

Chapter 8

Strengthening the United States' Defense Industrial Base

The United States' national security is strengthened by preeminent capabilities across multiple spheres. Not only does the United States have the world's most powerful and capable military, but it also possesses the most advanced and innovative technology sector, providing its armed forces with a qualitative edge in its competencies and capabilities (White House 2025a). At the same time, as Secretary of War Pete Hegseth (2025a, 8) testified before the House Armed Services Committee in June 2025, "while the [defense industrial base, DIB] remains technologically advanced and essential to our warfighting capabilities, decades of under-investment have left it strained, overly consolidated, and at risk of not keeping pace with modern and near-peer threats, especially in a protracted conflict." Moreover, recent advances in low-cost drones, missiles, and similar technologies could change how nation-states are involved in conflicts and how they defend and deter aggression (White House 2025a). Responding to the moment and further enhancing the U.S. military's dominance requires a revival of the United States' DIB.

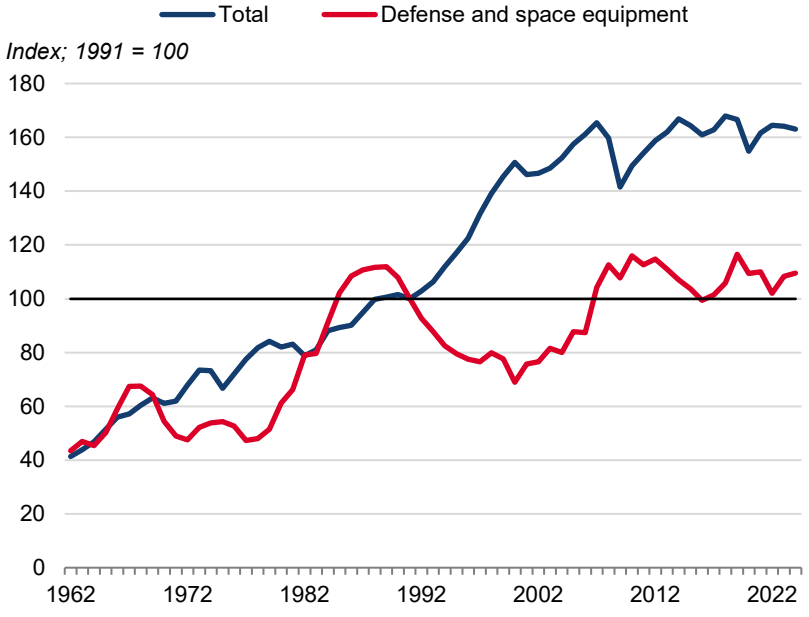
Reviving the DIB requires increasing the United States' overall industrial capacity, which has grown at a slower rate than the rest of the economy in recent decades. Manufacturing accounted for just 10 percent of U.S. gross domestic product (GDP) in 2024, down from 16 percent in 1997 (the series starts in 1997; Bureau of Economic Analysis 2026). A considerable share of the United States' industrial decline has been concentrated in the defense sector; defense-related employment fell by 2.1 million between 1985 and 2021 (Nicastro 2024), equivalent to about 40 percent of total manufacturing job losses over that period. Since

AUTHENTICATED U.S. GOVERNMENT INFORMATION GPO

1991, U.S. defense and space industrial production has grown only modestly, on net, even as economy-wide industrial production expanded 60 percent (figure 8-1). These trends, in part, reflect the substantial decline in Federal defense procurement and research spending since the end of the Cold War. In addition, the acceleration of overseas outsourcing during the 1990s further affected domestic industrial capacity and growth.

The DIB has also been hindered by structural factors, such as burdensome regulations and processes, that may deter business' participation and investments, as well as noncompetitive practices by adversarial state actors that discourage production in the United States (Department of War; DoW 2023a).[1] The erosion of domestic manufacturing capacity and overreliance on concentrated

Figure 8-1. U.S. Industrial Production: Total, Defense and Space



Sources: Federal Reserve Board of Governors; CEA calculations.

[1] In addition to the commercial DIB, the United States also has an Organic Industrial Base, comprising a core set of government-owned facilities that support manufacturing, logistics capabilities, and surge capabilities. While some of the issues facing the commercial DIB also apply to the Organic Industrial Base, this chapter predominately focuses on the economics affecting commercial participants.

foreign supply chains, particularly for critical materials and technologies, directly threaten the United States' security and ability to prevail in a potential high-intensity, long-term conflict (White House 2025a; Jones 2023). Strengthening the DIB is key to reversing these trends and fostering peace through strength. Moreover, expanding the DIB will help revitalize the United States' industrial sector and economic competitiveness, and spur innovation and growth.

This chapter starts with an overview of the current state of the U.S. DIB. Then it discusses benefits arising from a robust DIB and addresses demand- and supply-related barriers constraining the DIB.

The U.S. DIB in International Context

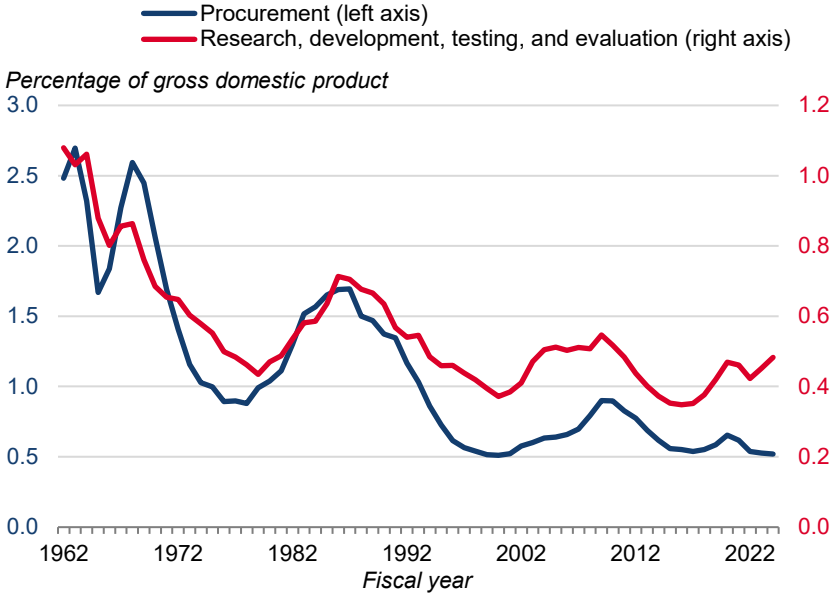
A common metric of a government's defense burden is the ratio of its total military expenditures to GDP. The ratio of defense spending to GDP is a critical target guideline for the North Atlantic Treaty Organization (NATO 2025a). Although the United States not only continues to meet its NATO obligations but also exceed the guideline (NATO 2025b), U.S. defense spending as a share of GDP has fallen by roughly half since the 1980s. Federal spending on the DIB has been particularly hard-hit, with funding for procurement and for research, development, testing, and evaluation (RDT&E) both being persistently low relative to Cold War levels (figure 8-2).

Procurement and RDT&E each play key roles for defense; procurement supports the military's current capacity, while RDT&E advances future defense capabilities. Shortfalls in these investments compound over time, diminishing the deployable stock of defense capital and undermining future readiness, and thus increasing risk to national security. Even as higher defense spending does little to mitigate conflict risk in the short term, some sustained investment can reduce the likelihood of conflict over longer horizons by raising the expected costs of aggression (Benmelech and Monteiro 2025).

Additional spending is especially critical now, as recent technological advances such as low-cost drones require a more expansive, innovative set of capabilities to secure the national defense (White House 2025a). Particularly as these capabilities differ substantively from those the U.S. military needed in the years immediately after the end of the Cold War, fulfilling them requires new investments in defense procurement and RDT&E.

International comparisons also help to contextualize the government's investments in the DIB (box 8-1). A particularly salient benchmark is China, the

Figure 8-2. Federal Spending on Defense Procurement and Research-Related Activity



Sources: Department of War; Office of Management and Budget; CEA calculations.

United States' pacing challenge militarily (Hegseth 2025a). Over the decade 2009–19, the United States' share of global defense spending fell about 9 percentage points to 38 percent, while China's share increased by about 6 percentage points to 14 percent, according to official data (DoW 2021). However, official measures from China may mislead; DoW (2024) estimates that China's true defense spending is 40–90 percent greater than its officially reported level.

Moreover, lower prices for goods and labor in China mean that $1 of Chinese spending on its DIB has greater purchasing power than $1 of DoW spending on the U.S. DIB (Eaglen 2024). China's defense procurement system likely also has fewer acquisition limitations than the United States', which seeks to harness market forces. Eaglen (2024) estimates that such economic factors could boost China's effective defense procurement by about 60 percent. Other metrics also suggest closer parity between recent U.S. and Chinese investments and industrial capacity. Weinbaum and colleagues (2022) estimate that, on a quality-adjusted basis, the United States received fewer than 400 military patents in 2019, about 100 less than in 2015; in contrast, China received more than 500 patents in 2019, an increase of about 200 from 2015. In 2021, 7 of the 15 largest defense-related firms globally by revenue were Chinese state-owned enterprises, matching the number of private U.S.-based firms (RAND Corporation 2022). These trends underscore the need for the United States to

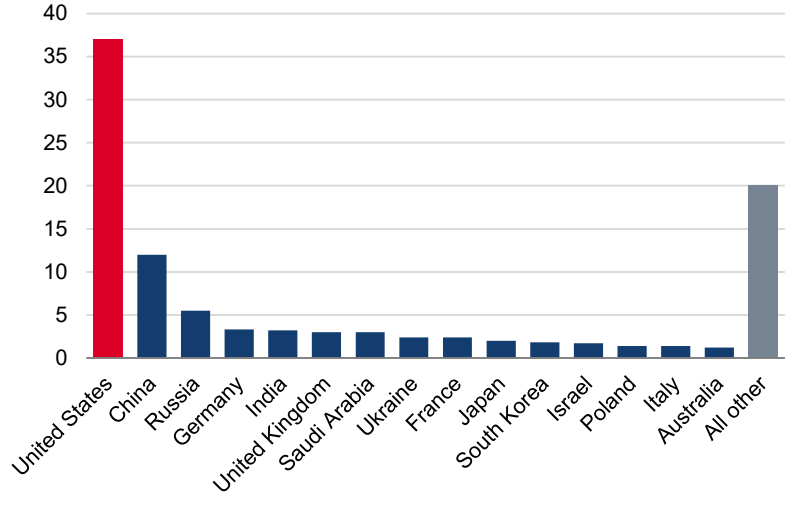
Box 8-1. Defense Spending by the United States and Its Allies

In 2024, the United States spent as much on defense as the next nine-biggest spenders combined, based on official data sources (Liang et al. 2025). Using the 90 percent upper bound of DoW's (2024) estimates of how much China's official defense data understate its true level of spending, the United States' defense spending is equivalent to 78 percent of the total spending across the next-nine largest spenders. Figure 8-i shows the distribution of defense spending by country in 2024, based on official data sources.

The United States' defense is also bolstered by the spending of its Allies and partners; Liang and colleagues (2025) estimate that the United States' NATO Allies collectively outspent China and Russia combined in 2024, based on official data sources. The United States' NATO Allies have considerably scaled up their defense spending in recent years, reaching an estimated 2.0 percent of their GDP in 2024, up from 1.4 percent in 2014. In real dollar terms, the United States' NATO Allies' spending grew 5.0 percent annually over the past decade, well above the United States' 0.4 percent growth rate. Nonetheless,

Figure 8-i. Distribution of Military Spending in 2024 by Country

Percentage of global spending



Sources: Liang et al. (2025); CEA calculations.

the United States still spends considerably more than its NATO Allies both in dollars—1.7 times all its NATO Allies' spending in 2024—and as a share of GDP—3.2 percent versus 2.0 percent in 2024 (NATO 2025b).

Similarly, while the United States' NATO Allies' spending on equipment (inclusive of research and development, R&D) grew 10 percent annually over the past decade, in inflation-adjusted dollars, the United States still accounted for 64 percent of total NATO equipment spending in 2024 (NATO 2025b). In 2025, NATO members committed to further increase their defense spending so that, by 2035, it would reach at least 3.5 percent of GDP, with an additional 1.5 percent of GDP funding for critical infrastructure, the DIB, and related components, bringing total defense-related spending to 5 percent of GDP (NATO 2025c).

In addition to NATO, the United States has 19 other major Allies, including Australia, Israel, Japan, and South Korea (U.S. Department of State 2025). In 2024, these 4 particular U.S. Allies were each top-15 global spenders on defense, together accounting for 7 percent of global defense spending, and each has grown its spending at a faster rate than the United States over the past decade, in percentage terms (Liang et al. 2025). The United States and its Allies are also expanding cooperation to strengthen their DIBs through actions such as collaborative defense manufacturing (U.S. Army 2025), co-development and co-sustainment of critical supply chains (White House 2025b), ship maintenance partnerships (U.S. Navy 2025a), and security partnerships such as AUKUS (DoW n.d.).

As Secretary Hegseth has underscored, the multitude of threats around the world makes it critical for the United States and its Allies to all step up and contribute to their collective defense to credibly deter aggression (U.S. Mission to NATO 2025). To this end, the United States advocates that all its Allies and partners meet the global standards of spending 3.5 percent of GDP on core military purposes and another 1.5 percent on security-related objectives set forth in the Hague Commitment (DoW 2026). Recent actions taken by the United States and its Allies are key steps toward this goal.

expand and strengthen its DIB to ensure that it can continue to meet China's pacing challenge.

The Domestic Context of the U.S. DIB Since the Cold War

Another key feature of the U.S. defense sector is its consolidation since the end of the Cold War: it is currently both highly concentrated (Nicastro 2024) and economically isolated (Allen and Berenson 2024).

Concentration

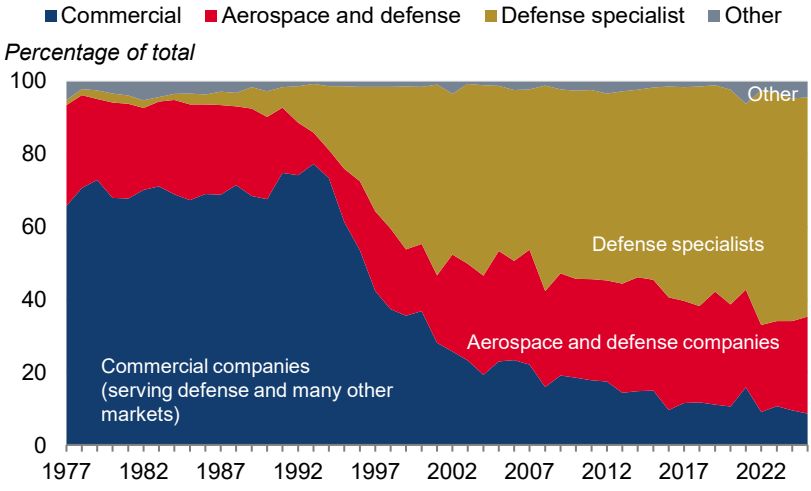
After the "Last Supper" in 1993, when the then–Deputy Secretary of Defense told executives of major DIB firms that he expected "half of the companies represented would not exist in five years" (Watts 2008, 31), the number of aerospace and defense prime contractors fell from more than 50 in the 1990s to 5 in the early 2000s, driven by consolidation (Commission on the Future of the United States Aerospace Industry 2002). A consolidated DIB had a certain logic after the collapse of the Soviet Union, when the United States faced no near-peer military adversary and domestic industry was robust enough to scale quickly to meet heightened defense needs during wartime (Council of Economic Advisers 1991).[2] Yet, after the terrorist attacks of September 11, 2001, when the United States launched Operation Enduring Freedom in Afghanistan (2001) and Operation Iraqi Freedom (2003), consolidation did not reverse; from the "Last Supper" through at least 2007, no major nondefense firm entered the DIB (Watts 2008).

Isolation

In addition to the defense sector being highly concentrated, its constituent firms are somewhat isolated, having relatively limited engagement with the rest of the economy (figure 8-3). Today, 60 percent of DoW's spending on major weapon systems goes to pure defense specialists and, when aerospace and defense companies are excluded, just 9 percent of its spending goes to commercial firms that do not specialize in defense (Allen and Berenson 2024). Before the "Last Supper," commercial firms that engaged in both defense and civilian production received roughly two-thirds of DoW's spending on major weapon systems, while pure defense specialists received about 5 percent (Allen and Berenson 2024).

[2] Even as the Council of Economic Advisers (1991) noted the economy's ability to readily adjust to meet defense needs in the past, it emphasized the importance of supporting the DIB in order to maintain production capacity for key equipment and sustaining investment in research in defense technologies.

Figure 8-3. Major Weapon Systems Acquisition Budget: Share by Industrial Base Category



Sources: Bollinger and Berenson, based on DoW's *Annual Report to Congress and Program Acquisition Cost by Weapon System*, fiscal years 1977 through 2025; CEA calculations.
Note: Figure 1 from Allen and Berenson (2024). Used by permission.

Reduced Competitiveness Resulting from DIB Consolidation and Isolation

Industry consolidation has presented the ultimate consumers—DoW, the U.S. government, and the American people, as well as U.S. Allies and partners—with potential economic benefits. However, the potential upsides are accompanied by significant downsides in the emerging strategic environment: decreasing competitiveness and the resulting increased costs of defense articles. When production exhibits economies of scale, concentrating activity across fewer firms can improve efficiency and lower unit costs. However, consolidation also increases the market power of the remaining established firms, inducing them to engage in oligopolistic tendencies, which may allow firms to increase their prices due to the lack of competition. Only half of DoW contract dollars are currently awarded in competitive bids (DoW 2022), and many open contracts have only one bidder (Carril and Duggan 2020). High fixed costs and cumbersome processes to engage with DoW create substantive barriers to entry (DoW 2023a). The dearth of viable competition reduces the market discipline imposed on established DIB firms, increasing the likelihood of elevated mark-ups in sales to DoW and impeding DoW's ability to prevent cost overruns and shipment delays. Additionally, competitive markets incentivize innovation and efficiency

gains, and can also help facilitate knowledge transfer across businesses. Beyond the aforementioned horizontal integration after the "Last Supper," the DIB has more recently experienced an increase in vertical integration, which can limit downstream firms' access to key inputs and raise costs for competitors, thus increasing overall costs for final consumers (DoW 2022).

The consequences of the DIB's lack of competitiveness have been prominently illustrated by how DIB firms have allocated their earnings since 2000, increasingly to share buybacks and dividends instead of internal investments (i.e., R&D, for new products and/or production capacity; DoW 2023b). One explanation for why a firm engages in share buybacks is that it believes that it does not have opportunities for internal investment that would yield greater returns to shareholders. Between the 2000s and 2010s, the balance of DIB earnings allocations made a dramatic reversal: dividends and share buybacks, which rose from 3.7 to 6.4 percent of earnings, overtook internal investment, which fell from 6.2 to 5.9 percent of revenues (DoW 2023b). To help spur the revitalization of the DIB, Executive Order 14372 prohibits "major defense contractors … [from] conduct[ing] stock buy-backs or issu[ing] dividends at the expense of accelerated procurement and increased production capacity" (National Archives 2026). The Executive Order's focus on major contractors aligns with evidence that the rising tendency to return funds to shareholders appears to be particularly pronounced across large defense prime contractors, with smaller DIB firms prioritizing growth (McGinn, Grinberg, and Everhart 2024). The diminished scope and competitiveness of the DIB means that strengthening it requires not just increased federal funding but also market reforms to encourage entry, growth, and competition.

Benefits of Enhancing the Defense Industrial Base

National defense is a fundamental example of a true public good (in the economic sense), due to its nonexcludable and nonrivalrous nature (Stiglitz 1999); each individual shares in the benefits of safety and security, from which it is impossible to exclude them. As an integral component to national defense, an innovative and robust DIB itself is a true public good. Beyond supporting national defense, a thriving DIB also yields substantial positive externalities for the United States by spurring domestic innovation and economic growth.

R&D Spillover from DIB Investment

Domestically, investments in the DIB can have pronounced positive externalities, as has been extensively documented for federal defense spending on RDT&E. Antolin-Diaz and Surico (2025) find that increases in the share of public spending in RDT&E can spur sustained increases in private investment and innovation over the medium term. Additionally, Moretti, Steinwender,

and Van Reenen (2025) find that government-led, defense-related R&D can increase both domestic and international private R&D. Given that private R&D itself yields positive externalities by generating technology spillovers (Bloom, Schankerman, and Van Reenen 2013), defense R&D spending can yield sustained returns by boosting long-run productivity and GDP. For example, Federal investments in applied R&D during World War II boosted employment and high-technology entrepreneurship for decades (Gross and Sampat 2023).

Many of the positive externalities from defense R&D stem from dual-use technologies, which have commercial as well as military applications. Perhaps the most prominent example of a dual-use technology affecting modern life is the Internet, originally developed by DoW's Defense Advanced Research Projects Agency (DARPA). DARPA-funded technologies abound in everyday life, ranging from advanced metals to satellites and the Global Positioning System (GPS) to high-definition televisions (HD TVs) (DARPA n.d.). DoW also facilitates cutting-edge technologies' progression from the prototype to mass-production stages; its price-inelastic demand for transistors and integrated circuits in the 1950s and 1960s, for example, helped manufacturers improve production methods and scale up to efficient levels of output (Howell et al. 2025, citing Mowery 2012). Although the complementarities between military and civilian uses are sometimes self-evident in advance, this is not always the case. The Manhattan Project's focus on nuclear weapons, for example, paved the way for civilian nuclear energy. The fact that subsequent applications cannot always be anticipated supports a broad-based increase in R&D funding for the DIB. DoW has historically played an outsized role in funding risky, capital-intensive ventures with potential military uses (Howell et al. 2025), and the nexus of digitization, artificial intelligence, and novel manufacturing processes offers numerous opportunities for DoW to further advance U.S. technological innovation.

Addressing Demand-Side Barriers to DIB Enhancement

The DIB faces unique economic challenges, because it effectively has a single source of demand, by which it is highly regulated (Rogerson 1994).[3] DIB regulation is critical to maintain national security. In practice, regulatory actions that enhance security can also generate economic frictions and barriers to entry that curtail DIB supply. For example, requiring key workers to hold security clearances improves operational security, yet constrains DIB participants' available labor market. While national security imperatives mean that the most economically efficient outcome is not necessarily socially optimal, opportunities still exist to improve economic conditions for the DIB in ways that can also enhance

[3] While the DIB can also sell abroad, those sales are regulated by the Federal government (Defense Security Cooperation Agency n.d.). Such regulations mean that, in practice, the Federal government is effectively the DIB's sole source of demand.

national security. The next section focuses on demand-side considerations; supply-side ones are addressed in the subsequent section.

Demand-Side Barriers: Internal and External Uncertainty

Uncertainty is an inherent characteristic of the DIB, as has been recognized since at least the 1960s; the DIB is subject to both internal uncertainty due to risks in developing and producing new technologies, and to external uncertainty from changes in the need or funding available for those technologies (Rogerson 1994, citing Peck and Scherer 1962 and Scherer 1964). Although both types of uncertainty can also affect commercial industries, the DIB is more exposed for several reasons, which largely stem from the Federal government's monopsony—its role as single largest buyer and end consumer—over the defense sector. Internal uncertainty is heightened because R&D efforts, even if successful, may not yield sales. Some defense orders are so small or complicated to produce that single-sourcing is the most economically effective means of procurement (Rogerson 1994). It is also often the case that defense products do not have commercial applications and therefore lack a viable market, even if they are high-quality.

The DIB's external uncertainty is also increased because, in contrast to many commercial customers, demand is largely determined by the annual appropriations process, and DoW has historically only had a limited ability to engage in multiyear procurement (O'Rourke 2025), leaving many DIB markets without a reliable signal of future demand. DoW's demand signal has been particularly noisy since the 2008 global financial crisis, stemming from fluctuations in DoW's budget and the increasing reliance of Congress on continuing resolutions rather than new appropriations legislation to fund DoW (2018). Additionally, in many instances, DIB goods are also exchanged under single-source, single-customer transactions that have no meaningful market price (Rogerson 1994), limiting DIB suppliers' ability to make adjustments to stabilize market activity. In markets with multiple customers, aggregate demand tends to be more stable than individual demand, as other customers' purchases can intertemporally smooth out volatility from those of any given customer.

External uncertainty has material implications for the DIB by influencing participants' incentive structures. For example, in recent decades, DoW's spending has shifted toward maintaining current systems and incrementally modifying legacy designs, rather than developing new projects, a trend that was at least in part spurred by budget uncertainties (DoW 2018). Maintenance and incremental modifications can help forestall the high costs of new programs and have shorter schedules, yielding more reliable and nearer-term revenue streams for firms. However, an overreliance on legacy projects can erode future capacity. Uncertainty about future demand reduces DIB firms' incentives to engage in their own R&D and introduce new products. Declines in the relative frequency of forward patent citations suggest a decline in the influence and

effectiveness of DIB R&D.[4] Prime defense contractors' patents are now less influential than those of other firms—as reflected in their tendency to be cited in subsequent patents—whereas, in the Cold War era, their patents were more influential. Across forward citations by firms other than prime contractors, the relative influence of prime contractors' patents is now roughly half its level at the "Last Supper" (Howell et al. 2025). The prolonged reduction in new DoW-funded projects has also left the current generation of DIB employees without adequate experience in bringing novel technologies through the full life cycle from conception to full-scale production (DoW 2018).[5] The DIB's increased isolation (Allen and Berenson 2024) means that DIB employees also have fewer opportunities to gain such experience from commercial ventures.

Solution to Demand-Side Barriers

Increasing the domestic demand signal. The Federal government has taken steps to address issues stemming from uncertainty about the level and predictability of DIB demand. In recent years, Congress has expanded DoW's ability to use multiyear procurement contracts, including in 2025 (U.S. Congress 2023, 2025), enabling DoW to provide more stable demand signals to DIB contractors. DoW is currently working on strengthening demand signals for munitions programs, which historically have been particularly vulnerable to funding disruptions, and plans to build on its success across a broader range of programs (DoW 2025a). Additionally, the Trump Administration has made rebuilding America's military and revitalizing the DIB one of its top fiscal priorities (Office of Management and Budget 2025); between the One Big Beautiful Bill Act (OBBBA) and the Fiscal Year 2026 National Defense Authorization Act (NDAA), spending for procurement, RDT&E, and DIB expansion is up more than a third from the Fiscal Year 2025 NDAA.

Increasing the demand signal from Allies and partners. Although the U.S. DIB predominately serves DoW, it is also a critical enabler for Allies and partners. Foreign demand for DIB products has been a focal point of President Trump's reciprocal trade agreements, which have secured guarantees on substantial increases in orders from partners such as the European Union and Japan (White House 2025c, 2025d). Additionally, as NATO Secretary General Mark Rutte noted, President Trump's efforts were pivotal to securing NATO members' agreement to increase defense-related spending to 5 percent of GDP by

[4] A decline in R&D effectiveness could stem from either a fall in the level of activity funded by firms or a decline in the success rate of R&D projects. Particularly in concert with the decline in Federal funding for defense R&D (figure 8-2), the end result of less influential and innovative technologies poses risks to future military capacity.

[5] In tandem with the business-oriented actions discussed subsequently in this chapter, chapter 9 of this *Report* discusses initiatives taken by the Trump Administration and proposes additional solutions to ensure that American workers have the skills they need to help advance and expand the DIB

2035 (NATO 2025a). The Trump Administration is also working on cutting red tape to further enable foreign military sales.[6] Executive Order 14268 recognizes the role of these sales to "simultaneously strengthen the security capabilities of our allies and invigorate our own defense industrial base" and calls for the Federal government to take multiple actions to streamline and facilitate foreign military sales (National Archives 2025a, 15631). Allies and partners can complement DoW as a customer, creating a more robust market with higher, more sustained demand for the DIB.

Addressing Supply-Side Barriers to DIB Enhancement

Primarily as the dominant market custodian and market regulator, the Federal government can substantially influence DIB supply by managing barriers to entry and market frictions that influence firms' ability and willingness to participate. The United States benefits from having a DIB founded in private enterprise, rather than state-owned firms, such as through increased competition and expanded access to the innovations generated in commercial, free markets relative to what would be possible in a command-and-control system. In contrast, state-dominated DIBs can be beset by issues such as corruption and the absence of market discipline, which can exacerbate cost and time overruns and quality deficiencies (Weinbaum et al. 2022).

Supply-Side Barriers

Monopsony, incentives, and the hold-up problem. However, because the U.S. DIB consists primarily of private businesses, it faces principal–agent problems that arise when the incentives of the principal (e.g., DoW as the single largest customer, regulator, and contract-enforcer) do not align with those of the agent (e.g., a firm as a supplier). Principal–agent problems are prevalent across economies but are further compounded in the DIB by the Federal government's monopsony. For example, many defense contracts take time to fulfill, incur substantial fixed and opportunity costs, and are for products with few, if any, alternate customers to DoW (Rogerson 1994). These factors exacerbate time-inconsistency problems, as bargaining power changes over the duration of the contract; once the contractor has invested resources, DoW could potentially seek to renegotiate contract terms (e.g., a lower sales price) or threaten to walk away from the contract altogether if the contractor does not acquiesce, which could leave the contractor without any revenue from the venture. The risk of future renegotiations can deter firms from initially investing resources or

[6] Foreign military sales are purchases in which DoW provides administrative services and can coordinate across partners' orders; partners can also contract directly with DIB firms for certain goods and services (Defense Security Cooperation Agency n.d.).

participating in the market, creating a "hold-up problem" for both DoW and its prospective suppliers (Rogerson 1994, citing Williamson 1985).

Information asymmetries. The DIB's hold-up problem is further compounded by information asymmetries; particularly for high-risk and complicated projects, it can be challenging for DoW to know whether a failure stemmed from bad luck or shirking (e.g., an underinvestment of effort or resources by a contractor). Such information asymmetries make it challenging to fully incentivize investments, leading to suboptimal outcomes (Tirole 1986). Many of the actions DoW takes, from funding RDT&E to utilizing cost-based contracts, seek to bolster its reputation for reliability and mitigate principal–agent problems of regulation to align incentives (Rogerson 1994).

Even with DoW's efforts to overcome the hold-up problem, the defense procurement process generates frictions that deter supplier entry. DoW (2023a, 11) assesses that "[DoW's] low volume buying patterns, lengthy periods between modernization, and often unnecessarily over-customized design specifications have combined to make [DoW] an unattractive customer, especially for smaller businesses." By deterring new entrants, these frictions can impede the DIB's potential; new entrants can bring in new capabilities, ensuring that the DIB can harness a variety of technologies to support DoW (2025a). Issues and risks can be exacerbated by lengthy project timelines. For example, major defense acquisition programs, such as the Columbia Class ballistic missile submarine, are now expected to average about 12 years from program start to initial capability, and in 2024 roughly 1 in 10 major defense acquisition programs experienced a delay of about 12 months or longer, due to problems such as design issues, testing delays, and delayed access to funding (U.S. Government Accountability Office 2025). "Scope creep" and continual design iterations during the production process, without consideration for their downstream implications, can also prolong project length; changes to capability requirements require DIB suppliers to expend additional time and resources to adjust their designs and manufacturing processes (DoW 2023a). Particularly for long-lasting contracts, scope creep heightens suppliers' uncertainty about their future resource needs and obligations, which can deter participation. For example, in 2025 the Department of the Navy cancelled all unstarted orders of Constellation Class frigates following a three-year delay in initial delivery amid a "persistent lack of design stability [that] stalled construction" (U.S. Navy 2025b; U.S. Government Accountability Office 2025, 130).

Solutions to Supply-Side Barriers

Increasing reliability and predictability. Recent executive actions aim to remove such frictions from procurement processes. Executive Order 14265 calls for a reformation of the defense acquisition process to emphasize "speed, flexibility, and execution" (National Archives 2025b, 15621), and Executive

Order 14275 establishes that "it is the policy of the United States to create the most agile, effective, and efficient procurement system possible" by reforming the Federal Acquisition Regulation, because "the expansion of the national and defense industrial bases is paramount" (National Archives 2025c, 16447). Pursuant to Executive Order 14265, DoW developed its Acquisition Transformation Strategy, which calls for "an aggressive systemic overhaul" to "rapidly deliver relevant and effective solutions at scale to address warfighting needs" (DoW 2025a, 1).

Subtier DIB participants are a particular concern for DoW, as they tend to have less favorable payment terms and cash flow than prime contractors (DoW 2023b). DoW (2023a, 15) assesses that "unreliable cash flow to small businesses makes the DIB more fragile and less secure, and this is driven by a range of issues from appropriation delays to commonly used contracting practices." To improve its insight on DIB supply chains and strengthen its relations with subtier DIB participants, DoW is expanding its use of direct-to-supplier relationships through its procurement systems (DoW 2025a). And new programs, such as the Small Business Investment Company Critical Technologies (SBICCT) Initiative—a joint effort between DoW and the Small Business Administration (SBA)—provide both capital and technical guidance to increase DIB participation and spur investments in critical technology areas, supply chains, and production processes. The SBICCT Initiative provides forward-looking signals about DoW's technological priorities, giving prospective DIB suppliers greater clarity on how they can participate (SBA and DoW 2025).

In addition, DoW's engagements with the financial industry and the Department's credit programs can help "crowd" private capital into the DIB, better aligning market incentives with social benefits. Government programs aimed at broadening participation and reducing transaction costs can increase the number of first-time entrants and venture-backed firms in the DIB (Howell et al. 2025). The first direct loan from DoW's Office of Strategic Capital to a DIB participant, MP Materials, helped the company secure $1 billion in private sector financing to scale up its domestic production (MP Materials 2025).[7] The OBBBA expanded the Office of Strategic Capital's funding by enough to support up to $100 billion in loanable funds (DoW 2025b). The public-private partnerships DoW fosters through such programs simultaneously reduce hold-up problem frictions by better aligning DoW's and DIB firms' incentives and ensure sustained market discipline.

The Administration has also used the authorities of the Defense Production Act (DPA) to strengthen and support the DIB. DoW, for example, has made a

[7] In addition to the $150 million loan from the Office of Strategic Capital, DoW provided $400 million in exchange for a preferred equity stake without voting rights alongside purchase commitments for MP Materials' output (MP Materials 2025). MP Materials will use this additional capital "to expand its existing rare earths separation and processing capabilities, as well as its magnet production capacity" (MP Materials 2025).

series of investments this year in critical mineral production capacity using the DPA, part of a broader effort to secure critical mineral supply chains (e.g., DoW 2025c, 2025d). These investments have been made in part using DPA Title III authorities, which allow the U.S. government to use various forms of finance to support industrial capabilities that support U.S. national defense.

Leveraging technological advances. Recent technological advances also create opportunities to expand and enhance the DIB, while standing up new firms with novel capabilities that could potentially improve competition and reduce concentration through creative disruption. Acquisition process reform is a top priority for DoW, with a focus on shifting from a hardware-centric to a software-centric approach (Hegseth 2025b). Advanced manufacturing automation can streamline development and production processes, improving performance (DoW 2023a). DoW's Manufacturing Technology program identifies ways to use advanced technologies to address current and future gaps in DIB capacity (Department of Defense Manufacturing Technology Program n.d.), while Additive Manufacturing Forward—a consortium of major private contractors—leverages funding from the SBICCT Initiative to spur small U.S. companies' adoption of additive manufacturing (ASTRO America n.d.). Additionally, synergies between hardware and software, such as digital "clones," can accelerate prototyping, streamline maintenance, and enable upgrades through software updates rather than the production of new physical devices. In an illustration of how pivotal recent technological advances can be for the DIB, in 2025 a defense technology firm topped CNBC's Disruptor 50 list—the first time one has done so in the list's 13 years of existence—and, overall, four DIB firms made the list (Boorstin 2025). To further harness the potential of novel commercial technologies, in 2025 DoW's Defense Innovation Unit launched the Blue Manufacturing Initiative to facilitate engagement between cutting-edge advanced manufacturers in the commercial space and conventional DIB participants and DoW, which will help to bring the DIB closer to the technological frontier (Beck 2025).

Through regulatory and process reform, new programs to expand financing and crowd in private capital, and leveraging technological breakthroughs, the Trump Administration is removing barriers to entry and supporting businesses' ability to participate in the DIB, expanding the market's supply and advancing it toward the economic frontier.

Conclusion

The United States' defense industrial base is an invaluable pillar of its national security, supporting the country's geoeconomics status and domestic economic growth. A generation of government underinvestment in the DIB has increased the burden on the industry and stands in stark contrast to China's and Russia's substantial military and industrial build-up. Fundamental economic

constraints confront the DIB, given the Federal government's unusual status as monopsonist and market regulator. Yet an economic lens can also identify opportunities to both improve the vitality of the DIB and strengthen national security. By expanding and reforming its spending, removing barriers to entry, and thus incentivizing the crowding in of private capital, the Federal government has made considerable progress in recent years to bolster both demand and supply in the DIB. Recent actions by the Trump Administration should further strengthen the DIB in the years to come, helping to sustain U.S. economic growth and secure peace through strength.