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Defense Acquisition Trends 2023: A Preliminary Look

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Abstract

The past year of contracting has faced multiple external influences: ongoing Covid-19 responses and supply chain disruptions, increasing inflation, and large-scale U.S. support to Ukraine given the Russian invasion of Ukraine. Despite all this, FY 2022 defense contract spending shows marked continuity with contract spending growing 0.1% after accounting for inflation. OTA spending has fallen further as commercial contracts have taken over as the mechanism of choice for responding to Covid-19. There are signs of greater adoption contracts with economic price adjustments or shorter time periods, but as of FY 2022 these shifts remained small scale. More surprisingly, spending on ordnance and missiles fell, suggesting that the acquisition system is still ramping up to recapitalize drawdowns by the United States and allies.

What is DoD Buying?

The continuity between FY2021 and FY2022 contract spending is striking given Russia's February 2022 invasion of Ukraine, the inflation in the larger economy, and ongoing supply chain challenges. Contract spending grew from \$387.1 billion to \$414.4 billion in current dollar terms, a 7.1% increase that after accounting for inflation represented 0.1% real growth (Office of Management and Budget, 2023).¹

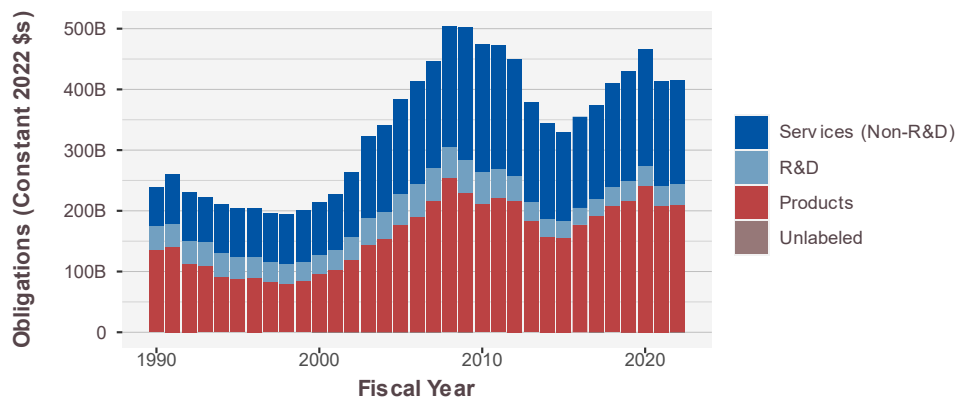
A key factor enabling this continuity is that while Ukraine has been given \$45 billion in current dollars of U.S. aid, with much of that aid transferred in FY 2022, most of the arms transferred came in the form of defense drawdowns. Because drawdowns transfer items already in stock there was a need to transport them to Ukraine, but they did not have to be purchased as products. However, these transfers still had important implications for the acquisition system, as the Department of Defense planned to replace the stocks with equivalent or successor systems in addition to taking further steps, where necessary, to strengthen production capacity strained by the unanticipated surge in demand. At time of

¹ This report uses the methodology employed in a range of CSIS reports on federal contracting. For over a decade, the Defense-Industrial Initiatives Group (DIIG) has issued a series of analytical reports on federal contract spending for national security by the government. These reports are built on Federal Procurement Data System (FPDS) data, which is downloaded in bulk from USAspending.gov, and, for other transaction authority data, from SAM.gov. DIIG now maintains its own database of federal spending, which includes data from 1990–2021. This database is a composite of FPDS and DD350 data. All dollar figures are in constant FY 2022 dollars, using Office of Management and Budget (OMB) deflators. This report accounts for inflation using Office of Management and Budget deflators for the entire economy. Use of different deflators, for example those for federal outlays or defense outlays specifically, suggests larger real growth, though regardless of measure there was substantial inflation in FY 2022. For additional information about the CSIS contracting data analysis methodology, see <https://github.com/CSISdefense/Lookup-Tables>.



writing, the United States reports obligations of \$432 billion for Ukraine Mission Support, although this total underestimates spending (*Ukraine Mission Support Report, 2023*).²

As shown in Figure 1, the DoD has managed to maintain its buying power in inflation adjusted terms. Product spending increased by 1% to \$209.14 billion, a comparable level to FY 2018. The peak product spending in FY 2020 was driven in good part by a substantial contract for the F-35, large contracts for major defense acquisition programs are often experience spikes and troughs rather than steady year-on-year growth (Jang et al., 2021). R&D spending grew by 0.9% to \$34.1 billion dollars, the seventh year of real growth. Unlike products and services, R&D avoided a decrease from FY 2020 to FY 2021. Finally, services contracting fell by 1.0% to \$170.6 billion.



Source: FPDS and CSIS analysis.

Figure 1. Defense Contract Obligations by Product, Service, and R&D, FY 1990–FY 2021

When considering contract spending by platform, as shown in Figure 2, FY 2022 spending shows one strikingly counterintuitive result: the largest decline was in ordnance and missile spending. That category fell to \$23.5 billion, a 13% decline, a result that will merit closer inspection given the demand for both munitions to backfill U.S. and allied stocks as well as ongoing research in hypersonic missile. Much of this can be attributed to obligations for the guided missile product category fell from \$6.6 billion to \$5.1 billion. Some of this change included normal whipsaws in project funding, with the Trident II spending rising from \$1.7 billion in 2020 to \$3.1 billion in 2021 before falling to \$2.5 billion in 2022. However, other shifts are more perplexing. Largely within the guided missile product category, obligations for the Guided Multiple Launch Rocket System dropped from \$1.81 billion in FY 2021 to \$1.27 billion in FY 2022.

The second largest decline was in the other R&D and knowledge-based portfolio, which fell by 10% to \$41.6 billion despite the 1% rise in R&D spending overall. This implies that much of the R&D spending was in categories clearly tied to a category of platform. The largest areas of growth were more intuitive. Space systems increased by 18% to \$11.3 billion. While space spending is widely believed to have significant spending tied to classified contracts, space has been an ongoing area of interest both in cutting edge research and in supporting a range of established DoD capabilities including global positioning

² DoD contracts are subject to a 90-day reporting delay and beyond that the latest reported contract start at time of writing was in September of 2022. In addition, in past conflicts National Interest Action Codes have a fairly strict definition of what is included under them, for example not including many of the transactions that took place in Afghanistan or Iraq under codes for the respective conflicts (Sanders et al., 2020).



system and communication satellites. The second largest increase was in missile defense, which rose by 7% to \$13.8 billion. That level is still below the recent peak of \$21.4 billion in 2020, but is consistent with an increasing strategic emphasis on air and missile defense driven in part by the demonstration of Russian missile attacks against Ukraine, including the regular target of power facilities and civilians.

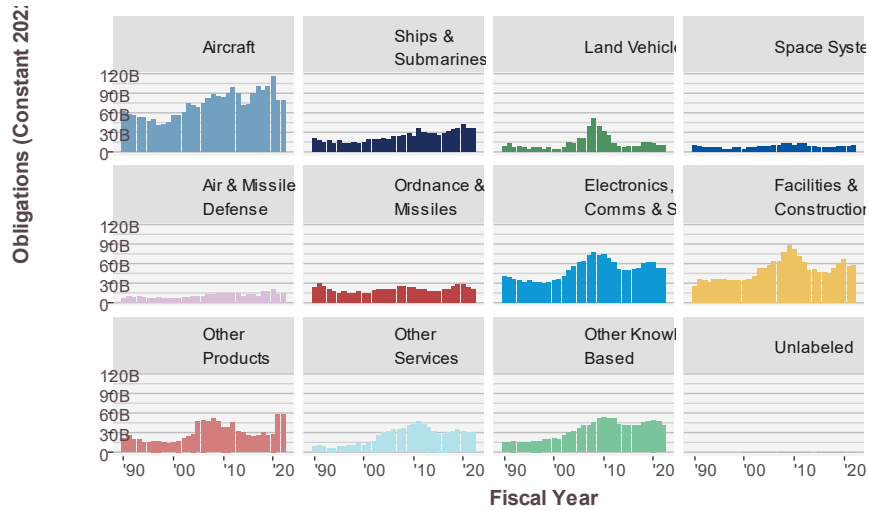


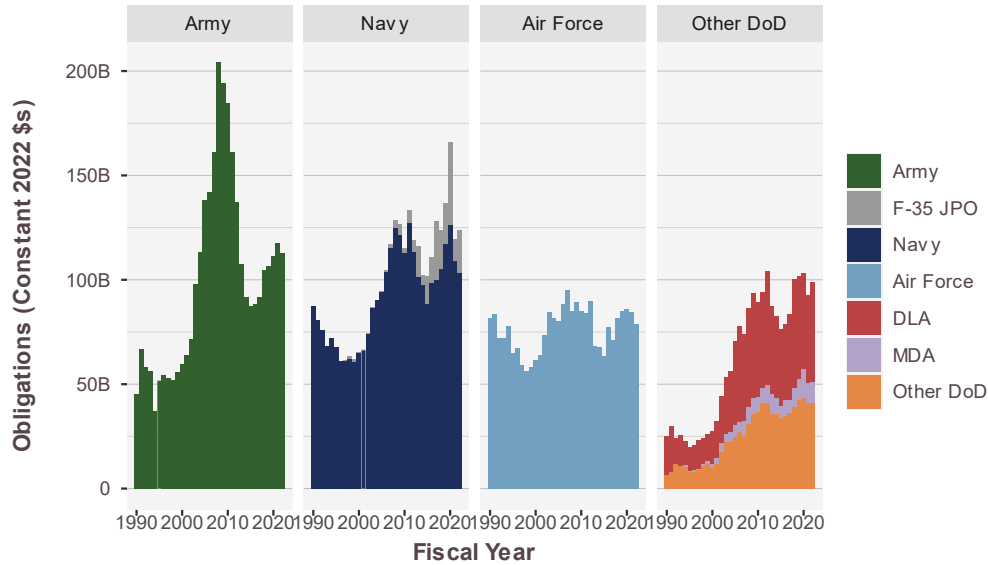
Figure 2. Defense Contract Obligations by Platform Portfolio, FY 1990–FY 2022

When considered by the contracting agency, as shown in Figure 5, the largest changes happened below the military department level. Spending on the F-35 continues to fluctuate. That program, due to the placement of the Joint Project Office (JPO) is entirely reported under the Navy despite the F-35A also being a leading acquisition priority for the Air Force. Spending for the F-35 major defense acquisition program, whipsawed up to \$20.7 billion, a 97% increase over FY 2021 but still below the nearly \$40 billion spent in FY 2020. These changes are a result of the uneven distribution of major contracts rather than major changes of plan for this program.

The military departments have all dropped slightly due to the effect of inflation, Army falling 4% to \$12.7 billion. However, the overall share going to the Army may lead one to overestimate spending on traditional Army platforms such as land vehicles and vertical lift. Instead, starting in FY 2021 COVID-19 response has is responsible for more than a quarter of Army spending. The Army spent \$31.6 billion in FY 2021 and \$23.6 billion in FY 2022 on drugs and biological products. In FY 2022, the Army spent \$4.6 billion on medical and surgical instruments. When excluding the F-35, Navy spending fell by 5% to \$103.1 billion. Finally, the Air Force fell by 6.6% to \$79.0 billion, although the Air Force, which includes Space Force spending, is suspected to be responsible for the largest proportion of the classified budget.

Growth was concentrated instead in the Defense Logistics Agency (DLA), which experienced a 15% increase to \$48.2 billion in FY 2022. A cursory examination of product and service codes reported by DLA did not show a clearcut source for this growth, the agency does spend on medical supplies in a heightened manner since FY 2020 and also may be showing the effects of supporting the sustainment necessary for support to Ukraine and European reassurance initiatives. The Missile Defense Agency also grew, but only by 4% to \$9.8 billion. The remaining other DoD agencies in aggregate fell by 1% to \$40.9 billion.



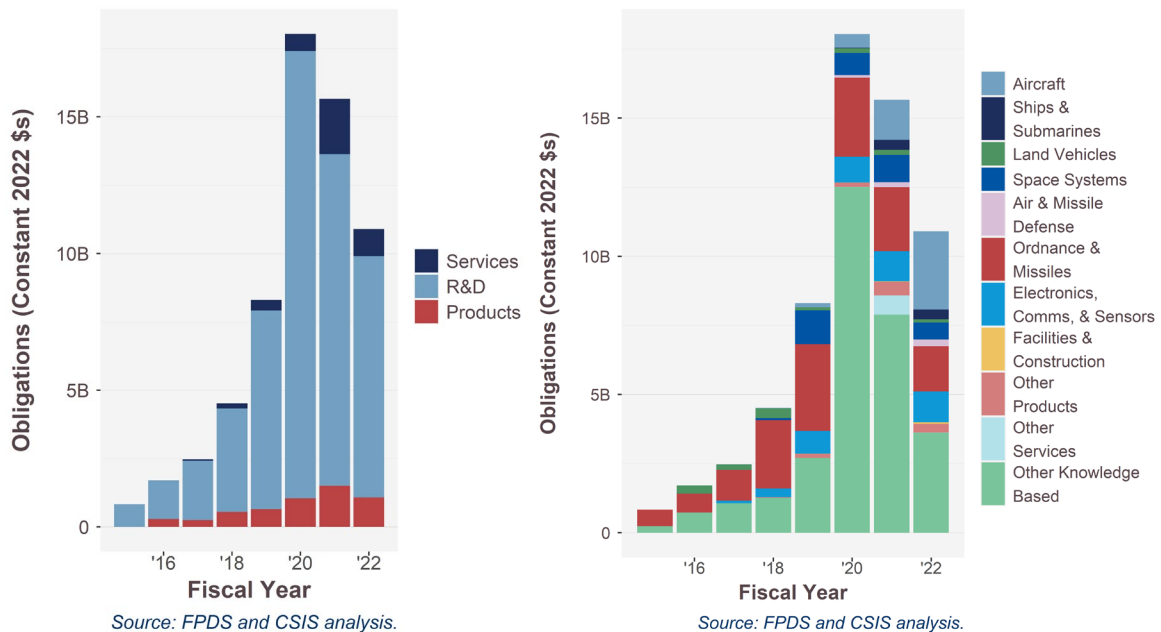


Source: FPDS and CSIS analysis.

Figure 3. Defense Contract Obligations by DoD Component, FY 1990–FY 2021

Use of Non-Traditional Acquisition Approaches

While contract R&D spending has experienced steady contracting growth, the picture is different when including other transaction authority (OTA) arrangements. That contracting approach grants great flexibility and is targeted towards non-traditional vendors as well as any vendors have made substantial internal investments in their offering to the DoD (McCormick & Sanders, 2021). The large FY 2020 spike in of Figure 4 can be traced in part to the Army’s role in the federal response to the COVID-19 pandemic.



Source: FPDS and CSIS analysis.

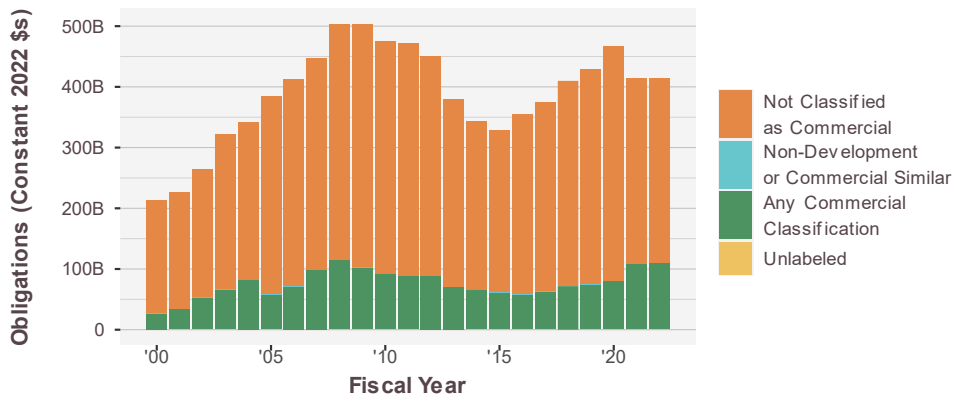
Source: FPDS and CSIS analysis.

Figure 4 Defense OTA obligations by product, service R&D area and portfolio, FY 2015-FY 2022



OTAs proved their worth in their ability to rapidly support Operation Warp Speed and that spending accounted for nearly half of OTA expenditures in FY 2020 and a significant portion of FY 2021 (Schwartz & Halcrow, 2022). In the lower graph COVID-19 related spending is largely contained within other knowledge-based services. As that rapid response effort wraps up, OTA R&D spending has faded as well.

However, while ordnance and missiles have been a consistent use case for OTAs, the war in Ukraine has not led to a surge in activity. Instead spending on ordnance and missiles dropped to \$1.6 billion in FY 2022, a 29% decline.

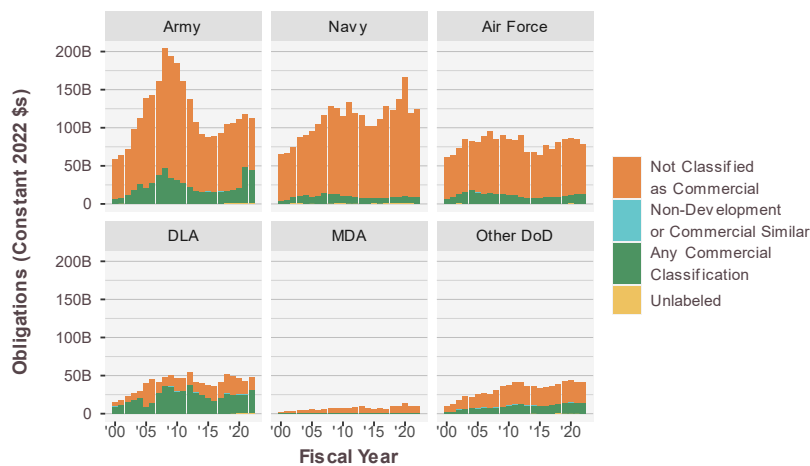


Source: FPDS and CSIS analysis.

Figure 5. Defense Contract Obligations Categorized as Commercial

While OTA use has declined from its initial pandemic surge, use of commercial items grew dramatically in FY 2021 and sustained that larger market share in FY 2022, rising 1.2% to \$109.0 billion. For the past two fiscal years at least 26% of DoD contracting has used commercial procedures, the highest proportional share of this century, although FY 2008 had \$114.1 billion in commercial obligations, a slightly higher absolute spending level.

As shown in Figure 6, the Army and the Defense Logistics Agency (DLA) have been the primary users of commercial items and services. Echoing the FY 2020 spike in OTA spending, the growth in commercial contracting was largely driven by the Army spending discussed above.



Source: FPDS and CSIS analysis.

Figure 6. Defense Contract Obligations Categorized as Commercial



Competition

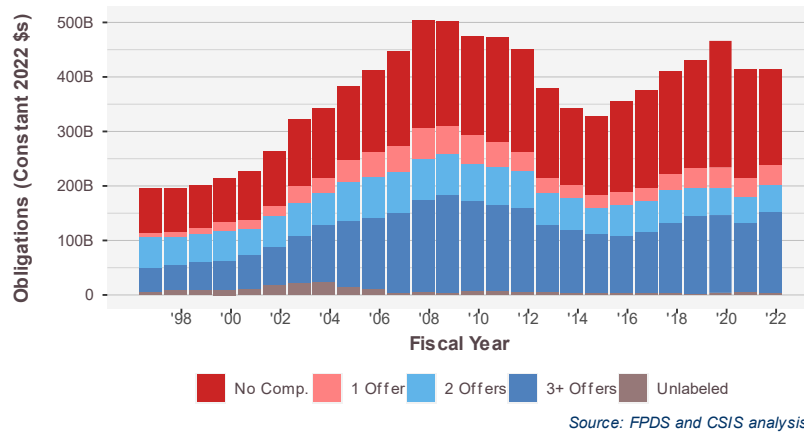


Figure 7. Competition Spending by Number of Offers, FY 1997–FY 2022

The share of contract obligations originally subject to competition has fluctuated notably in recent years. From FY 2021 to FY 2022, the value of contracts competed with three offers or more rose by 16% to \$149 billion. This increase contributed to the share of obligations that were competed with two or more offers rising from 42% to 48%, the highest level since FY 2015. This increase is in line with Biden administration emphasis on competition (Office of the Under Secretary of Defense for Acquisition and Sustainment, 2022). That said, the changes in recent years regarding the level of competition are more affected by the composition of purchases than any given competition promotion policy.

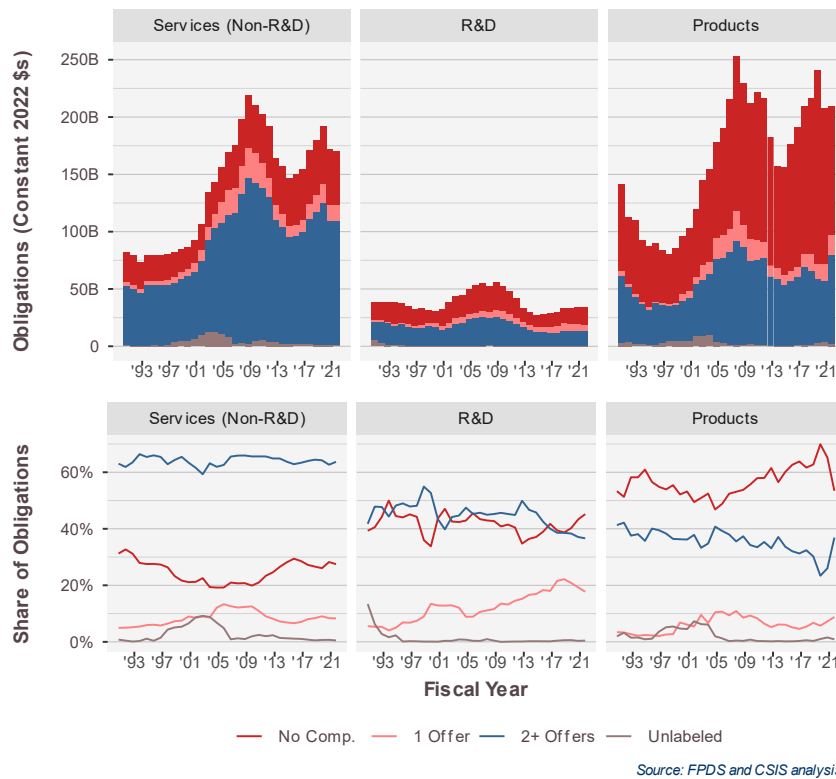


Figure 8. Competition Spending and Share by Product, Service, and R&D, FY 1991–FY 2022



As shown in Figure 8, the average level of competition varies greatly between products, services, and R&D. In the rightmost column and least competed are defense products, because much of the spending goes to weapon systems that the developing vendor has exclusive rights to produce. During the Trump administration, a drive to purchase existing weapon systems contributed to falling share of contracts subject to competition (Jang et al., 2021). In FY 2022 the value of contracts for defense products competed with two or more offers, rose from 26% to 37%. This led to the larger increase in competition noted above. It was driven not by a sudden surge of competition for weapon systems but instead by increasing competition for other products related to Covid-19 response.

Services, shown in the leftmost column, have been fairly stable in the extent of competition, even as total spending rose and fell. However, in the middle, R&D contracts shows a troubling trend of increasing competition with a single offer starting after FY 2005 and peaking in FY 2019 at 22% of defenses R&D spending. Single offer competition can indicate weakness in the industrial base, as it can indicate that a contracting officer hoped for competition but that multiple vendors did not find it worth their effort to bid. The rate of single offer competition defense R&D competition has begun to fall losing out to contracts awarded without competition which accounted for 45% of defense R&D spending in FY 2022, the highest level since FY 2006.

Responding to Inflation

The 7% GDP inflation seen in past year meant that inflation has been a concern to a degree not seen since the early 1980s which peaked even higher at 13.6% in the summer of 1980 (*Consumer Price Index (CPI) Databases*, n.d.). That inflationary period also coincided with hikes in defense outlay that had begun in FY 1979 and meant that contract spending could keep pace and gave contracting officers flexibility to maintain scope (Sanders & Holderness, 2022).

The steady state spending in FY 2022 suggests that today's environment is similar, although risk is not evenly distributed throughout the industrial base. Last year, to analyze potential sources of risk, CSIS looked at the distribution of pricing mechanism and duration by vendor size as shown in Figure 11. For industry, risk is highest in firm-fixed price contracts which, by default, are static in the face of changing external market conditions. That said, this risk is mitigated by contracts with shorter durations, which may still be subject to a period of high inflation but not the accumulated effects of multiple years. Small and medium vendors are most exposed to firm-fixed price contracts that last more than a year; in FY 2021 this made up 38% and 43% of their prime obligations respectively. The rate for large and big five contractors, 31% and 26% respectively, still holds real risks but is mitigated by the greater reliance for many of these contractors on cost-based contracting which generally has more mechanisms to reflect unexpected changes during contract implementation.



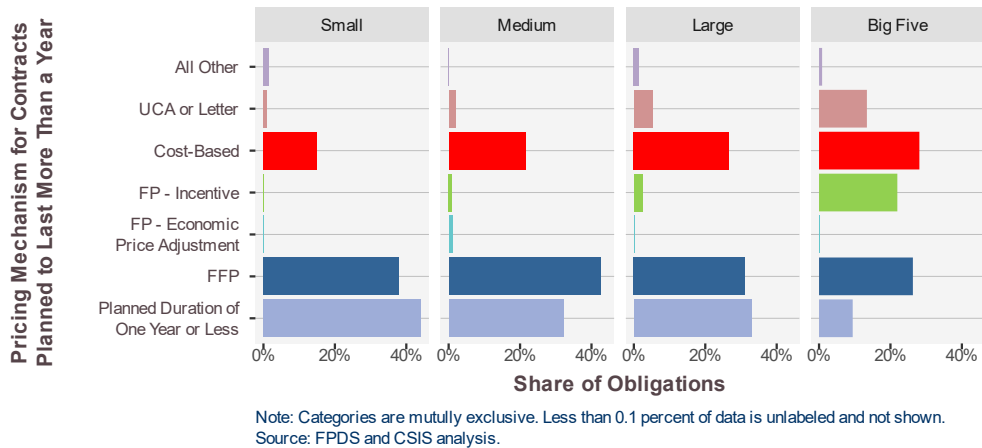
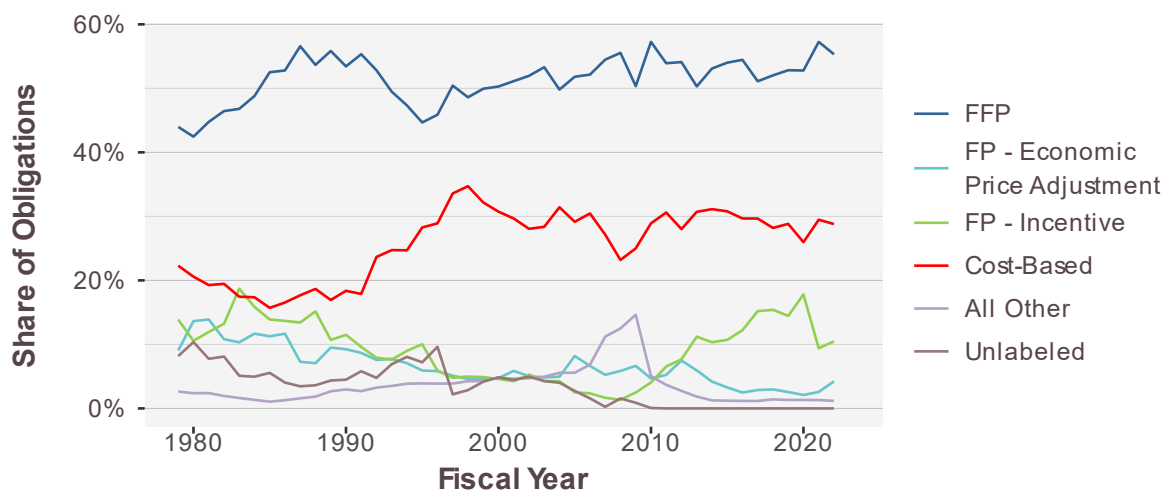


Figure 9. Share of Defense Contract Obligations by Pricing Mechanism and Planned Duration, FY 2021

There is a mechanism in fixed-price contracting that is deliberately designed to address risk from changing prices, namely economic price adjustments. As shown in Figure 10, in FY 2021, contracts using economic price adjustments as their primary pricing mechanism accounted for 2.6% of DoD prime contracts. After the last bout of inflation, that share routinely exceeded 10% through FY 1986. Then and now those numbers understate the use of any form of fixed-price economic price adjustment, as such mechanisms will often be a small part of a larger contract to address a specific known risk, such as fuel costs. However, even with imperfect reporting, the trends in use can still provide an important clue as to the larger use of such mechanisms. In FY 2022, the obligations for contracts primarily using this mechanism rose 65% to \$17.5 billion, which increased the overall usage rate from 2.6% to 3.1% of DoD contract obligations. The baseline usage rate back in FY 1979 was notably higher, already reaching 9.1%. This suggests that while use of the pricing mechanism is on the rise today, it is unlikely to reach past peaks and that in keeping with DoD statements there have not been widespread adjustments of existing contracts to incorporate economic price adjustment mechanisms (LaPlante, 2022).

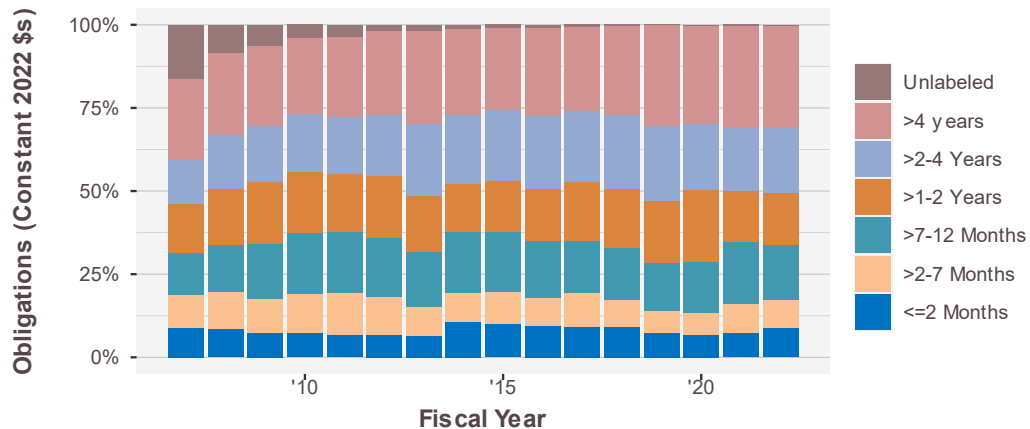


Source: Federal Procurement Data System (FPDS) and CSIS analysis.

Figure 10. Historical Contracting Mechanisms, FY 1979–FY 2022



Another possible mechanism for reducing the risks of inflation would be to reduce the planned duration of contracts and task orders. This would be an inherently slow shift, as 50% of contracts obligations in FY 2022 have an initial ultimate duration of at least two years or more and thus this will slowly work their way through the system. As seen in Figure 11, fast duration contracts did become more common from FY 2021 to FY 2022, growing by 20% to \$37.2 billion.



Source: FPDS and CSIS analysis.

Figure 11. Share of Defense Obligations by Initial Contract or Task Order Ultimate Duration, FY 2007–FY 2022

However, this did not reflect a larger trend to shorter contracts, as the total obligations to contracts with initial unmodified duration of a year or less fell by 2% to \$140 billion, despite the strong growth of quick turn contracts. In FY 2021 and FY 2022 obligations to contracts lasting a year accounted for 35% and 34% of all contract spending, respectively. This is notably higher than the 28% rate that prevailed in both FY 2019 and FY 2020, but still below the recent peak of 38% in FY 2011 and FY 2014. Taken together this suggests that if inflation is an ongoing concern there is room for further shortening of contract terms, but that it is too soon to say if such a sustained shift is occurring.

Addressing Limits to Production

In recent years, acquisition reform efforts focused on innovation and rapid prototyping and transfer of new systems to operators in time to maintain technology superiority. However, the war in Ukraine is a more industrial conflict, U.S. and allied transfers are often technologically superior to Russian equivalent systems, but production capacity has increasingly been an area of focus. Congress has voted to authorize wider use of multi-year procurement which is a vital tool for building this capability. Multi-year procurement gives industry greater certainty that their investments in expanding a factory or training new workers will not prove to be redundant several years later when the immediate crisis is past.

Because of the necessity for Congressional authorization, it is not surprising new permissions granted in the 2023 National Defense Authorization Act (NDAA) have not led to increases in the FY 2022 data included in Figure 12. Instead, it is useful to look at FY 2022 levels as a baseline and an example of what to expect by looking at the often cyclical rates of multi-year authority employment in ships and submarines and lane vehicles. That said, acquisition experts also raised concerns as to the quality of multi-year reporting earlier in the century, which may merit additional investigation.



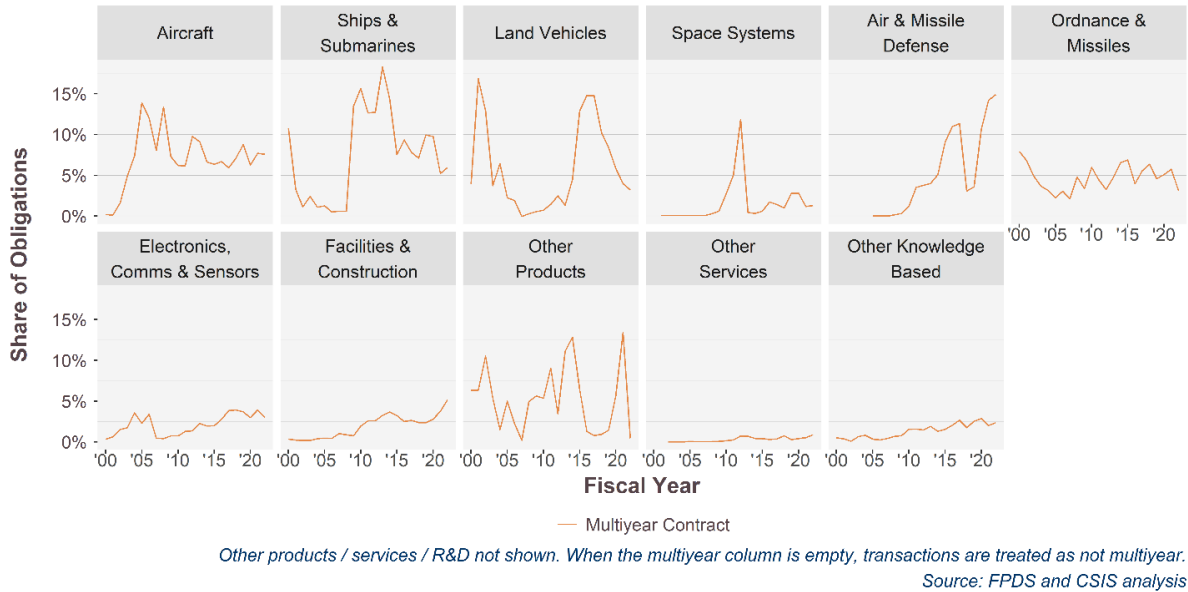
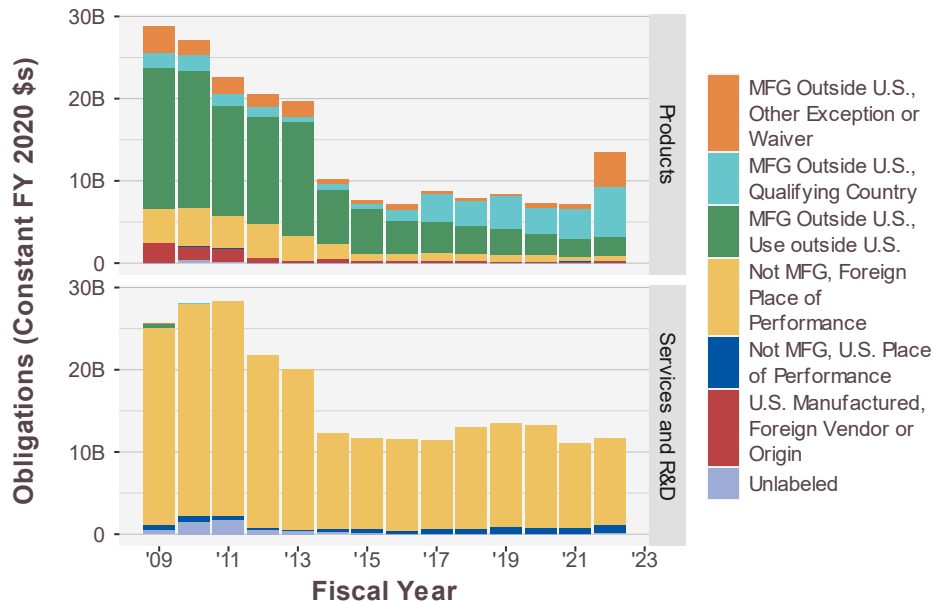


Figure 11. Share of Contract Obligations Employing Multiyear Procurement by Platform, FY 2000–FY 2022

Usefully given the relevance of air and missile defense to the war in Ukraine, multi-year contracting has a growing role for that portfolio, reaching 15% of spending in that category in FY 2022. By comparison, ordnance and missiles presently devotes only 8% of obligations in that portfolio to multi-year contracting. Based on the example of other sectors, the reliance of the ordnance and missiles sector on multi-year contracting could easily double. That said the limitation on the rate of increase in implementing the 2023 NDAA will be shaped not just by the DoD’s ability to move swiftly on contracting, but also the long lead times for standing up or expanding production activities.

Another possible way to increase capability is to look to other nations to fill gaps in U.S. industrial capacity. As Figure 13 shows, the DoD heavily relied on international production during the more intense periods of the wars in Iraq and Afghanistan, primarily for use outside the United States, as is shown in green. In more recent years, acquisition of products from abroad has turned to ally-shoring from countries with reciprocal defense procurement arrangements with the United States that thus are qualifying countries depicted in light blue. The biggest surprised in FY 2022 is the \$4.2 billion for products manufactured outside the United States that is driven by purchase of commercial goods, including fuels.

These jumps for largely commercial goods are not yet an example of international production to help fill gaps that relate to weapon systems. The growth does not necessarily represent an increasing comfort with international vendors and manufacturing. Instead, a key factor is the rising U.S. content requirements, a process started under the Trump administration and continued by the Biden administration. As a result of these changing thresholds, products need more U.S. content to count as a U.S. good. Thus, a product that counted as United States in origin in FY 2016 may no longer qualify in FY 2022.



Source: FPDS and CSIS analysis.

Figure 12. Contracts with Foreign Vendor or Origin for Products and Services, FY 2009–FY 2022

Conclusions

Contract obligations kept up to inflation, even when using a comparatively high measure.

In nominal terms, contract spending grew from \$387.1 billion to \$414.4 billion, a growth rate of 0.1% when applying a 7% inflation adjustment. The Office of Management and Budget’s estimates that inflation for federal outlays in general and defense outlays in particular are both lower than that overall chained GDP inflation rate, so it is safe to say that spending is steady or growing depending on the preferred measure.

OTAs, commercial acquisition authorities, and efforts to increase competition have all been applied to the DoD’s COVID-19 response.

The DoD response to COVID-19, led by the Army, has employed a range of acquisition approaches that were cultivated to ease the adoption of new technology, often from outside the traditional defense ecosystem. As these responses mature, efforts move from OTAs to traditional contracts employing commercial contracting approaches. This change was already in progress from FY 2020 to FY 2021, with the notable change in FY 2022 being a shift to increasing competition.

The acquisition system is adjusting to inflation, but primarily through higher topline spending.

Product, service, and R&D obligations each had growth rates within roughly plus or minus 1%. This suggests relatively stable spending patterns compared to the shift to product spending that happened under the prior administration. While the rise in nominal spending is the most important trend, there were notable shifts in contracting approaches that reduce risks to industry from inflation: a 65% increase to \$17.5 billion in obligations for contracts primarily using fixed-price economic price adjustment contracts and 20% growth to \$37.2 billion in obligations for contracts taking two months or less. However, these substantial increases are not enough to hit historic ties or change how the typical dollar is spent in a \$414 billion acquisition enterprise.



Through FY 2022 efforts to support the war in Ukraine and build productive capacity are not primarily being exercised through defense contracts and OTAs.

Presidential drawdown authority for existing stocks and funding under the Defense Production Act Title III are both not included in the data of this report and represent are both being used in bold and innovative ways to address this challenge. However, from a strict acquisition system spending perspective, the money has not yet arrived through contracts and OTAs. Even before accounting for inflation, missile and munition obligations fell from \$22.0 billion to 20.5 billion.

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