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Defense Acquisition Trends 2023: Meeting the Challenge of Production?

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Abstract

The industrial-scale conflict of the war in Ukraine and the burgeoning production capacity of the People’s Republic of China are reshaping the objectives of the defense acquisition system. This paper considers how acquisition trends have evolved in this environment, with special attention to the nation’s first National Defense Industrial Strategy. After accounting, for inflation contract obligations rose 5.3% in Fiscal Year (FY) 2023, including increases in aircraft and shipbuilding, and a striking 58% 1-year rise in ordnance and missile obligations. A groundbreaking look at the number of defense vendors and the market share going to nontraditional defense contractors finds, skipping over the COVID-19 response in the past 2 years, that the \$94.7 billion spent in FY2023 was 9.3% above FY2020 levels. Other Transaction Authority usage has also increased with a diversifying group of customers and a near doubling of spending on production.

Introduction

In Fiscal Year (FY) 2023, the defense acquisition system faced the challenge of sustaining industrial-scale warfare. In response to Russia’s expanded war in Ukraine, the U.S. took advantage of Presidential Drawdown Authority (PDA) to provide security assistance to Ukraine from existing U.S. stocks. Presidential drawdowns increased from a value of \$9.2 billion in FY2022 to \$14.6 billion in FY2023 (Arabia et al., 2022). Concurrently, the defense industrial base (DIB) began to increase and accelerate production to replenish transferred systems and to prepare for scenarios in which the war continues over multiple years. However, the DIB confronts an uncertain funding landscape, as proposed supplemental security assistance that would provide an influx of funds to the DoD was delayed for consideration to FY2024 and faces an uncertain fate at the time of writing.

Russian aggression is far from the DoD’s exclusive focus; instead, the National Defense Strategy identifies China as the pacing threat. China’s defense industrial capacity has expanded at a striking pace, with China’s shipbuilding industry output dwarfing that of the United States (Jones & Palmer, 2024, p. 14). China produces a range of platforms, especially ships, at a pace difficult to imagine, let alone achieve, for the DoD’s exquisite systems. Building the same systems, but at a faster pace, can be part of the solution. However, in the Western Pacific new submarines will be slow to arrive in optimistic scenarios. The DoD and its industry partners confront the challenge of both innovating new systems and ensuring systems arrive in the hands of the operators at a pace far exceeding that of traditional major defense acquisition programs.

To meet this daunting geopolitical environment, the DoD launched its first National Defense Industrial Strategy (NDIS) earlier this year (DoD, 2023). It outlined four strategic pillars, each with their own action items and metrics. The four pillars and some of the actions that are being taken in pursuit of the strategy are listed below:



- **resilient supply chains:** making capacity investments, increasing the visibility of lower tiers in the supply chain, and building resilience with the help of allies and partners
- **workforce readiness:** supporting the recruiting and training of public- and private-sector workers for a range of high-tech and industrial jobs
- **flexible acquisition:** pursuing standardization, open architectures, “access to intellectual property and data rights” (DoD, 2023, p. 34), and use of commercial off-the-shelf acquisition where possible¹
- **economic deterrence:** countering adversary efforts in the economic realm and strengthening science and technology sharing within alliances (DoD, 2023, pp. 16–17, 27, 34, 45; DoD, 2024)

While the strategy was released after the period covered in this report, it drew on longstanding best practices and recent work such as the February 2022 supply chain report (DoD, 2022). The NDIS calls out the importance of metrics: “Intermediate measures of success for the near-term actions over the next three to five years will be necessary to track progress toward the long-term goals” (DoD, 2023, p. 49).

Much of this will require information not available in the open source. For example, in February 2023 the deputy secretary of defense issued a data call to illuminate the supply chain for 110 weapons systems (DoD, 2023, p. 49). However, public data sets, such as the Federal Procurement Data Source (FPDS), can aid in identifying challenge areas and demonstrating progress towards the NDIS’s goals.

This paper examines FY2023 contract obligations to examine the extent to which recent shifts have anticipated the strategy’s direction and to better understand the baseline from which the U.S. government and industry, in cooperation with allies and partners, will face another demanding year in a marathon of industrial capacity building. The paper begins with an examination of overall contracting trends in the section titled What Is the DoD Buying? The next section, titled Production Capacity and Munitions, focuses on the parts of the NDIS most relevant to responding to the war in Ukraine. The following section, The Supplier Base and Nontraditional Defense Contractors, looks at DIB vendor counts and the market share won by the sort of nontraditional vendors the NDIS seeks to attract into the base. The penultimate section, The Range of Contracting Approaches, looks at the mix of Federal Acquisition Regulation (FAR) and non-FAR arrangements the NDIS seeks to encourage, with a deeper dive on Other Transaction Authority (OTA). International cooperation and production diplomacy is also central to the NDIS but beyond the scope of this paper for space reasons. The paper concludes with findings regarding the relevant illustrative outcomes and outputs identified by the NDIS.

What Is the DoD Buying?

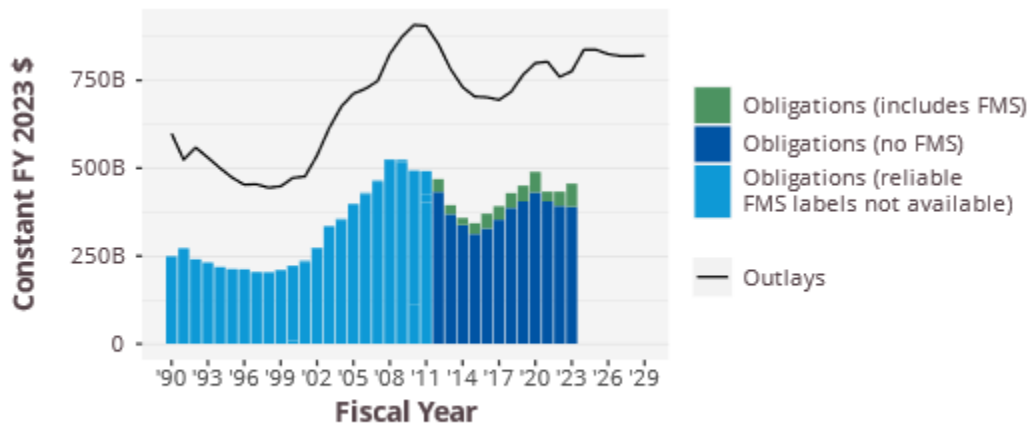
This analysis starts by looking at the demand signal for industry, as measured by DoD contract obligations as shown in Figure 1. Contract obligations rose from \$433.1 billion in 2022 to \$456.2 billion in 2023, a 5.3% increase after accounting for inflation.² This contract obligation growth outpaced the overall 2.1% increase in DoD outlays. Foreign funding bolstered spending as contracts that include foreign military sales (FMS) jumped from \$40.5 billion to \$65.8 billion. The dramatic increase is partially attributable to \$36.5 billion in spending on the F-35 project,

¹ Flexible acquisition pointedly does not include “broad-based acquisition reform, which ... is beyond the scope of this strategy” (DoD, 2023, p. 34).

² Unless otherwise specified, all dollar figures in this paper are converted to constant 2023 dollars using gross domestic product deflators from the Office of Management and Budget’s 2025 presidential budget.



86% of which was for contracts that include FMS.³ The substantial increase in FMS provides evidence of the budgetary and often supply chain support that allies and partners provide for DIB production capacity.



Source: FPDS, FY 2025 Office of Management and Budget Public Historical Tables, CSIS Analysis

Figure 1. Defense Contract Obligations and Total Obligation Authority, FY1990 to FY2024 Oct–Nov

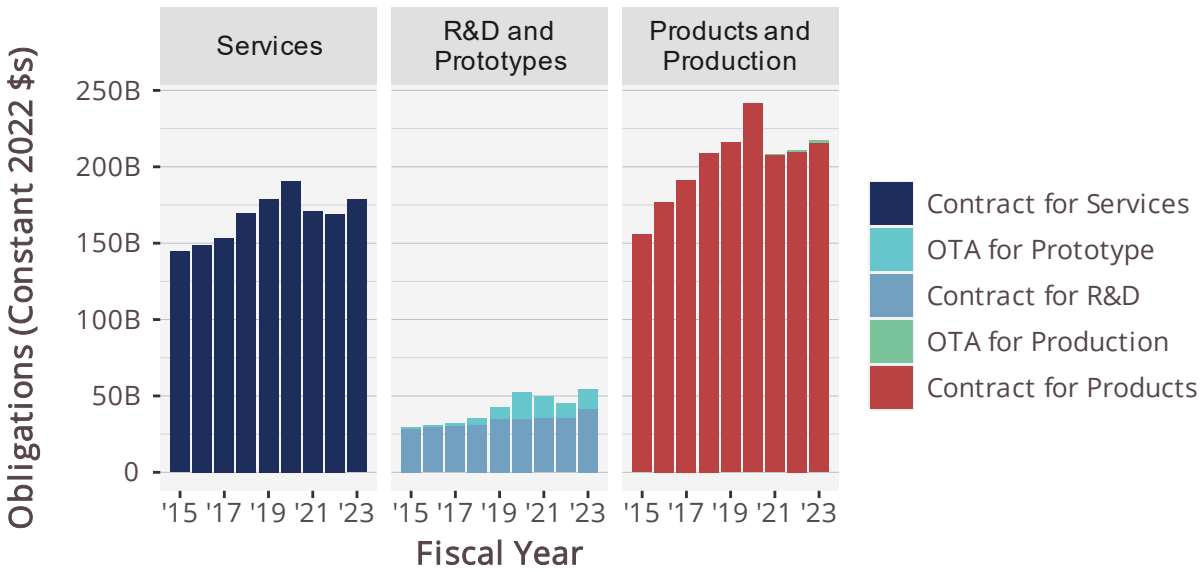
Obligations by Area

To understand how the DoD balances competing priorities of production, technology and innovation, and maintenance of existing equipment, this paper now turns to obligations for products, research and development (R&D), and services. These three categories, although not precisely aligned with DoD funding accounts, provide a helpful view of the DoD’s shifting priorities over time.

This section introduces a second form of funding, the innovation-oriented OTA. While OTA is only reliably available back to FY2015, these arrangements play a substantial role in R&D and thus must be considered to give a complete picture. The data show that product along with OTA procurement spending continues to account for the largest share of obligations, accounting for 48.25%, followed by services (39.7%) and then R&D along with OTA prototypes (12.05%).

³ The F-35’s fluctuations are broken out below in the Navy section of Figure 4.





Note: Unlabeled contract product, service, and R&D areas as well as unlabeled OTA agreement types not shown.
 Source: FPDS and CSIS analysis

Figure 1. Defense Contract Obligations by Product, Service, and R&D and OTA Obligations by Agreement Type, FY2015 to FY2023

Figure 2 depicts the trajectory of DoD spending across these three areas from FY2015 to FY2023, showing an increase from FY2022 to FY2023 across the board, with the largest increase seen in R&D. However, despite significant increases in FY2023, both product and services contract obligations remained over 6% lower than the recent peak in FY2020. When considering both contracts and OTAs, total spending remained 7% below FY2020’s total of \$507.9 billion, a figure largely attributable to increases in major air systems programs, notably the F-35, increases in naval ship spending, and COVID-19–related spending.

Obligations for services fell slightly from FY2021 to FY2022 but rose sharply in FY2023 by 5.9% to \$187.4 billion in FY2023. R&D and prototype obligations saw the most significant hike, leaping by 20.0% from \$47.4 billion in FY2022 to \$56.8 billion in FY2023. Finally, the largest contract spend category of the three, product and production obligations, experienced the smallest growth, rising 3.4% from \$220.3 billion in FY2022 to \$227.8 billion in FY2023. For both R&D and Prototype and Product and Production obligations, spending rose at a faster rate for OTAs than for contracts.

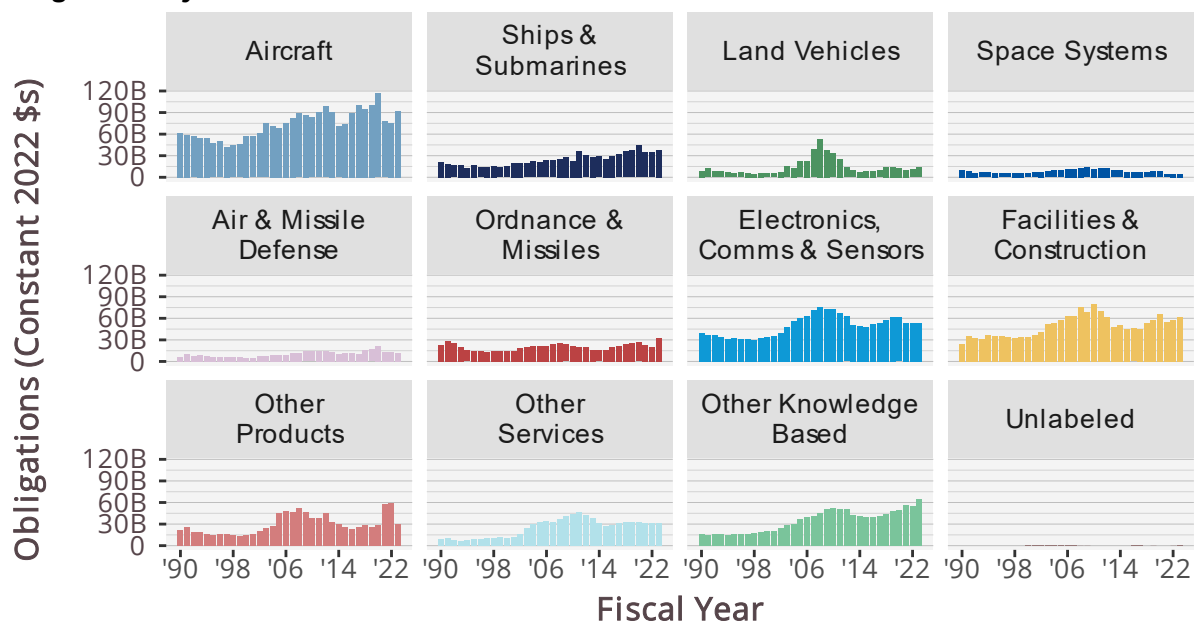
To understand the trends shaping the DIB, one must also look not only at what and how much the DoD buys, but *how* it buys, particularly given the department’s stated objective of increasing acquisition flexibility. OTAs, distinct from than contracts, grants, or cooperative agreements, are an acquisition approach that pursues innovation and flexibility by enabling certain federal entities, including the DoD, to procure goods and services outside of the traditional acquisition system. However, although OTAs enable flexibility of payment arrangement, promote the utilization of nontraditional vendors, and can advance new technologies, their relative newness and the need to tailor agreements mean that the usage of OTAs is often more demanding on the acquisition workforce and requires additional training.

In the past fiscal year, OTA obligations rose for both prototypes and production. The increased use of OTA for prototypes was dramatic, up 30.4% to \$13.6 billion from FY2022. Yet, despite this increase, OTA for prototypes remained significantly lower than the peak in FY2020.



While OTA use had fallen markedly after peaking in 2020 as part of Operation Warp Speed and the larger U.S. COVID-19 response (Schwartz & Halcrow, 2022, pp. 19–20), 2023 re-establishes their importance as over 3 in 10 dollars spent on R&D or prototypes use the OTA mechanism. Similarly, OTAs increased for production, nearly doubling from a small baseline at \$1.1 to \$2.1 billion in FY2023. While still a tiny portion of product spending, OTA for production is worth watching closely as it indicates one path for OTA prototype experiments to transition to systems that are deployable in the field.

Obligations by Platform



Source: FPDS and CSIS analysis.

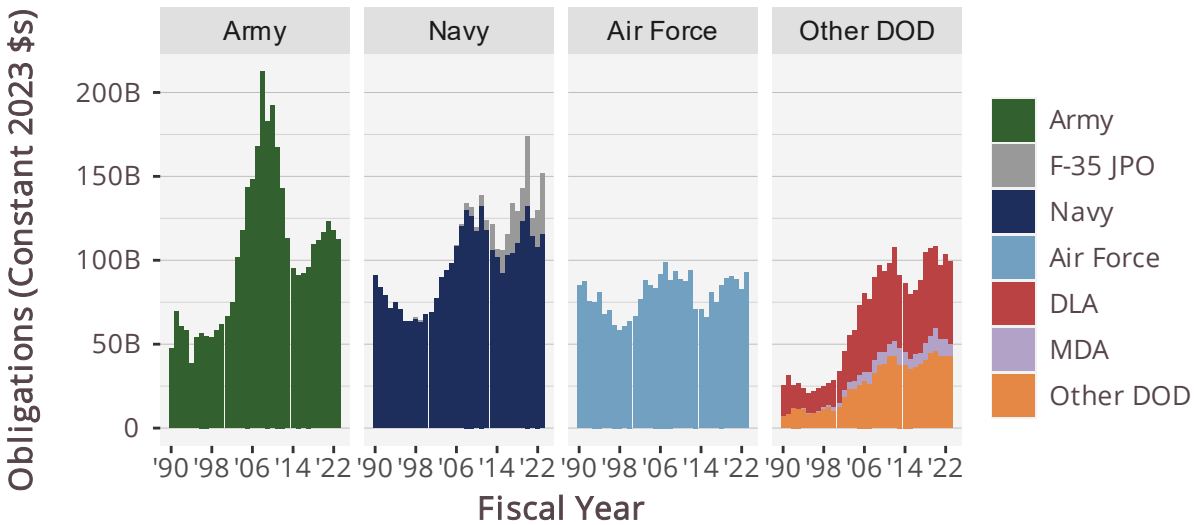
Figure 2. Defense Contract Obligations by Platform Portfolio, FY1990 to FY2023

Obligations by Component

The 5.3% increase in spending was concentrated in a short list of weapon systems categories, primarily ordnance and missiles, as seen in Figure 3. That category, central to refilling stocks diminished by the war in Ukraine, surged from \$21.4 billion to \$34.1 billion, a 59.3% increase to the highest obligation amount this century. Surprisingly, despite their similar relevance, air and missile defense equipment fell by 13% to \$12.6 billion. This is the lowest spending level since FY2017. Land vehicles, aircraft, other knowledge-based services, and submarines all experienced double-digit growth (28.8%, 23.4%, 17.0%, and 11.5% increases respectively). However, the gain in other knowledge-based services is somewhat deceptive as it is in part a consequence of decreasing granularity in the product and service codes used by the FPDS. Those codes once distinguished defense R&D by platform type but in recent years only specify the phase of R&D for a range of platforms.

Understanding the landscape of contract spending across DoD components provides further insight into how and to what extent DoD strategic priorities are reflected in its acquisition efforts. Figure 4 shows DoD obligations from 1990 to FY2023 organized by component. The data show that in FY2023, the services together accounted for 78% of the department's spend, with the Navy at 25.3% (32% including F-35 Joint Program Office obligations), Army at 24.6% and the Air Force at 20.3% of total contract obligations.





Source: FPDS and CSIS analysis.

Figure 3. Defense Contract Obligations by DoD Component, FY1990 to FY2023

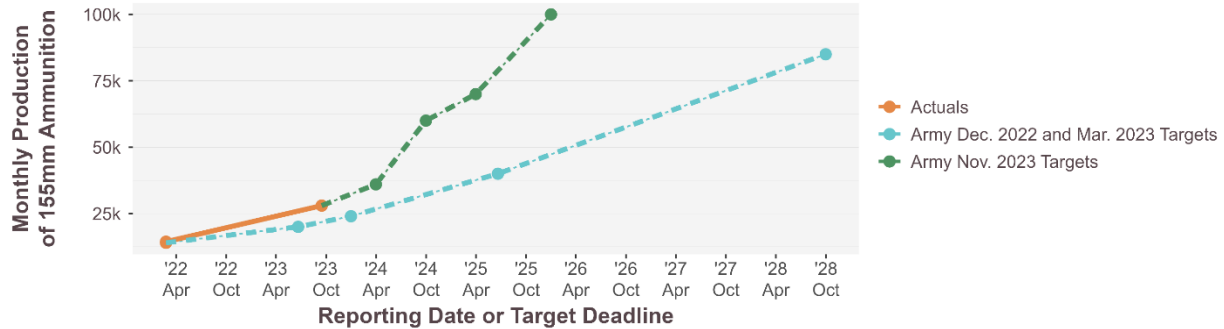
This represents a significant dip in obligations from non-service components, such as the Missile Defense Agency (MDA), whose contract obligations dropped 31% from FY2022 to FY2023 and halved since FY2020. The MDA’s 50% decline in contract obligations corresponds to the 43.9% decline in missile defense platforms highlighted in Figure 3.

Among the DoD services, the Air Force experienced the most significant increase in contract obligations, up from its dip to \$82.5 billion in FY2022 to \$92.7 billion in FY2023, a 12.3% rise. This growth was driven by a steady rise in spending in the other knowledge-based services portfolio. The Navy also increased its contract obligations, climbing 7% from \$107.9 billion in FY2022 to \$115.5 billion in FY2023. However, at \$115.5 billion, obligations still represent a 12% drop from the service’s contract obligations in FY2020, which saw greater DoD spending on naval platforms, including ships and submarines. The Army, unlike the Air Force and the Navy, decreased contract obligations from FY2022 to FY2023, dropping by 4.7% from \$117.8 billion to \$112.3 billion. This decline occurred despite the increase in ordnance missiles and land vehicles, both portfolios associated with the Army due to the wrapping up of the Army’s extensive spending in FY2021 and FY2022 as part of COVID-19 response efforts.

Production Capacity and Munitions

In support of a larger mantra that production is deterrence, the industrial strategy plainly identifies an “increase in DIB capacity” (DoD, 2023, p. 24) as a key metric for success and seeks to pursue multiple routes to that goal. This can mean direct investments, especially in government owned facilities that are operated by the government (GOGO), operated by contractors (GOCO), or leased to contractors (such as most of the Alleghany Ballistics Laboratory). For data availability in FPDS reasons, this report focuses on private sector industrial base rather than the organic industrial base, but as shown in Figure 5, based on public reporting, the ramp in the Army artillery shell production had exceeded initial projections and has grown more ambitious in response to the ongoing operational need by Ukrainian forces. Meeting future targets, however, will depend on whether a supplemental spending bill is passed (CSIS, 2024).





Sources: Bryan Bender and Lara Seligman, *Politico*, Dec., 4, 2022; Jen Judson, *DefenseNews*, Mar. 28, 2023; Noah Robertson, *DefenseNews*, Sept. 15, 2023; Sam Skove, *Defense One*, Nov. 27, 2023; initial chart by Govini; and CSIS analysis.

Figure 4. Army 155 mm Ammunition Production Rates and Targets

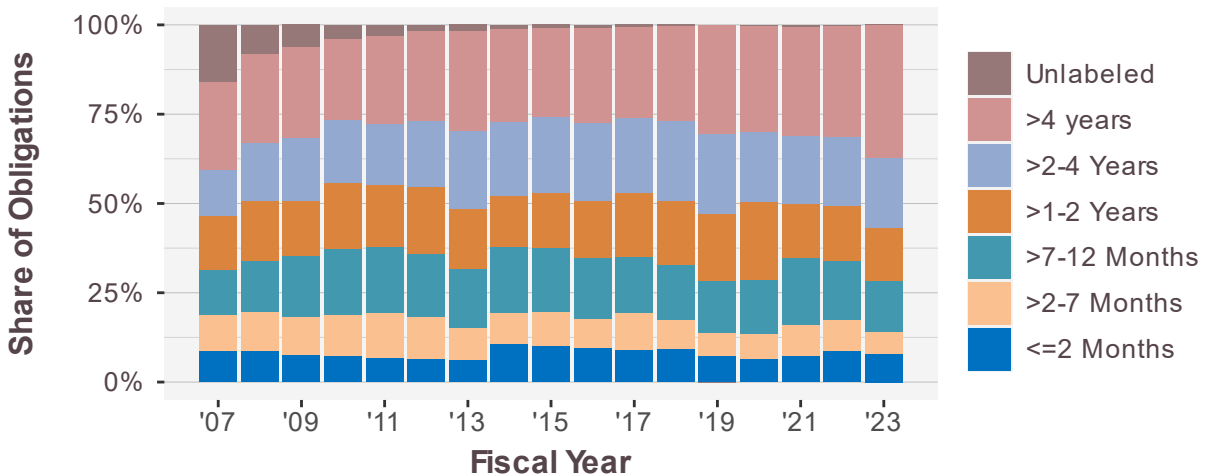
Deputy Secretary of Defense Kathleen Hicks listed five key investments by the administration since its first budget to boost the DIB:

- \$2.4 billion for casting and forging, batteries, kinetics, and critical minerals;
- \$10.3 billion in microelectronics, augmented by historic funds in the CHIPS and Science Act;
- \$12.9 billion for industrial base infrastructure and facilities, including shipyards;
- \$9 billion alone in submarine industrial base investments to support both our domestic production goals and [Australia, United Kingdom, and United States (AUKUS)] commitments; and,
- \$24.7 billion for multi-year procurement of key munitions, from PATRIOTs to Long-Range Anti-Ship Missiles. (Hicks, 2024)

Both direct support and attempts to incentivize industry to make further investment are one of the places where the strategy becomes most explicit about specific contracting approaches.⁴ Specifically, increasing multi-year procurement is a goal in its own right, which requires not just funding but also program-by-program authorization by Congress. Historically, industry has been hesitant to make major investments in capacity, especially in the ordnance and munitions, because of the boom and bust cycles of spending and a longstanding peacetime emphasis on lowering unit costs by maximizing efficiencies (Cook, 2023).

⁴ Capacity boosting actions include 2.1.2.1 (incentivizing industry to boost and sustain spare production capacity); 2.1.2.3 (revitalizing the [organic industrial base] with “innovative funding mechanisms including GOGO and GOCO sites”); and 2.3.2.6 (“The DOD will seek to expand the use of multi-year procurement [MYP]”; DoD, 2023, pp. 17, 19, 38).



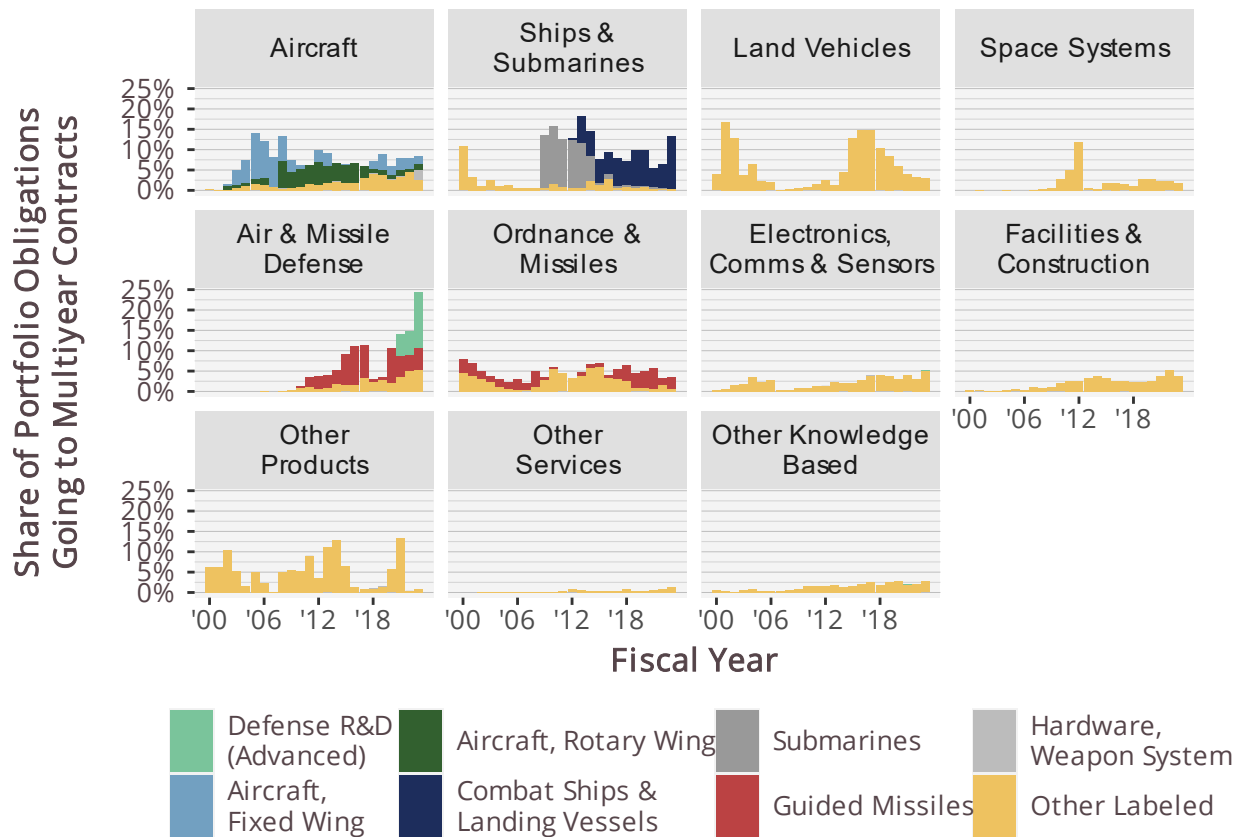


Source: FPDS and CSIS analysis.

Figure 5. Share of Defense Obligations by Initial Contract or Task Order Ultimate Duration, FY2007 to FY2023

Contract funding, which markedly rose for ordnance and missiles as shown earlier in Figure 3, is the most powerful demand signal to industry to ramp up production. Boosting capacity is a slow process that leads the strategy to point to longer-term contracts and program duration as ways both to incentivize industry and build up the domestic production base (DoD, 2023, pp. 17, 19). This does come with challenges in an environment where high inflation is a recent memory and a potential future risk. As seen in Figure 6, in the wake of inflation the use of contracts with a duration of 7 months or less rose in FY2022 to the highest level since FY2018. However, the share for shorter-term contracts fell to just 14.1% in FY2023 with contracts with an anticipated ultimate duration of 4 years or more rising to 37%, the highest level of the period with reliable data available.





*Note: When the multiyear column is blank, transactions are treated as not multiyear.
Source: FPDS and CSIS analysis.*

Figure 6. Share of Contract Obligations Employing Multi-Year Procurement by Platform and the Top Seven Products or Services, FY2000 to FY2023

However, many contracts are shorter term or only placed in batches at a time and thus address present demand and stockpiles but do not assure industry that this demand will recur in the future. Multi-year procurement is a powerful means to incentivize industry to boost capacity in ways that will have long-term benefits but may take years to achieve a return on investment. This method lays out expected future buys and includes reimbursement to industry for investments made should those future buys fall short of expectations. This approach inherently limits DoD’s future flexibility to shift priorities should a system no longer be relevant to urgent strategic needs, which is why explicit congressional authorization is required.

Multi-year contract spending rose to nearly \$26.0 billion in FY2023, exceeding the previous high of \$25.8 billion in FY2021. Figure 7 shows the share of contracting for a given platform using multi-year procurement. These shares are lumpy as a given program moves into and then out of the acquisition pipeline, but air and missile defense and ships and submarines have both shown marked increases. The doubling in multi-year ship and submarine contracts, going from \$2.3 billion to \$5.3 billion due to the DDG-51 is especially noteworthy. While air and missile defense obligations are not yet rising, multi-year procurement has increased from \$2.15 billion to \$3.05 billion, a promise of steady funding in the future. By comparison, multi-year procurement rose 78% for ordnance and missiles, but the \$1.2 billion in obligations in FY2023 are still below FY2020’s \$1.4 billion.



The Supplier Base and Nontraditional Defense Contractors

The DIB is proportionally smaller than its Cold War peak: the 3.2% share of U.S. GDP going to military expenditures is a bit over half the rate of 1973 and a bit over a third of the 1963 rate. In absolute terms, there are “1.9 million fewer people” in the DIB relative to 1985 and in the larger economy “7.1 million fewer people in US manufacturing jobs since 1979” (DoD, 2023, p. 21). Even with expanding budgets, this difference results in fundamental restraints that prevent any industrial strategy from simply replicating the strengths of the Cold War DIB.

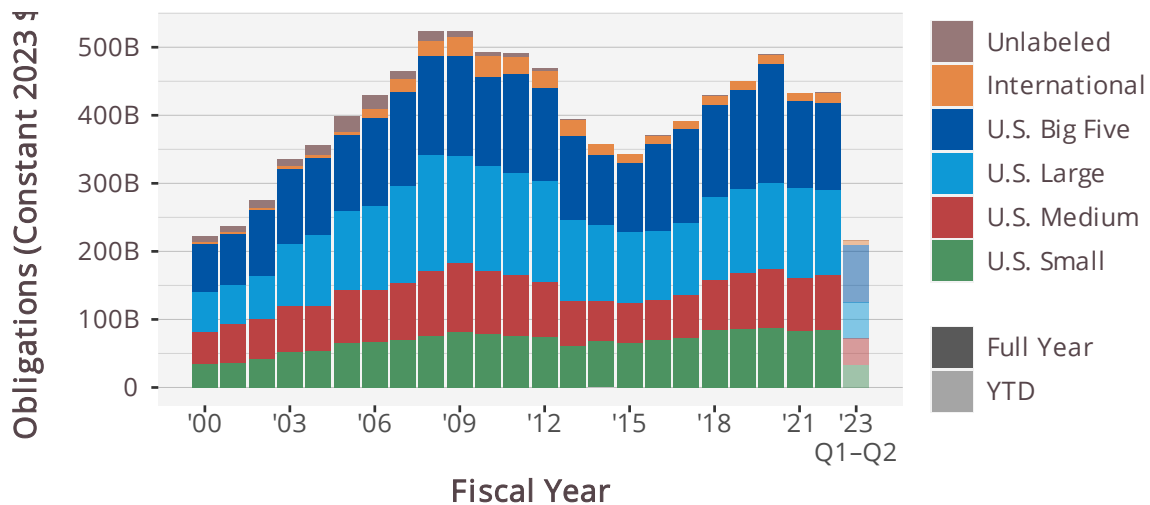
Instead, the NDIS builds on past rounds of acquisition reform and seeks to take advantage of the larger U.S. economy by increasing the diversity of DIB vendors. Two categories of vendors are especially important for this end: small businesses, categorized using definitions set by the U.S. Small Business Administration, and those larger companies that have not adopted DoD cost accounting processes, referred to as nontraditional defense contractors. The strategy plans on DoD acquiring products and services employing “an appropriate level of customization that can balance efficiencies and speed of fielding from commercial off-the-shelf (COTS) capabilities with resilience, scale, and effectiveness through the life cycle of platforms” (DoD, 2023, p. 34). A sign of success would be an “increase in number of suppliers newly doing business with the Department” (DoD, 2023, p. 24).⁵

Figure 8 shows DoD contract obligations from FY2000 to FY2023 Q1–Q2 with a breakdown between U.S. contractor size and a distinction between U.S. vendors and international vendors.⁶ The U.S. Big Five vendors—Lockheed Martin, RTX, Boeing, General Dynamics, and Northrop Grumman—held a 29.3% market share in FY2022. Pfizer briefly joined their ranks as a top contractor because of the Army’s role in contracting in response to COVID-19. In FY2022 U.S. large vendors had 29.0% market share, and U.S. medium vendors had an 18.4% market share. International vendors, which does not include the U.S. subsidiaries of international companies, had only a 3.5% market share, though the \$6.7 billion they received in FY2022 was a 29.3% increase over FY2021, which may have been influenced by production diplomacy efforts.

⁵ Four different NDIS action items directly involve considerations for expanding the supplier base: 2.1.2.4 seeks to “expand relationships with companies and industries not traditionally in the DIB,” including socioeconomic diversity; 2.3.2.1 considers standards and interoperability with reference to small business and nontraditional suppliers, 2.3.2.3 calls for using a preference COTS to access an “expanded supplier base”; and 2.3.2.6 advises “helping” small businesses navigate the complex defense acquisition process (DoD, 2023, p. 19, 36–38).

⁶ CSIS has classified by parent company for all vendor identifiers receiving \$250 million in one year or \$1 billion over the study period. That classification is still ongoing for the latter half of FY2023, so only the data for which classification is complete is shown.





Source: FPDS and CSIS analysis

Figure 7. Contract Obligations by Vendor Size, FY2000 to FY2023 Q1-Q2

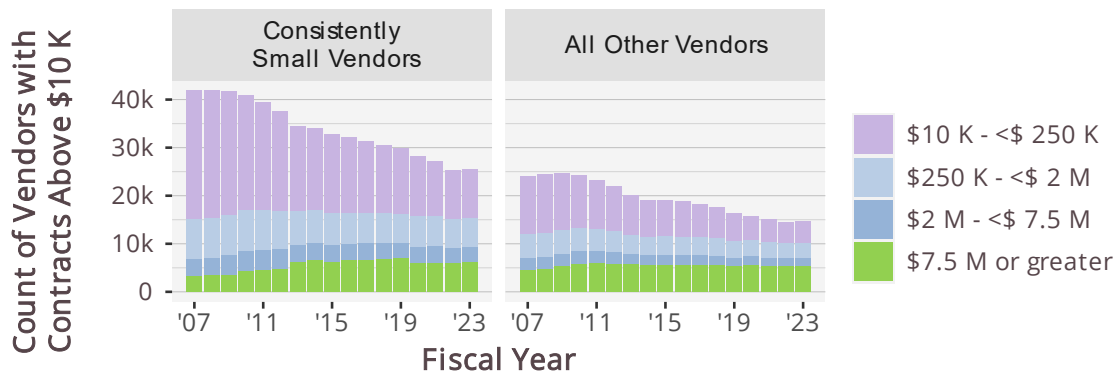
Promoting U.S. small vendors is a priority of the NDIS, and they start in a comparatively strong position with a 19.6% market share in FY2022. From FY2020 to FY2023, small businesses only had a 16.3% or lower market share, but a decline in internationally located contracting as the overseas contingency operations drew down and concerted promotion efforts, U.S. small businesses have had an 18% share or higher since FY2014.

Figure 9 turns from market share to the count of vendors.⁷ The contractors on the left are consistently classified as small businesses. This means they operate only as small businesses in each sector amongst which they do business. There may be other sectors where their employee count or revenue would mean they would be larger than small, but they did not win any contracts in those sectors in that given fiscal year. Another reason a vendor might be inconsistently classified is if they graduated beyond small business status or were acquired but still received legacy credits they won as a small business.

The contractors on the right include large and medium contractors as well as vendors with a variable classification as a small business. These contractors may qualify in some sectors as a small vendor, but they also surpass thresholds in other sectors or on more recent contracts, but for some contracts, they qualify as small businesses. The graph shows the number of players within the DIB over time. There has been an overall 39% decline in the number of contractors in the defense industry from FY2007 to FY2023, with the largest decline occurring in areas where contractors are exclusively winning small contracts, between \$10,000 and \$250,000. These vendors with small contractors declined by 62% to 63% regardless of small business status. As can be seen in Table 1, the magnitude of decline was inversely proportionate to the largest contract won by the vendor; that is to say that vendors winning small contracts declined markedly while those winning larger contracts were less likely to exit.

⁷ The threshold for reporting contracts in FPDS has changed repeatedly over the period. To provide a consistent baseline, only those contractors with a contract above \$10,000 in 2018 dollars, the year reporting threshold last changed, are included in these counts. These vendor counts employ unique entity identifiers (UEI) and parent UEI identifiers provided by FPDS. To reduce counting multiple subsidiaries as different entities, this analysis groups UEIs with their parent UEIs, when one is provided for that fiscal year.





Note: Threshold values are adjusted for inflation (in 2018 \$s).
 Source: FPDS Unique Entity (UEI) reporting and CSIS analysis.

Figure 8. Number of Defense Contractors by Annual Small Business Status and Size of Largest Federal Contract

		2007	2015	2020	2023	'07– '23	'15– '23	'20– '23
Consistently Small Vendor	\$10 K- <\$250 K	26.7K	16.5K	12.5K	10.2K	-62%	-38%	-18%
	\$250 K - <\$2.0 M	8.3K	6.5K	6.3K	5.9K	-29%	-10%	-7%
	\$2.0 M - <\$7.5M	3.7K	3.7K	3.6K	3.4K	-8%	-9%	-8%
	\$7.5 M or greater	3.2K	6.1K	5.9K	6.1K	90%	0%	5%
	Subtotal	41.8K	32.8K	28.3K	25.5K	-39%	-22%	-10%
Variably Small or Large Vendor	\$10 K- <\$250 K	12.1K	7.7K	5.1K	4.5K	-63%	-41%	-11%
	\$250 K - <\$2.0 M	4.9K	3.8K	3.3K	3.1K	-37%	-18%	-6%
	\$2.0 M - <\$7.5M	2.5K	2.2K	1.9K	1.8K	-29%	-18%	-8%
	\$7.5 M or greater	4.5K	5.5K	5.5K	5.2K	15%	-5%	-4%
	Subtotal	24.0K	19.1K	15.8K	14.6K	-39%	-24%	-7%
Total	65.9K	51.9K	44.1K	40.1K	-39%	-23%	-9%	

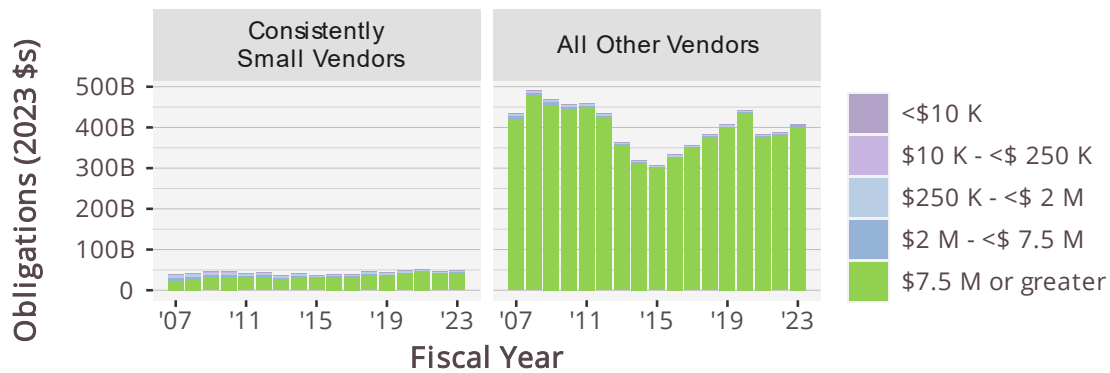
Table 1 compares FY2023 with three snapshots: FY2007 with overseas contingency operations supported by contractors, FY2015 as a low point in contract spending due to the budget caps, and FY2020 as the recent high-water mark in real contract spending. Despite FY2020's higher spending, there was a drop in consistently small vendors with contracts over \$7.5 million in that year. That category of contractors went from 6,100 in FY2015 to 5,900 in FY2020. The drop occurred entirely between FY2019 and FY2020, and in FY2023 count had recovered to 6,100 vendors, which suggests that the COVID-19 pandemic may have temporarily suppressed the number of vendors.

As suggested by Figure 8, a reduction in the number of vendors winning small contracts does not imply a reduction in market share going to small vendors. Indeed, the number of consistently small vendors with contracts above the \$7.5 million threshold increased from FY2007 to FY2015. The share of obligations going to small businesses was rising from FY2007 to FY2015 even amidst a general decline in the number of vendors (Bipartisan Policy Center, 2021). As a result, it is important to look at multiple measures or changes at the periphery of the DIB could swamp out shifts that may be more consequential to the core.

Figure 10 further emphasizes this point. Since FY2012, no more than 5% of contract obligations were awarded to contractors winning only contracts under \$7.5 million, and less than



2.5% of contract obligations went to contractors winning only contracts under \$2 million. A comparison of defense and federal contracting by Edward Hyatt (2023) suggested that federal and DoD consolidation and competition move in parallel in sectors not specific to a single agency. As a result, the decline in these total vendor counts may be shaped by larger policies such as federal category management or best-in-class contracting, which may result in greater reliance on a smaller pool of vendors qualified for pivotal multi-award contracts (Miller, 2019).



*Note: Threshold values are adjusted for inflation (in 2018 \$s).
Source: FPDS Unique Entity (UEI) reporting and CSIS analysis.*

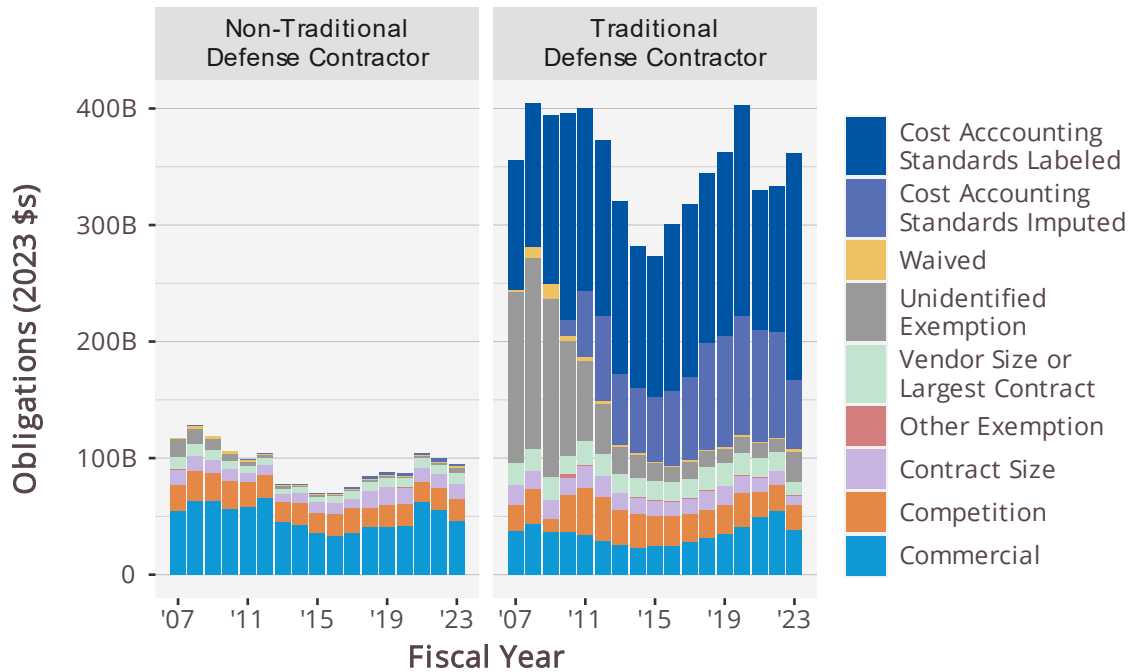
Figure 9. Defense Contract Obligations by Annual Contractor Small Business Status and Size of Largest Federal Contract

Nontraditional Defense Contractors

This paper breaks new ground by overcoming a crucial limit in contract reporting: nontraditional status is not tracked directly in FPDS. The analysis presented here makes some simplifying assumptions; for example, vendors are classified as nontraditional based on whether or not they have any contracts employing defense cost accounting standards in a given fiscal year rather than assessing their status at the start of each individual contract.⁸ When possible, this defers to FPDS’s “Cost Accounting Standards Clause” to learn whether a contract has such a clause, is exempt, or has been granted a waiver. Unfortunately, this field ceased reporting for task orders in FY2011, so the study team attempted to replicate the field based on cost accounting standard applicability rules in the Code of Federal Regulations (CAS Applicability, 2018). As an additional simplifying assumption, when FPDS labels are not available, the study team applied the current regulations, which entered into force in August 2018, rather than accounting for the changes in the rules before 2018 over time.

⁸ Nontraditional defense contractors are defined in statute as “an entity that is not currently performing and has not performed, for at least the one-year period preceding the solicitation of sources by the Department of Defense for the procurement or transaction, any contract or subcontract for the Department of Defense that is subject to full coverage under the cost accounting standards prescribed pursuant to section 1502 of title 41 and the regulations implementing such section” (Nontraditional Defense Contractor, 2022).





Source: FPDS and CSIS analysis

Figure 10. Defense Contract Obligations by Nontraditional Status and Reason for Exemption from Cost Accounting Standards, FY2011 to FY2023

The breakdown of defense contract obligations for nontraditional defense contractors is shown in Figure 11. The graph includes two classifications for cost accounting standard clauses: *labeled* refers to those contracts confirmed to apply cost accounting standards by FPDS, and *imputed* refers to those contracts that were unlabeled but do not appear to qualify for any exemptions. *Waived*, shown in yellow, refers to contracts that have been authorized to not apply cost accounting standards despite not qualifying for an exemption. Multiple exemptions could apply to a single contract; they are classified in the order of this list by the first exemption that applies. This order is reversed in the graph, to make it easier to track categories most relevant to the NDIS. *Commercial* refers to use of commercial products and service acquisition procedures under the FAR Part 12. *Competition* refers to seal bids as a solicitation procedure or firm-fixed-price contracts with sufficient competition that did not require cost and pricing data. *Contract size* covers contracts below the \$2 million Truth in Negotiation Act threshold. *Other exemptions* capture lesser-used exemption categories (i.e. for foreign governments). *Vendor size or largest contract* covers those vendors that are consistently small or have no contracts greater than \$7.5 million. When FPDS categorized a contract as exempt, but the study team could not determine the reason, that is categorized as an *unidentified* exemption. Unclassified exemptions overwhelmingly appear on contracts held by traditional defense contractors, which limits their impact on classification. Nonetheless, their prevalence is troubling and will be further examined by the study team in future iterations of this research.

Nontraditional contractors won an estimated \$94.7 billion market share in FY2023, below the COVID-19 boosted magnitude of the prior 2 years but up 9.33% above the FY2020 obligations of \$86.65 billion. Obligations to nontraditional were higher in FY2007 to FY2010, with the last peak at \$104.1 billion in FY2012, suggesting that the drawdown of overseas contingency operations followed by the budget caps led to consolidations. Because vendors with no contracts over \$7.5 million and consistently small vendors are potentially exempt from cost account standards, they actually make up the majority of all defense contractors by count,



as is implied by Figure 9. By looking at obligations, Figure 10 can demonstrate the addressable market for nontraditional entities. Regardless of the nontraditional status of the awardee, commercial contracts and qualifying competed contracts had \$84.0 billion and \$40.65 billion respectively in FY2023 obligations. Commercial contracts obligations were lower than the past 2 COVID-19 response years but still 1.5% above the FY2020 level. Qualifying competition is up 1.6% from FY2022's level but down 15.9% from the \$48.3 billion obligated in FY2020.

Standardization and Interoperability

Increasing commonality through standardization and interoperability are recurring themes in the NDIS.⁹ This is in line with a longstanding emphasis on MOSA, an attempt to make DoD acquisition more like Android phones or IBM personal computers through the use of open interfaces that allow a broader range of vendors to provide solutions (Sanders, 2022). The strategy posits that this suite of approaches “benefits DOD by reducing the risk of lock-in to a single supplier by allowing small businesses to offer components or systems that can be integrated into larger defense systems, which by extension, and together with multi-year contracts, mitigate business execution risk” (DoD, 2023, p. 36).

There are no simple ways to measure the extent of adoption of common standards or the higher bar of modular open systems, but there are signs to watch. From 2017 to 2021, an increasing number of budget lines for procurement and research, development, testing, and engineering for the Army, and to a lesser extent the Air Force, saw mentions of open systems or open architectures (Sanders, 2022, p. 6). Neither of those services matched the more than a dozen each research, development, test, and evaluation (RDT&E) and procurement lines from the Navy, whose sonar boosting Advanced Processor Build and Technology Insertion (APB/TI) is a success story of incorporating quickly developed commercial chip technology going back to 2013 (Guertin et al., 2018). The Army's Future Long-Range Assault Aircraft (FLRAA) placed considerable emphasis on MOSA in both guidance documents and in competitive criteria (Freedberg, 2020; GAO, 2023; PEO Aviation MOSA Transformation Office, 2021). For the presently under development uncrewed aerial system Collaborative Combat Aircraft, the government reference architecture developed as part of the Next Generation Air Dominance program has been a point of emphasis for Air Force leadership (*Air Force, Fixed-Wing Tactical and Training Aircraft Programs*, 2023; Luckenbaugh, 2024).

The industrial strategy puts forward as an illustrative outcome “increase in adoption of open systems architectures across critical programs” (DoD, 2023, p. 40). This is an area where FPDS reporting, perhaps in the government-furnished equipment or property field or via another mechanism, would ease tracking progress and also advertise to vendors both presently in the DIB and beyond about the addressable market should they produce a compliant hardware or software product.

The Range of Contracting Approaches

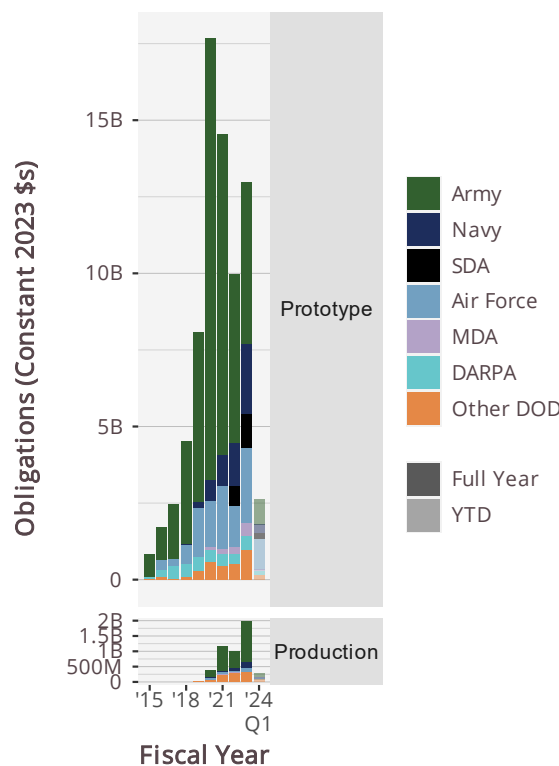
As covered above, multi-year procurement is called out in the NDIS, similar to the way incentive fee contracting was highlighted by a previous DoD-led acquisition policy shift, the Better Buying Power 3.0 initiatives (Kendall, 2016, p. 9). But as the name indicates, the flexible acquisition pillar seeks to manage shifting priorities resulting from an evolving geostrategic situation, including by adjusting requirements. The software acquisition pathway merited special mention as an example of a modern means of delivering software implementable with existing

⁹ Citations include action items 2.3.2.1, calling for broadened platform standards and interoperability; 2.3.2.4, seeking “Increase Access to Intellectual Property (IP) and Data Rights to Enhance Acquisition and Sustainment”; and 2.4.2.2, which involves participating in standard setting bodies to increase interoperability (DoD, 2023, pp. 35–38, 46).



authorities. The yet-to-be-released operational annex may contain more details, as the NDIS announced that the DoD “will look to use greater FAR- and non-FAR-based contract types, as appropriate, and seek to ensure contracting authorities align with present defense priorities” (DoD, 2023, p. 38). As a metric for evaluating that goal, the NDIS puts forward an “increase in range of contracting types and authorities used” (DoD, 2023, p. 40).¹⁰ Time will also tell whether the operational annex will address critique raised by Caverley et al. (2023) that the NDIS would benefit from disaggregating different strategies for different contexts.

The objective of increasing the range of contracting types might have implementations for the pricing mechanisms used by the DoD. For example, use of fixed price–incentive firm contracts has greatly expanded use after the Better Buying Power reforms and time and materials, labor hours, and fixed-price level of effort contracts have been largely suppressed (Sanders et al., 2023, pp. 6–7). However, while not explicitly mentioned in the NDIS, an increasing range may have greater implications for OTAs and commercial solutions openings (CSO; Office of the Under Secretary of Defense for Acquisition and Sustainment, 2022, p. 13). A CSO launched in January 2024 seeking uncrewed surface vehicles as part of the consequential Replicator uncrewed aerial systems initiative (Katz, 2024). CSOs will be important to track going forward, but an initial review found only 34 labeled award or indefinite delivery vehicles for CSOs, only two of which had ceilings over \$7.5 million in size.¹¹



Note: Unlabeled values not show.
Source: FPDS and CSIS analysis.

Figure 11. Defense OTA Obligations by Customer and Type, FY2015 to FY2024 Q1

¹⁰ Acquisition approach action items include 2.1.2.6 with reference to encouraging collaboration and 2.3.2.5, “Consider Greater Use and Policy Reform of Contracting Strategies” (DoD, 2023, pp. 22–23, 38).

¹¹ These two include an indefinite delivery vehicle to Deloitte (USASpending, n.d.-b) and L3-Harris (USASpending, n.d.-a). The labeling for CSOs only dates to October 2022, so this list almost certainly misses larger historical CSOs.



While not mentioned by name in the NDIS, OTAs are directly relevant to the action item to “Promote Accelerator Programs to Foster Innovation” (DoD, 2023, pp. 18–19).

Since FY2020, over 90% of OTA obligations go to vendors with significant participation by nontraditional entities. As seen in Figure 12, OTA use has jumped 36.2% from 2022 to 2023. While the Army is still the plurality user, a wide range of customers, including the Army, the Navy, the Air Force, the Defense Advanced Research Projects Agency, the Missile Defense Agency, and the Space Development Agency, have \$400 million or more in OTA spending. While the Army is still the leading employer of OTA arrangements for production, both the Navy and Air Force have increased their use, admittedly only to \$204 million and \$102 million, respectively, in 2023.

Findings

Production Capacity and Munitions

DoD took time to ramp up, but the rise in shipbuilding and ordnance and missiles, as well as an uptick in multi-year contracting, shows that the demand signal to industry has arrived. This growth is not sufficient to ensure sustained capacity, as munitions are notorious for spikes in spending followed by rapid declines. However, the combination of multi-year procurement and direct investments in capacity incentivize sustained capacity.

Relevant NDIS Illustrative Outcomes and Outputs:

- **“Increase in DIB capacity” (Action Item 2.1.2.1):** The organic industrial base has increased its production of 155 mm ammunition, as shown in Figure 5. From FY2022 to FY2023, priority portfolios *ordnance and missiles as well as ships and submarines* have increased by 59.3% and 11.5% respectively, but obligations for air and missile defense has declined 6.7%, as seen in Figure 3.
- **“Expand the use of multi-year procurement (MYP)” (sub-bullet under Action Item 2.3.2.6):** Multi-year contracting has *surged 41% to nearly \$26.0 billion* in FY2023. As seen in Figure 7, *ships and submarines and air and missile defense* were notable drivers, reaching \$5.3 and \$3.1 billion respectively. Multi-year contracting for ordnances and missiles grew by 78% to just \$1.2 billion but remains below the FY2020 level.
- **“Increase in adoption of open systems architectures across critical programs” (Action Item 2.3.2.1):** Rising adoption can be seen in the Army emphasis on MOSA in the FLRAA competition and the centrality of government reference architectures to the upcoming multi-competitor procurement stage of the Collaborative Combat Aircraft, but good measures are lacking.

The Supplier Base and Nontraditional Defense Contractors

The total number of defense contractors has dramatically declined, but this would be misleading as the primary indicator of DIB health. As shown in Figure 9, since FY2007 there has been a marked decline in the number of defense contractors, with those vendors in categories whose maximum contract value was smallest suffering the largest declines. This helps explain why the number of vendors can decline even as the share of obligations to small vendors rose since FY2013, as is seen in Figure 8. As a result, any metrics that focus on the total number of new vendors, or the total number of vendors overall, will likely be dominated by shifts in vendors whose largest contract is between \$10,000 and \$2 million. This group may be a key indicator of barriers of entry to federal contracting, but these tens of thousands of firms have a collective market share of less than 2.5%. Thus, additional metrics are likely to be necessary to have a sense of commercial participation, production capacity, and the ability of small vendors to traverse the valley of death, or the extent of DIB consolidation. The extent of



obligations going to nontraditional vendors is a valuable supporting metric, and it shows the DIB is beginning to recover to pre-budget cap levels.

Relevant NDIS Illustrative Outcomes and Outputs

- **“Increase in number of suppliers newly doing business with the department” (Action Item 2.1.2.4):** As shown in Figure 9, the number of contractors fell by 9% from FY2020 to FY2023, but the number of vendors with contracts over \$7.5 million fell by only 0.2% to 11,400. However, in a positive sign, the \$94.7 billion in obligations to nontraditional market shows growth is 9.3% above the FY2020 levels.

The Range of Contracting Approaches

Both commercial contracting approaches and OTAs played key roles in response to COVID-19, but OTA subsequently blossomed across multiple dimensions. OTAs are still overwhelmingly focused on prototyping rather than production and rightly receive less attention from the NDIS than multi-year procurement. However, FY2023 shows that the mechanism has not gone out of style since Operation Warp Speed but instead shows a blossoming to sustained and diversified use, implying a growing confidence of the acquisition workforce.

Relevant NDIS Illustrative Outcomes and Outputs

- **“Increase in Off-the-Shelf acquisition supporting critical programs” (Action Item 2.3.2.3):** As seen in Figure 11, use of commercial authorities for COVID-19 has receded, but the nearly \$84.0 billion spent in FY2023 is still 1.5% above FY2020’s level.
- **“Increase in range of contracting types and authorities used” (Action Item 2.3.2.5):** As shown in Figure 2, OTAs for prototypes are up 30.4% to \$13.6 billion and OTAs for production have nearly than doubled to \$2.1 billion, the latter a new high. As seen in Figure 12, OTAs have also diversified. The state of CSO is still too early to tell.

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