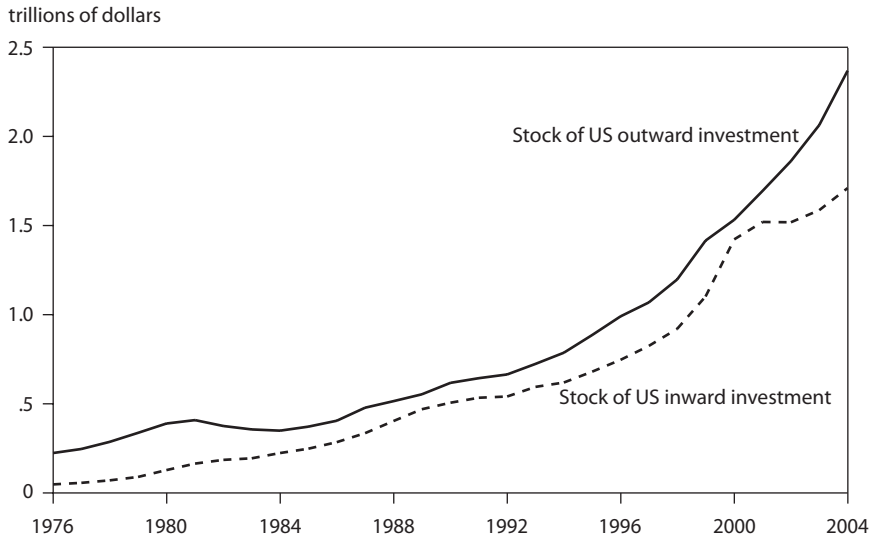
Sources: China Statistical Publishing, *China Statistical Yearbook 2001*, 17-13, and *China Statistical Yearbook 2005*, table 18.13; other data from United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2004*, annex table B.3.

most FDI stock resides in developed countries, defined by UNCTAD to be those of the European Union, plus Australia, Canada, Iceland, Israel, Japan, Malta, New Zealand, Norway, Switzerland, and the United States. The predominance of FDI in developed countries ought to give second thoughts to those who think that globalization is mostly about transferring business from high-wage to low-wage countries. Indeed, the percentage of global FDI stock in developed countries in 2004 (72 percent) was considerably higher than it was in 1985 (59 percent), a trend that continues today, despite the very large growth of FDI into China, discussed below.

From 1985 to 2004, the stock of FDI in the United States increased more than eightfold, from about $185 billion in 1985 to slightly under $1.5 trillion in 2004. This represents a massive increase, with an annual compound growth rate of more than 11 percent over 19 years. Even so, the growth rate of FDI in the United States was actually slightly slower during this period than the global rate of growth. Moreover, the growth rate of FDI into the United States actually fell somewhat after 1985: Between 1977 and 1984, it had been about 16 percent. Also, although the stock of FDI in the United States grew to almost equal the stock of US direct investment abroad in 2000, in the first years of the 21st century the growth of the latter greatly outpaced that of the former (figure 1.1). At the end of 2004, the stock of US direct investment abroad was more than $2 trillion, or about one-third more than the stock of FDI in the United States.

Table 1.1 also indicates inward FDI into two large economies, the United States and China. The data underscore an important fact: While there was a large buildup of FDI in the United States between 1985 and the present, it was part of a larger worldwide trend. This fact was largely missed in the debate over FDI during the late 1980s and early 1990s, which led, among other things, to the passage of the Exon-Florio Amendment. During this period, many critics of FDI saw the rise as a phenomenon unique to the

Figure 1.1 US outward and inward investment, 1976–2004



Source: BEA, International Investment Position, available at www.bea.gov.

United States, and an alarming one at that. In their eyes, the large flows of FDI into the United States hurt the United States. In chapter 3 we offer evidence that much of this criticism was misplaced, and that increased foreign participation in the United States enhances growth rates, investment in R&D, and innovation.

During the late 1980s and into the early 1990s, much of the debate over FDI in the United States focused on national security concerns. A number of sensationalist books were published, including *Selling Our Security* by *New York Times* correspondent Martin Tolchin and George Washington University professor Susan Tolchin[37] and *Rising Sun*, a novel by science fiction writer Michael Crichton (1992), which was later made into a movie starring Sean Connery, the original James Bond. These books, along with numerous others, suggested that FDI by Japanese firms, and especially FDI resulting from takeovers of US firms by Japanese firms, would diminish US technological capabilities, much of which would be shipped off to Japan. Lester Thurow (1992), then Dean of the Sloan School of Management, even posited a war in the near future between Japan and the United States, in which the United States would fare poorly due to this so-called "hollowing out" of US technology. Despite brisk book sales and hand-wringing about these issues at think tanks and academic institu-

37. See Tolchin and Tolchin (1992). This followed an earlier book by the same authors; see Tolchin and Tolchin (1988).

tions, the dire predictions simply never came to pass. Rather than decline relative to Japan in the 1990s, US technological capabilities rose, in large part because of the expansion of information technology–based industries in the United States.

Given that the growth rate of FDI into the United States actually fell during the late 1980s relative to a few years earlier, why did FDI become such a controversial issue? By the late 1980s, the extent of foreign ownership of US business activity had grown to the point that it was much more visible than it had been in previous years. It was less visible during the 1970s because, despite the fast growth of FDI into the United States, the percentage of US business activity under foreign control remained quite low. Also, many large foreign investors had come to be recognized by Americans, and even accepted as household names. Many Americans likely did not recognize such names as Shell, Lever Brothers, and Philips Norelco as those of foreign-owned firms. But during the late 1980s, a number of large foreign investors entered the United States for the first time, bringing with them names that were clearly foreign-sounding and not well known to the American public.[38] Thus not only did the United States witness an enormous expansion of activity under foreign control during the 1980s, before widespread recognition of the phenomenon of globalization, but also Americans became exposed to a multitude of new, unfamiliar corporate names. Moreover, Japanese economic growth considerably outpaced that of the United States, and Japan's strong economic performance stoked US anxieties that it might soon overtake the United States as the world's largest economy. These anxieties were soon to be allayed because during the 1990s the US economy would greatly outperform Japan's.

As table 1.1 indicates, as rapid as the pace of FDI in the United States has been since 1985, it was moderate compared with the growth rate of FDI in China. Between 1985 and 2003, the stock of FDI in China increased from $6.1 billion to over $500 billion, increasing at an annual compound rate of almost 19.1 percent. This turned China from one of the least globally connected economies into a global center for efficient manufacturing in less than 20 years. The rise of FDI in China has been mirrored by a high growth rate for the Chinese economy, which has hovered at close to 10 percent in recent years. FDI in China has been a major cause of the growth, albeit by no means the only factor (Graham and Wada 2001).

It is hard to overstate the magnitude of globalization, or the buzz that economic integration has created. Almost every day, it would seem, a new book appears on the topic of globalization, or related topics, such as the "offshoring" of production. A number of these books have been best-sellers (Bhagwati 2004, Friedman 2000, Friedman 2005, Stiglitz 2002, Wolf 2004). Table 1.2 summarizes additional data showing the extent and mag-

38. Many of these companies have now become household names; one thinks of Mitsubishi, Samsung, Siemens, and Sony. In 1989, these names were unknown to most Americans.

Table 1.2 Impact of multinationals on world product and trade, 1990 and 2003

	1990	2003
Gross product of foreign affiliates of multinational enterprises (billions of dollars)	1,454	3,706
Gross product of foreign affiliates of multinational enterprises (percent of world GDP)	6.4	10.2
World GDP at current prices (billions of dollars)	22,588	36,163
Exports of foreign affiliates of multinational enterprises (billions of dollars)	1,194	3,077
Exports of foreign affiliates of multinational enterprises (percent of total world exports)	28.0	33.3
World exports at current prices (billions of dollars)	4,260	9,228
World exports (percent of world GDP)	18.9	25.5

Sources: UNCTAD's *World Investment Report 2004,* table 1.3, and authors' calculations based on data from this table.

nitude of globalization. As discussed below, the gross product (value added) by foreign affiliates of multinational firms in 2003 accounted for more than 10 percent of total world GDP. The share of US GDP accounted for by domestic affiliates of foreign firms is about 4.5 percent, lower than it is in other highly industrialized countries. In 2003, the exports that these affiliates generated—again, not including exports by the parent firms—totaled about one-third of world exports, up from somewhat more than one-fourth of world exports in 1990. As the table shows, world exports themselves, another measure of globalization, accounted for about 25 percent of world GDP in 2003; this percentage stood under 20 percent in 1990.

It is against these measures that FDI in the United States, and other indications of the extent to which the US economy has become globalized, should be assessed. Table 1.3 indicates several such relevant measures for 2000 and 2003, the latter being the most recent year for which data are available.

A number of important points emerge from the data in table 1.3. Of the several measures of the extent of foreign ownership in the US economy, the most striking in size is the FDI stock ratio, which indicates the percentage of equity of all US nonfarm, nonfinancial corporations accounted for by inward FDI in the nonfinancial sector (FDI itself being a measure of equity). This measure is both high and growing: It was 15.7 percent in 2003, up from 15.1 percent in 2000 and 11.3 percent in 1992. These data reflect the fact that there have been substantial numbers of large foreign takeovers of US firms in the last 15 years, primarily by European firms.

Table 1.3 Extent of FDI in the United States, 2000 and 2003
(percent or billions of dollars)

Measure	2000	2003
a. FDI stock ratio (FDI stock, nonfinancial affiliates, as percent of net worth of all US nonfinancial corporations)	15.1	15.7
b. Share of foreign affiliate employment in total US employment	4.5	4.2
c. Share of foreign affiliate employment in US manufacturing employment	12.6	12.5
d. Share of foreign affiliates of US GDP	4.5	4.1
e. Share of foreign affiliates of US manufacturing GDP	17.4	19.1
Memorandum:		
f. FDI stock, nonfinancial affiliates, at year end	1,025.6	1,196.5
g. Total FDI stock, at year end	1,256.9	1,526.3
h. Net worth of all US nonfinancial corporations, historical cost basis	6,785.7	7,619.5
i. US GDP	9,817.0	11,734.4
j. US manufacturing GDP	1,238.5	1,190.2
k. Value added by all foreign-owned affiliates in the United States	447.3	486.3
l. Value added by foreign-owned affiliates in US manufacturing	215.7	227.7

Sources: Items a–e, authors' calculations based on data included as memo items; *Memorandum* items: (f) Bureau of Economic Analysis, Foreign Direct Investment in the United States, Balance of Payments and International Investment Position Data, available at www.bea.gov; (g) same as item f; (h) US Federal Reserve, Balance Sheets for the US Economy, available at www.federal reserve. gov; (i) Bureau of Economic Analysis, National Income and Product Accounts, available at www.bea.gov; (j) same as item i; (k) Bureau of Economic Analysis, Foreign Direct Investment in the United States, Value Added by US Affiliates of Foreign Investors, available at www.bea.gov; (l) same as item k.

Simultaneously, US firms have acquired an even larger number of foreign firms, including within Europe.

This growing level of merger and acquisition activity is mirrored in the share of manufacturing employment in the United States accounted for by foreign-owned corporations. As table 1.3 indicates, this share has been stable in recent years, at about 12.5 percent. The employment share is lower than the share of foreign firms in US manufacturing GDP—about 19 percent in 2003—because, as chapter 3 discusses in greater detail, foreign investment in the US manufacturing sector is more concentrated in subsectors that are relatively capital-intensive than in those that are relatively labor-intensive.

Table 1.4 Value added by majority-owned affiliates of foreign investors operating in the United States in major manufacturing subsectors and by entire domestic US subsector, 2003

Sector or subsector	Value added by majority-owned affiliates of foreign investors (billions of dollars)	Value added by entire domestic subsector (billions of dollars)	Value added by majority-owned affiliates (percent of value added by subsector)
All manufacturing	227.68	1,369.23	16.6
Food, beverages, and tobacco processing	16.26	170.62	9.5
Paper	4.24	46.44	9.1
Printing and related	4.62	44.55	10.4
Chemicals	49.95	174.36	28.6
Plastics and rubber	9.00	65.53	13.7
Nonmetallic minerals	14.73	46.16	31.9
Primary metals	4.50	38.67	11.6
Fabricated metals	7.83	109.10	7.2
Machinery	19.87	95.09	20.9
Computer and electronic products	22.85	125.64	18.2
Electrical equipment	5.51	48.58	11.3
Motor vehicles	31.78	129.92	24.5
Other transport equipment	3.41	64.98	5.2
All other	34.13	212.59	16.1

Source: Bureau of Economic Analysis, Foreign Direct Investment in the United States, Value Added by US Affiliates of Foreign Investors; available at www.bea.gov.

Despite the low double-digit percentage shares of foreign investment in the US nonfinancial corporate sector, and in the sector's manufacturing portion, the total share of foreign-controlled firms in the US economy, as measured by share of total GDP, was 4.1 percent in 2003—much lower than in the manufacturing or nonfinancial corporate sectors. This demonstrates that FDI in the United States tends to be made by large multinational companies and is heavily concentrated in manufacturing. The overall best measure of the total extent of foreign control over the US economy is the share of foreign-controlled firms in US GDP. Even today, notwithstanding growing FDI in the United States, foreign control of the economy is rather modest and significantly lower than the corresponding measure for the world as a whole.

In manufacturing, however, foreign investment is significant, as table 1.4 shows. It portrays foreign-owned firms' contribution in the manufacturing sector to US GDP, the value added by majority-owned affiliates of

foreign investors in the United States by major manufacturing subsector, the value added by the entire domestic subsector, and the percentage of the latter contributed by the former. Note that 16.6 percent of value added in the entire manufacturing sector was generated by foreign-owned firms. However, there is a great deal of variance in the same percentage by subsector. In nonmetallic minerals, majority-owned affiliates of foreign investors contribute almost 32 percent of value added; most of this is glassmaking as opposed to mining. Foreign investors contribute almost 29 percent of value added in chemicals, which includes pharmaceuticals. But in other sectors—food, beverages, tobacco, paper, fabricated metals, and transport equipment other than motor vehicles—the share of value added for foreign-owned firms is under 10 percent.

The Impetus for This Book

Active debate continues over the role of foreign investment in the United States and its effect on US national security, despite the relatively low level of foreign investment in the United States, and notwithstanding strong empirical and anecdotal evidence that foreign investment benefits the US economy, even in industries considered sensitive to national security.

This chapter has emphasized that security-related concerns over FDI in the United States have quite a long history. However, this history has evolved over time, so that today's concerns are often quite different from those that arose, say, during World War I. For example, during the pre-World War I years, most FDI in the United States was "greenfield"—i.e., the foreign investor created US operations from scratch. Given this nature of FDI, the main concern then was that foreign-controlled operations might dominate US markets for strategic products and services so that critical technologies associated with these products and services would remain under foreign control. This was a relevant concern at a time when, in many sectors (e.g., chemicals in 1917), foreign firms indeed held technologies that were not available to their US-owned competitors. But in 1988, when security-related concerns over FDI again arose, US-owned firms were often (albeit not always) at the leading edge of the relevant technologies. Moreover, the majority of "new" FDI in the United States was then being generated by foreign takeovers of extant US firms (Graham and Krugman 1995). The national security concern thus was somewhat different than it had been in 1917. In particular, the concern became that, if foreign firms bought US-owned firms, then the foreign firms would come into possession of sensitive technologies not previously available to them, and this possession might create security risks for the United States. This concern led to the passage of Exon-Florio, which gives the president the power to block foreign takeovers of US firms for secu-

rity reasons but not the power to intervene in foreign-controlled operations created by green field investment in the United States. Thus, one motivation for this book is to examine whether new circumstances in 2006 that have led to new security-related concerns over FDI in the United States require measures beyond those currently embodied in Exon-Florio or, alternatively, major changes in the existing law.

All of the issues covered in this study must be examined in the context of the current international economic position of the United States. The United States is now more dependent on foreign investment than ever, because US savings, net of the drain on these savings created by public-sector deficits, are insufficient to finance domestic investment. As a consequence, the United States must import savings from abroad, generating net capital inflows, or net foreign investment, into the United States. This deficit for 2005 was slightly less than $800 billion, implying that the United States needed to import in excess of $2 billion per day during 2005 to close the gap between domestic investment and domestic saving. Moreover, the deficit is expected to grow in coming years. Chapter 3 discusses this in greater detail, but generally the data suggest that the United States will require even more foreign investment, including acquisitions of US companies. In addition, and similar to the experience of the late 1980s, before the US current account deficit is closed significantly in the next three to five years, US assets could become much cheaper, and therefore more attractive, to foreign investors. As a result, there is likely to be a substantial increase in foreign investment in the United States, and an accompanying increase in the number and complexity of reviews by the Committee on Foreign Investment in the United States (CFIUS).

As this chapter demonstrates, the United States has tended to impose restrictions on FDI in times of conflict or insecurity. The TWEA and numerous sector-specific foreign ownership restrictions were adopted during and after World War I, and the United States seized the assets of foreign-owned firms operating in the United States during both world wars. Uncertainty about Japan and two high-profile transactions in the late 1980s—Sir James Goldsmith's attempt to buy Goodyear Tire and Rubber, and Fujitsu's attempt to acquire 80 percent of Fairchild—were the straws that broke the camel's back on investment issues, leading to the adoption of the Exon-Florio Amendment in the 1988 Omnibus Trade and Competitiveness Act. Three years later, in the wake of the controversial and ultimately failed attempt by the French government-owned firm Thomson to acquire LTV, a defense contractor, Congress passed the Byrd Amendment, requiring heightened scrutiny for acquisitions of US firms by foreign government-owned or government-controlled firms.

At the time of this writing, the CFIUS process was under fire on Capitol Hill. Focus on CFIUS intensified in the wake of the sale of IBM's personal computer division to Lenovo, a Chinese company, and reached a

feverish pitch during congressional debate over the proposed CNOOC-Unocal transaction and Dubai Ports World–P&O acquisition. In addition, the Government Accountability Office (GAO), the congressional audit and oversight organization, released a highly critical report on CFIUS in late September 2005. That report, among other things, argued that

- the Treasury Department and certain other agencies take too narrow a view of the definition of national security;
- CFIUS, with Treasury as the lead, is reluctant to initiate investigations under Exon-Florio because of a perception that they would lead to a chill in inward investment;
- the 30-day timetable for reviewing foreign acquisitions of US companies does not afford national security agencies adequate time to fully assess the potential national security implications of a particular transaction; and
- CFIUS agencies disagree as to what criteria to use when deciding whether to pursue an investigation (second-phase review) under CFIUS, with the Department of Defense and "other officials" arguing for broader criteria that would allow for more investigations (US GAO 2005).

The GAO report was considered at two Senate Banking Committee hearings chaired by Senator Richard Shelby (R-AL) in October 2005.[39] Around that time, Senators Shelby and James Inhofe (R-OK) introduced two distinct amendments that would substantially toughen CFIUS reviews. The Inhofe Amendment would

- expand the definition of national security to include US national economic and energy security;
- give Congress the power to block any transaction investigated and approved by CFIUS, by joint resolution of the two houses;
- rename CFIUS as the Committee on Foreign Acquisitions Affecting National Security; and
- transfer chairmanship of the process from the US Treasury to the Department of Defense.[40]

39. One of the authors of this book testified at the second hearing. See testimony of David Marchick, *Hearings on the Implementation of the Exon-Florio Amendment and the Committee on Foreign Investment in the United States*, before the Senate Committee on Banking, Housing and Urban Affairs, October 20, 2005.

40. Inhofe Amendment, SA 1311 to S 1042, 109th Congress (2005).

The Shelby Amendment would

- extend the review period between notification of a transaction to CFIUS and a decision on whether to proceed to investigation to 60 days, up from 30;
- give Congress the power to request CFIUS investigations into acquisitions by foreign government–controlled entities that could affect US national security;
- require CFIUS deliberations to account for "the long-term projections of United States requirements for sources of energy and other critical resources and materials"; and
- allow Congress to block any transaction investigated and approved by CFIUS by joint resolution of the two houses.[41]

Senators Shelby and Inhofe are not alone. In the midst of the Dubai Ports World–P&O controversy, more than 20 bills were introduced by members of Congress to either block the Dubai Ports World acquisition, prohibit foreign ownership of key port operations, or amend Exon-Florio.[42] Given all of this debate and legislative activity, the authors and C. Fred Bergsten, director of the Institute for International Economics, thought a comprehensive discussion of the Exon-Florio Amendment, and the national security implications of foreign investment, particularly with respect to China, would be timely.

We have organized the book as follows. Chapter 2 discusses the Exon-Florio process for reviewing foreign takeovers of US firms for national security reasons in some detail, including the legislative history of the process, experience to date, and how Exon-Florio reviews have changed following the terrorist attacks of September 11, 2001. Chapter 3 examines the economic and political impact of FDI on the United States, recapping and updating the discussion in chapters 3 and 4 of Graham and Krugman (1994), which dealt with these subjects in considerable detail. Chapter 4 analyzes issues related to FDI in the United States posed by the rise of China as both an economic and geopolitical power, detailing the ways in which current issues regarding China are both similar to and different from those

41. Shelby Amendment, SA 1467 to S 1042, 109th Congress (2005).

42. *Foreign Investment Security Improvement Act of 2006,* S 2333, 109th Congress, 2nd sess. (2006); *Port Security Act of 2006,* S 2334, 109th Congress, 2nd sess. (2006); *Smart and Secure Foreign Investment Act,* S 2335, 109th Congress, 2nd sess. (2006); *Safe and Accountable Foreign Enterprises Proving Other Requirements to Secure (SAFE PORTS) Act,* HR 4814, 109th Congress, 2nd sess. (2006); *Port Operations Require Tough Security (PORTS),* HR 4820, 109th Congress, 2nd sess. (2006); HR 4839, 109th Congress, 2nd sess. (2006).

raised 10 to 15 years ago regarding Japan. Chapter 5 discusses the increasing politicization of the Exon-Florio process, and includes several case studies in which domestic firms sought to use the Exon-Florio process for commercial gain. Finally, chapter 6 discusses policy issues and, in particular, whether and how the Exon-Florio process should be amended in light of current events.