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Defense Acquisition Trends 2021: A Preliminary Look

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Defense Acquisition Trends 2021: A Preliminary Look

Rhys McCormick—is a Fellow with the Defense-Industrial Initiatives Group (DIIG) at the Center for Strategic and International Studies (CSIS). His work focuses on unmanned systems, global defense industrial base issues, and U.S. federal and defense contracting trends. Prior to working at DIIG, he interned at the Abshire-Inamori Leadership Academy at CSIS and the Peacekeeping and Stability Operations Institute at the U.S. Army War College. He holds a bachelor's degree in security and risk analysis from Pennsylvania State University and a master's degree in security studies from Georgetown University. [rmccormick@csis.org]

Greg Sanders—is a Fellow in the International Security Program and Deputy Director of the Defense-Industrial Initiatives Group at CSIS, where he manages a research team that analyzes data on U.S. government contract spending and other budget and acquisition issues. In support of these goals, he employs SQL Server, as well as the statistical programming language R. Sanders holds a master's degree in international studies from the University of Denver, and he holds a bachelor's degree in government and politics and a bachelor's degree in computer science from the University of Maryland. [gsanders@csis.org]

Andrew Hunter—is a Senior Fellow in the International Security Program and Director of the Defense-Industrial Initiatives Group at CSIS. From 2011 to 2014, he served as a senior executive in the Department of Defense, serving first as Chief of Staff to Under Secretaries of Defense for Acquisition, Technology, and Logistics Ashton B. Carter and Frank Kendall before directing the Joint Rapid Acquisition Cell. From 2005 to 2011, Hunter served as a Professional Staff Member of the House Armed Services Committee. Hunter holds a master's degree in applied economics from Johns Hopkins University and a bachelor's degree in social studies from Harvard University. [ahunter@csis.org]

Abstract

This report, the latest in an annual series, examines the trends in what the U.S. Department of Defense (DoD) is buying, how the DoD is buying it, and from whom the DoD is buying. This year's study focuses on the acquisition system's response to the 2018 National Defense Strategy's emphasis on peer and near-peer competition and the emergence of a new research and development (R&D) paradigm. This report looks at whether there has been a significant shift in the DoD's investment posture between platform portfolios and the composition of R&D spending between contracts and Other Transaction Authority (OTA) agreements. Additionally, this report includes analysis of the topline DoD contracting trends.

Introduction

This paper examines the notable trends in what, how, and from whom the Department of Defense (DoD) has been buying. These trends provide critical insights into the DoD's priorities and the industrial base's response to those priorities. These trends provide vital information describing the timely situation of defense acquisition. Since Fiscal Year (FY) 2020 was one of the first years in which the budget was developed following and in accordance with the release of the 2018 National Defense Strategy (NDS), the trends for FY2020 are particularly interesting. Identifying and discussing the shifts in the defense industrial base and acquisition system in response to the NDS are of particular intrigue given that previous Naval Postgraduate School (NPS)—funded research showed that it can take the acquisition system years to respond to changes in priorities.

This report uses the methodology used in Center for Strategic and International Studies (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 <https://www.usaspending.gov/>. DIIG now maintains its own database of federal spending, which includes data from 1990 to 2020. This database is a composite of



FPDS and DD350 data. For this report, the study team relied on FY2000 to FY2020 data. All dollar figures are in constant FY2020 dollars, using Office of Management and Budget (OMB) deflators. For additional information about the CSIS contracting data analysis methodology, see <https://github.com/CSISdefense/Lookup-Tables>.

For this paper, CSIS focused on the following research questions:

- **Area:** Has there been a significant shift in DoD investment between and within the areas of products, services, and research and development (R&D) to reflect the 2018 National Defense Strategy priorities?
- **Platform Portfolio:** Have there been significant changes across the different sectors of the defense industrial base?
- **Other Transaction Authorities (OTA):** What are the significant trends in OTA usage across the DoD and how does the growth of OTAs affect the DoD's technology development efforts?
- **Components:** Have there been significant shifts in defense contracting trends between the major DoD components?

DoD Contract Spending in a Budgetary Context

Defense contract spending continued to grow in FY2020, at nearly twice the rate of growth of overall defense spending. As shown in Figure 1, total defense contract obligations increased from \$391.5 billion to \$421.3 billion, an 8% increase. Comparatively, defense spending increased less than 4%, rising from approximately \$707 billion to \$732 billion. Defense contract spending accounted for 57.5% of defense spending in FY2020, the highest level this century. This continues the ongoing trends over the course of the defense contracting rebound where defense contract spending has grown at rates faster than the overall rate of growth in defense spending. Between FY2015 and FY2020, overall defense spending increased 18% compared to the 41% growth in defense contract obligations. Given that the defense budget is likely to remain relatively flat in the coming years, it will be difficult for the DoD to maintain this level of defense contract spending.



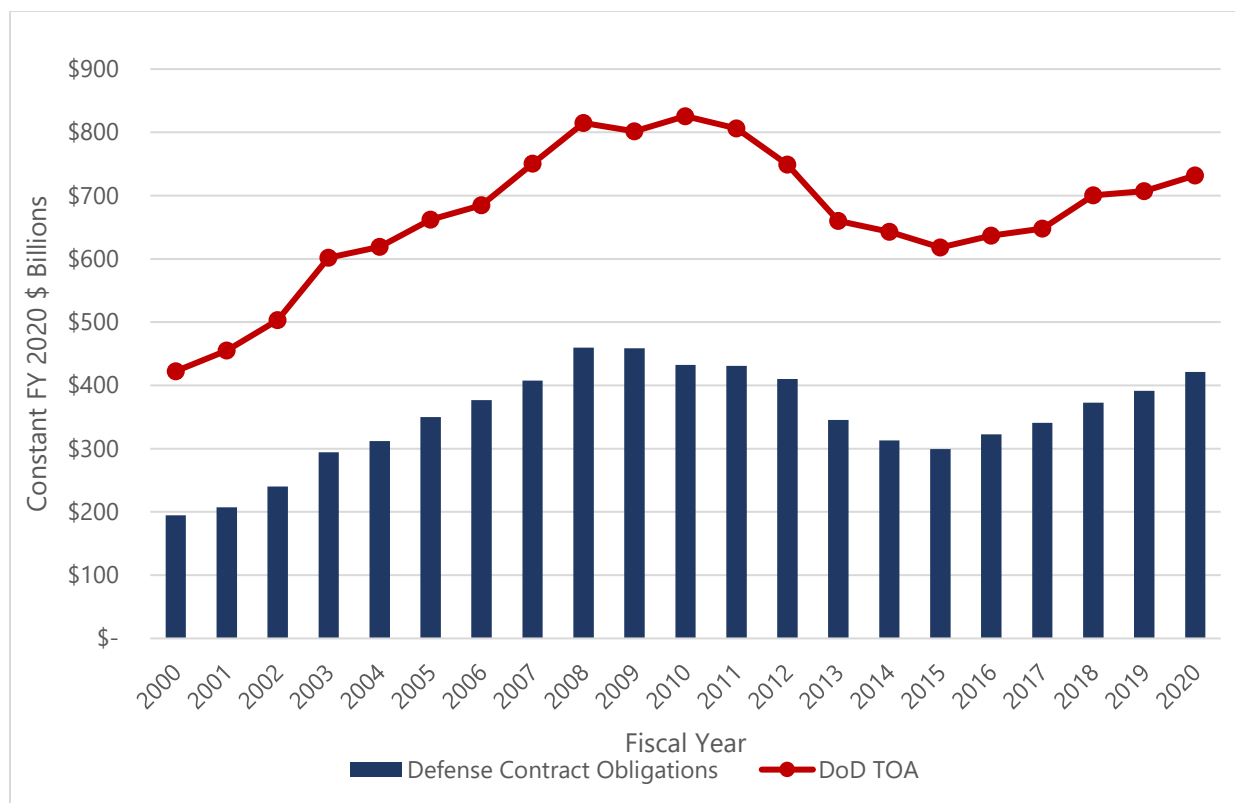


Figure 1. Defense Contract Obligations Versus Budget Authority, 2000–2020

Source: FPDS; Department of Defense, "National Defense Budget Estimates for Fiscal Year 2021 (Green Book)," Office of the Under Secretary of Defense (Comptroller), April 2020; Department of Defense, "Analysis of the FY 2021 Defense Budget" Todd Harrison and Seamus Daniel, CSIS (Washington, DC), August 2020; CSIS analysis

In addition to the growth in defense contract spending, OTA obligations have continued to grow as the DoD increasingly uses them in response to the FY2016 legislative changes in the National Defense Authorization Act (NDAA), aimed at incentivizing their usage. DoD OTA obligations increased 113% in FY2020, rising from \$6.6 billion in FY2019 to \$14.1 billion in FY2020. Between FY2015 and FY2020, DoD OTA obligations increased 2030%. Of note, while the sum of OTA dollars obligated increased 113% last year, the Sum of Base and All Options Value or potential total contract value of DoD OTA obligations only increased 1%. This could suggest that while OTAs are likely to continue to rise in future years, we might not see the same level of year-over-year growth that we've seen in recent years.

Figure 2 shows defense OTA obligations from FY2015 to FY2020.

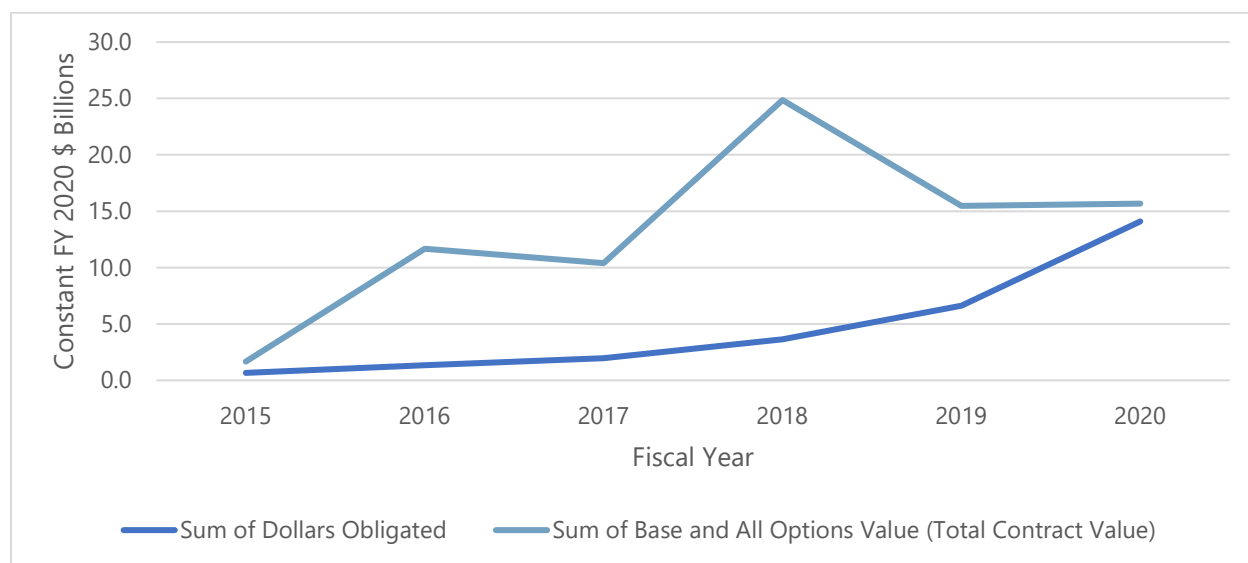


Figure 2. Defense OTA Obligations, 2015–2020

Source: FPDS; CSIS analysis

What Is the DoD Buying?

As previous CSIS research showed, you started to see some of the “emergent shifts in the composition of the DOD’s investment portfolio” in the FY2019 contract data (McCormick, 2020). You continue to see some of these shifts in the DoD’s investment portfolio, but there are also some outliers. Defense Products, which had started to slow down in FY2019, rebounded strongly in FY2020. Defense Products contract obligations increased 11% in FY2020, rising from \$197.2 billion to \$218 billion. Defense Services contract obligations continued to grow in FY2020, but at not at the same rate as before. Defense Services contract obligations increased from \$164.0 billion in FY2019 to \$173.1 billion, a 6% increase. Defense R&D contract obligations fell slightly in FY2020, falling from \$30.3 billion to \$30.2 billion, a 0.5% decline. However, that does not tell the full story as OTAs are increasingly supplementing contracts, particularly for R&D activities. Overall, if you include both R&D Contract and OTA Obligations, defense R&D spending increased 22% in FY2020, rising from \$37.0 billion to \$45.0 billion.



Figure 3 shows defense contract obligations by area from FY2000 to FY2020.

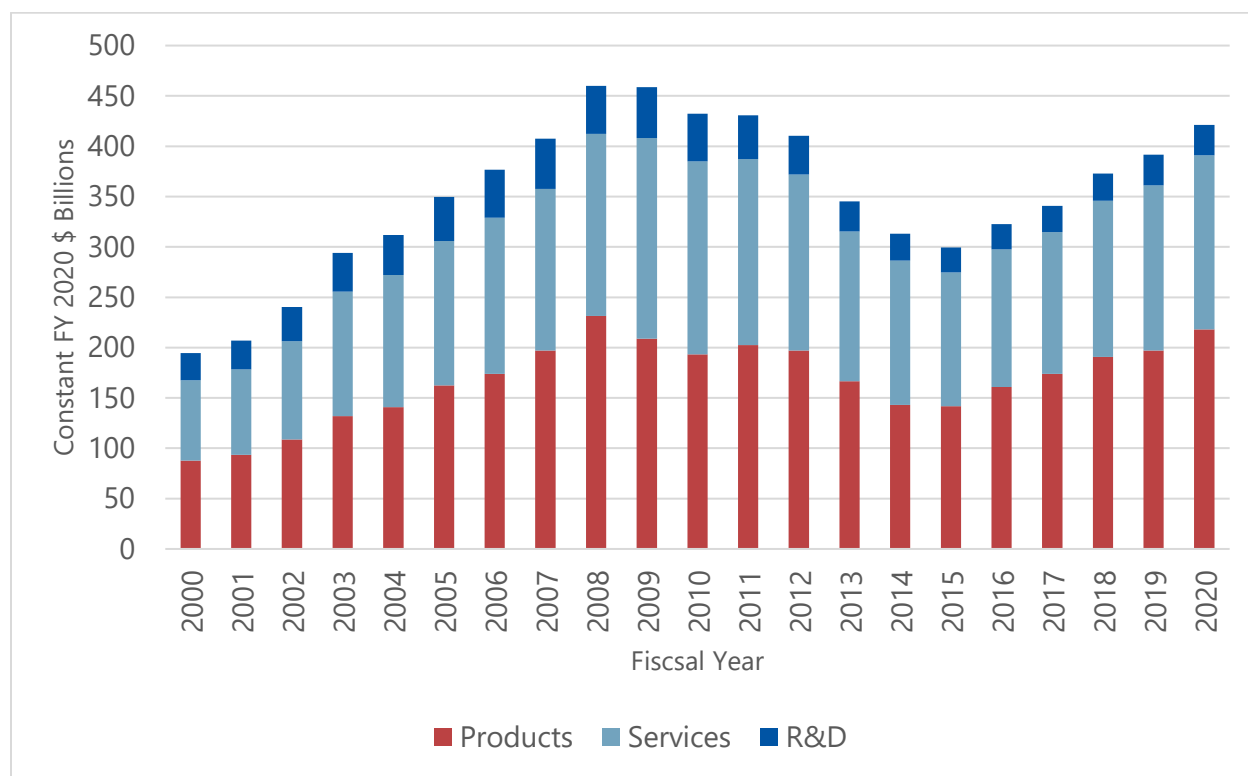


Figure 3. Defense Contract Obligations by Area, 2000–2020

Source: FPDS; CSIS analysis

Defense Contract Obligations by Stage of R&D

Previous CSIS analysis last year showed evidence that there is a “paradigm shift ongoing in the DoD as OTAs have become a core element in the DoD’s approach to technology acquisition over the last five years.” While we have seen some recovery in defense contracting in “the early and mid-stages of the development pipeline for major weapon systems” (McCormick, 2020a), that has not yet proven out for the later stages. However, there was evidence to suggest that “OTAs are partially supplanting contracts in the mid-to-late stages of the development pipeline for major weapon systems” (McCormick, 2020b).

There were mixed fortunes for the two early-stage R&D activities, Basic Research (6.1) and Applied Research (6.2) in FY2020. Defense Basic Research defense contract obligations declined 5% in FY2020, falling from \$4.0 billion to \$3.8 billion. Applied Research contract obligations increased from \$7.9 billion to \$8.0 billion, a 1% increase. Between FY2015 and FY2020, Basic Research and Applied Research contract obligations increased 10% and 18% respectively.

Similar to the early-stage R&D activities, there were divergent fortunes for the two mid-stage R&D activities, Advanced Technology Development (6.3) and Advanced Component Development & Prototypes (6.4), after several years of growth in both. Advanced Technology Development contract obligations declined slightly in FY2020, falling from \$6.2 billion in FY2019 to \$6.0 billion in FY2020, a 3% decline. Advanced Component Development & Prototypes contract obligations increased 8%, rising from \$7.3 billion in FY2019 to \$7.9 billion in FY2020. Between FY2015 and FY2020, Advanced Technology Development (6.3) and Advanced



Component Development & Prototypes (6.4), contract obligations have increased 40% and 84% respectively.

The data continue to suggest that “OTAs are partially supplanting contracts in the mid-to-late stages of the development pipeline for major weapon systems” (McCormick, 2020b). Last year, System Development & Demonstration (6.5) contract obligations declined 8% and have declined 18% between FY2015 and FY2020. Similarly, Operational Systems Development (6.7) contract obligations declined 7% in FY2020 and are down 39% from where they were in FY2020. Meanwhile, defense OTA R&D obligations went from \$6.7 billion in FY2019 to \$14.8 billion in FY2020, a 122% increase. Between FY2015 and FY2020, defense OTA R&D obligations have increased 1,850%.

Figure 4 shows defense contract obligations by stage of R&D from FY2000 to FY2020.

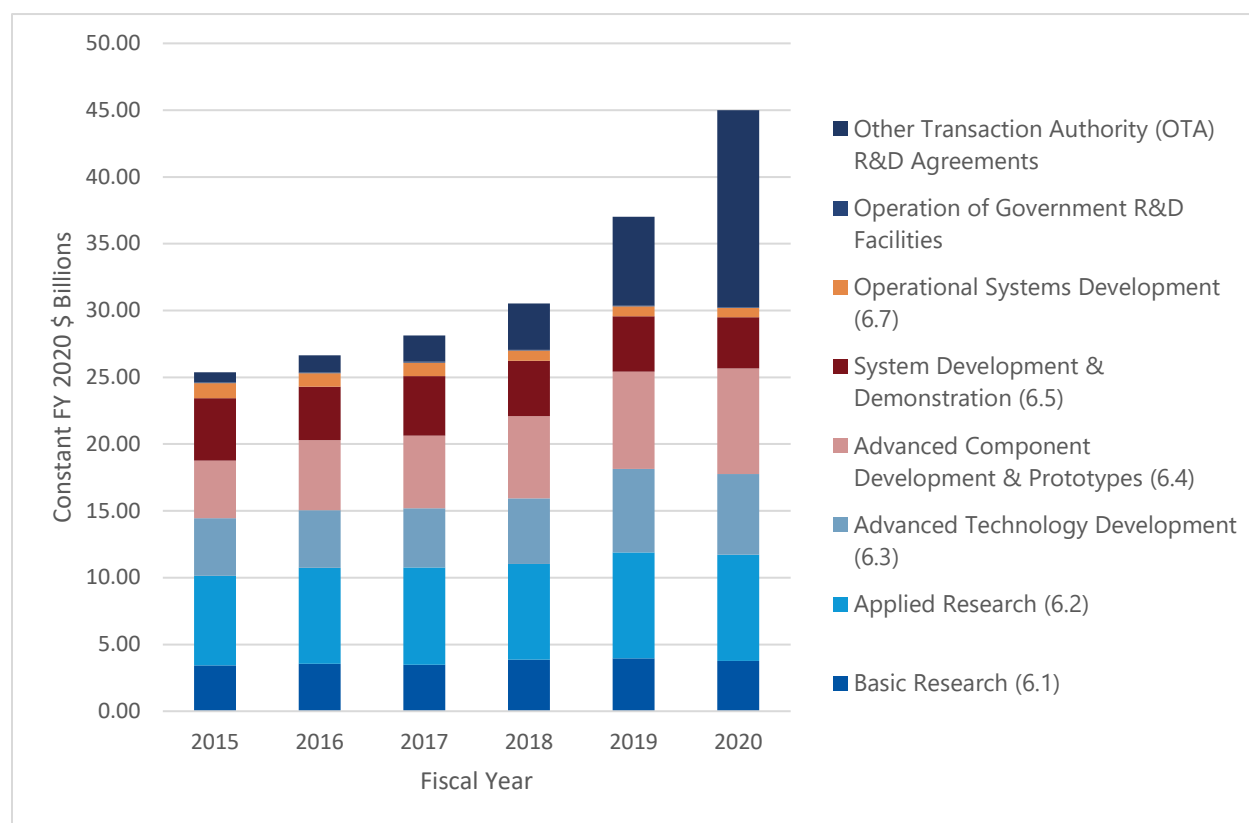


Figure 4. Defense R&D Obligations by Stage of R&D, 2015–2020

Source: FPDS; CSIS analysis



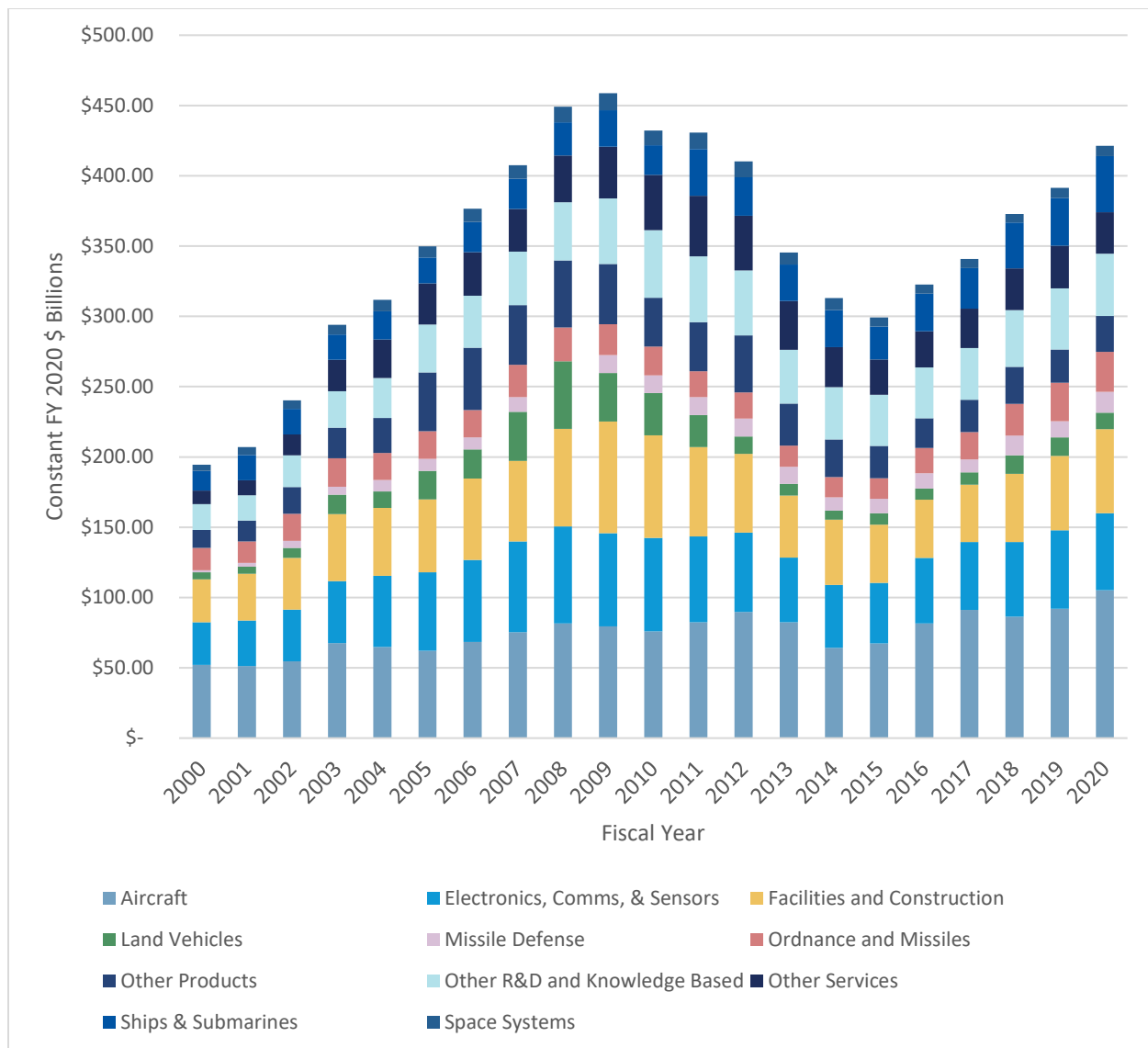


Figure 5. Defense Contract Obligations by Platform Portfolio, 2000–2020

Source: FPDS; CSIS analysis

Similar to previous years, the data show mixed trends for the platform portfolios emphasized in the NDS: Air and Missile Defense, Nuclear, Space, Cyberspace, and C4ISR (Department of Defense, 2018).

Over the course of the defense contracting rebound, Air and Missile Defense contract obligations have whipsawed back and forth between growth and declines, and FY2020 was no exception to that trend. After declining 18% between FY2018 and FY2019, Air and Missile Defense contract obligations rebounded in FY2020. Air and Missile Defense contract obligations increased from \$11.5 billion in FY2019 to \$14.8 billion in FY2020, a 29% increase. Between FY2015 and FY2020, Air and Missile Defense contract obligations have increased 45%.

After seeing substantial growth in FY2019, defense Space Systems contract obligations slightly came back down to Earth last year. Defense Space Systems contract obligations fell 1% last year, falling from \$7.3 billion in FY2019 to \$7.2 billion in FY2020. Despite this decline, defense Space Systems contract obligations are up 12% between FY2015 and FY2020.



Electronics, Communications, and Sensors (EC&S) had seen steady growth at the start of the defense contracting rebound, but that trend came to a halt in FY2020. EC&S contract obligations declined from \$55.8 billion in FY2019 to \$54.9 billion in FY2020, a 2% decline. EC&S contract obligations increased 28% between FY2015 and FY2020.

Ordnance and Missiles contract obligations continued to increase in FY2020, but not at the level higher than the overall rate of growth like they had done so in previous year. Last year, defense Ordnance and Missile contract obligations increased 4%, less than half the overall rate of growth. While Ordnance and Missiles grew at a rate less than the overall growth rate last year, Ordnance and Missiles contract obligations grew 95% between FY2015 and FY2020, over twice the overall rate of growth in defense contract obligations.

Outside of the platform portfolios emphasized in the NDS, there were interesting trends in the three major weapon system sectors: Aircraft; Ships & Submarines; and Land Vehicles.

After notable whiplash between growth and declines at the start of the defense contracting rebound, defense Aircraft contract obligations have continued their steady growth over the last 2 years. Defense Aircraft contract obligations increased from \$92.0 billion in FY2019 to \$105.1 billion in FY2020, a 14% increase. Between FY2015 and FY2020, defense Aircraft contract obligations have increased 56%.

The Ships & Submarines had been steadily growing throughout the defense contracting rebound but saw sizable growth in the last year. In FY2020, Ships & Submarines contract obligations increased 18%, rising from \$34.0 billion to \$40.0 billion, a new record high level. Ships & Submarines contract obligations increased 70% between FY2015 and FY2020.

The Land Vehicles sector had been on the rebound after experiencing the brunt of the cuts of sequestration and the defense drawdown but experienced a setback in FY2020. Defense Land Vehicles contract obligations fell from \$13.2 billion in FY2019 to \$11.7 billion in FY2020, an 11% decline. Despite this 1-year decline, Land Vehicles contract obligations increased 43% between FY2015 and FY2020, a rate slightly than the overall rate of growth.

Defense Components

Navy contracting obligations, which had been on the decline at the start of the defense contracting rebound, have continued their bounce back over the last 2 years. Navy contracting obligations increased 20% last year, rising from \$124.5 billion in FY2019 to \$150.0 billion in FY2020. As a share of total defense contract obligations, the Navy went from 31.8% to 35.6%, a 20-year high. Between FY2015 and FY2020, Navy contract obligations have increased 62%, the second-largest growth among DoD components only behind the Missile Defense Agency.

The Army continued its slow but steady growth path that it has been on over the course of most of the defense contracting rebound. Army contract obligations increased from \$96.7 billion in FY2019 to \$100.1 billion in FY2020, a 3% increase. As a share of total defense contract obligations, the Army continued to fall slightly, from 24.7% to 23.8%. Between FY2015 and FY2020, Army contract obligations have increased 26%, the lowest among the three military services and well below the overall growth in defense contract obligations (41%).

After 2 years of steady growth between FY2018 and FY2019, Air Force contract obligations stalled out in FY2020. Air Force contract obligations went from \$77.5 billion in FY2019 to \$77.8 billion in FY2020, a 0.5% increase. As a share of total defense contract obligations, the Air Force fell from 19.8% to 18.5%. Between FY2015 and FY2020, Air Force contract obligations increased 26%.

The Missile Defense Agency (MDA) continued on its ascendent path that it has been on the last few years. MDA contract obligations increased from \$9.0 billion in FY2019 to \$12.3



billion in FY2020, a 37% increase. Between FY2015 and FY2020, MDA contract obligations increased 141%, the highest level among all DoD components and nearly 3.5 times the rate of overall growth in defense contracting obligations.

The Defense Logistics Agency (DLA) continued to decline, as it has done so over the past few years. DLA contract obligations declined 7% last year, falling from \$45.1 billion in FY2019 to \$41.9 billion in FY2020. Despite the declines in recent years, DLA contract obligations are still up 24% in FY2020 from where they were in FY2015.

Figure 6 shows defense contract obligations by component from FY2000 to FY2020.

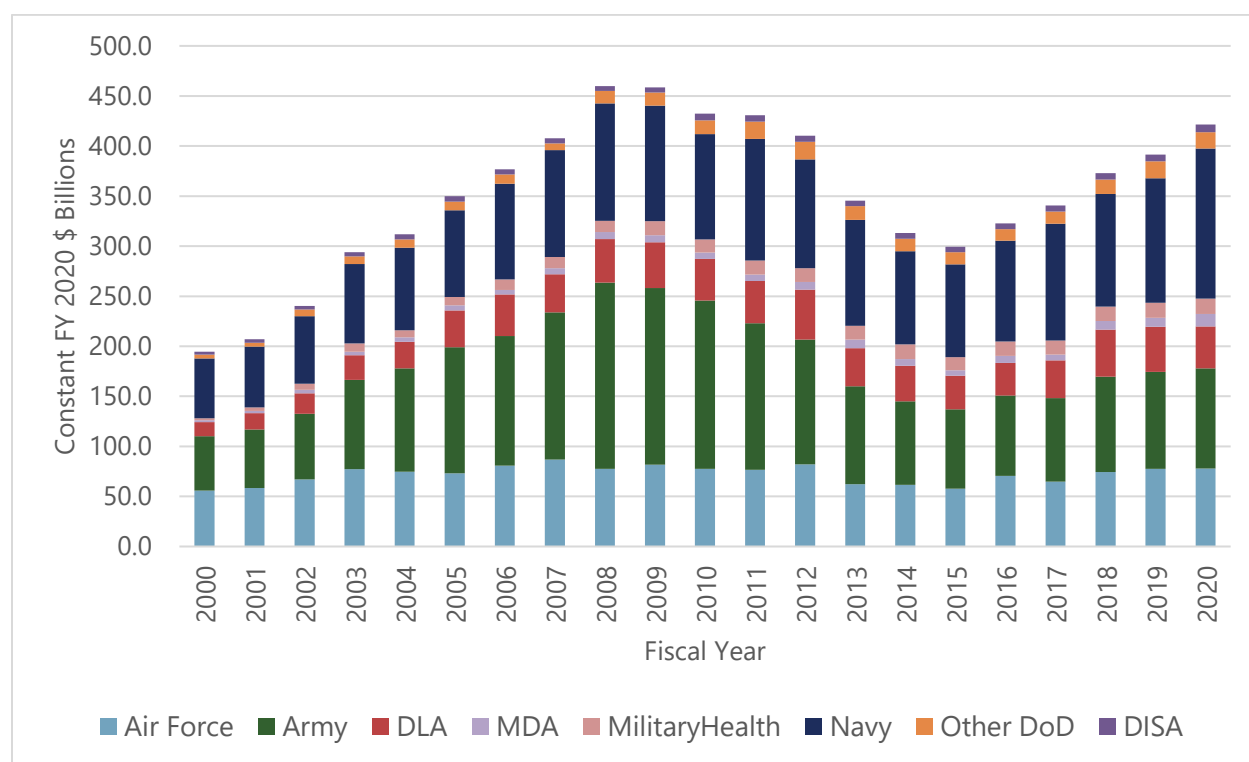


Figure 6. Defense Contract Obligations by Component, 2000–2020

Source: FPDS; CSIS analysis

Conclusion

Defense Contract Obligations Continued to Grow Even as Defense Budget Levelled Off

Defense contract spending continues to grow in FY2020 even as defense spending has started to level off some. In FY2020, defense contract spending grew at nearly twice the overall rate of growth in defense spending. Defense contract spending accounted for 57.5% of defense spending in FY2020, the highest level this century. If the defense budget remains relatively flat in the coming years as currently expected, it will be difficult for the DoD to maintain this level of defense contract spending.

Mixed Trends in the 2018 National Defense Strategy Priority Platform Portfolios

The data show mixed trends for the platform portfolios emphasized in the NDS (Air and Missile Defense, Nuclear, Space, Cyberspace, and C4ISR).

EC&S declined 2% in FY2020 after several years of growth. Despite this decline, EC&S contract obligations increased 28% between FY2015 and FY2020.



Space Systems fell 1% in FY2020 after experiencing growth the previous year.

Air and Missile Defense contract obligations continued to whipsaw over the course of the defense contracting rebound, rebounding again in FY2020, seeing a 29% increase after a sizeable decrease the preceding year.

Mixed Growth in Early and Mid-Stage of the Weapon Systems Pipeline

The data show mixed trends in both the early and mid-stages of the weapon systems pipeline.

In the early R&D stages, Basic Research (6.1) contract obligations declined 5% while Applied Research (6.2) increased 1%. In the mid-stage, Advanced Technology Development (6.3) and contract obligations declined 3% while Advanced Component Development & Prototypes (6.4) contract obligations increased 8%.

OTA Usage Continues Increasing, Supplementing Contracts in the Mid-to-Late Stages of the Development Pipeline for Major Weapon Systems

OTA usage across the DoD continues to surge in response to the FY 2016 NDAA legislative changes that aimed to incentivize their usage. In FY2020, defense R&D OTA obligations increased from \$6.6 billion to \$14.1 billion, a 113% increase. Since FY2015, defense R&D OTA obligations have increased 2,030%.

The impact of R&D OTAs is most notable in the late stages of the development pipeline for major weapon systems, where contracting has largely fallen off a cliff. System Development & Demonstration (6.5) and Operational Systems Development (6.7) contract obligations declined 8% and 7% respectively last year. However, comparatively, defense OTA R&D obligations went from \$6.7 billion in FY2019 to \$14.8 billion in FY2020, a 122% increase. While not all of that \$14 billion goes to late-stage weapon systems development, a sizable percentage does.

As highlighted in seven recent CSIS reports, the growth in OTAs is massive, and it is increasingly clear that OTAs are supplementing contracts in certain traditional defense acquisition activities and that a new R&D paradigm is emerging. However, the full implications of that final paradigm shift for both government and industry remains unknown.

Navy and Air Force Bounce Back; Army Slows Down, but Continues Growing

Navy contract obligations continued their rebound into FY2020, increasing 20%. As a share of total defense contract obligations, the Navy rose from 31.8% to 35.6%.

Air Force contracting continued its whipsaw over the course of defense contracting rebound, stalling out in FY2020 after 2 years of steady growth. Air Force contract obligations went from \$77.5 billion in FY2019 to \$77.8 billion in FY2020, a 0.5% increase.

The Army continued its slow but steady growth path that it has been on over the course of most of the defense contracting rebound, increasing 3% in FY2020. Between FY 2015 and FY2020, Army contract obligations have increased 26%, the lowest among the three military services and well below the overall growth in defense contract obligations (41%).

Final Thoughts

The overall picture that emerges from a detailed examination of the 2020 data reveals important signals for the future of the defense acquisition system. First, it appears that contract spending may either be approaching or has reached a local peak in the typical boom and bust cycle of defense acquisition. Second, the 5-year rebound in the acquisition system made some progress in addressing the priorities of the NDS, but few if any of the NDS priority areas really stand out in their performance compared to areas of the defense acquisition system that were not so prioritized. These two factors create a challenge for the department as resources tighten,



which may compel more profound shifts in support of various sectors of the acquisition system. Lastly, the growth of OTAs has substantially reshaped the system development pipeline for the DoD, altering how the department ingests new technology and who participates and controls that process. This shift will likely reshape relationships in the defense industry as well over time, but the nature of that reshaping and what new centers of control emerge is very much open to debate.

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