



Rising Demands and Proliferating Supply: **The Future of the Global UAS Market**

Alexander Holderness
Defense Industrial Initiates Group, International Security Program
Center for Strategic and International Studies (CSIS)
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Research Questions Examined Both the U.S. and Foreign UAS markets

- What is the current state of U.S. government UAS contracting?
- How is the U.S. UAS market different from other platform portfolio markets?
- What are major trends in the global UAS market, and which nations are taking the lead in providing and proliferating capabilities?

Data Gathering Required Manual Tagging and Classifications Categorizing Different Systems

Data Gathering

- Federal Procurement Data System (FPDS) tracks “complete unmanned aircraft systems and subordinate air vehicles”
 - Study team manually tagged relevant MDAPs and searched transaction descriptions.
- Teal Group estimates that only half of UAS spending in the FY23 Budget is Unclassified

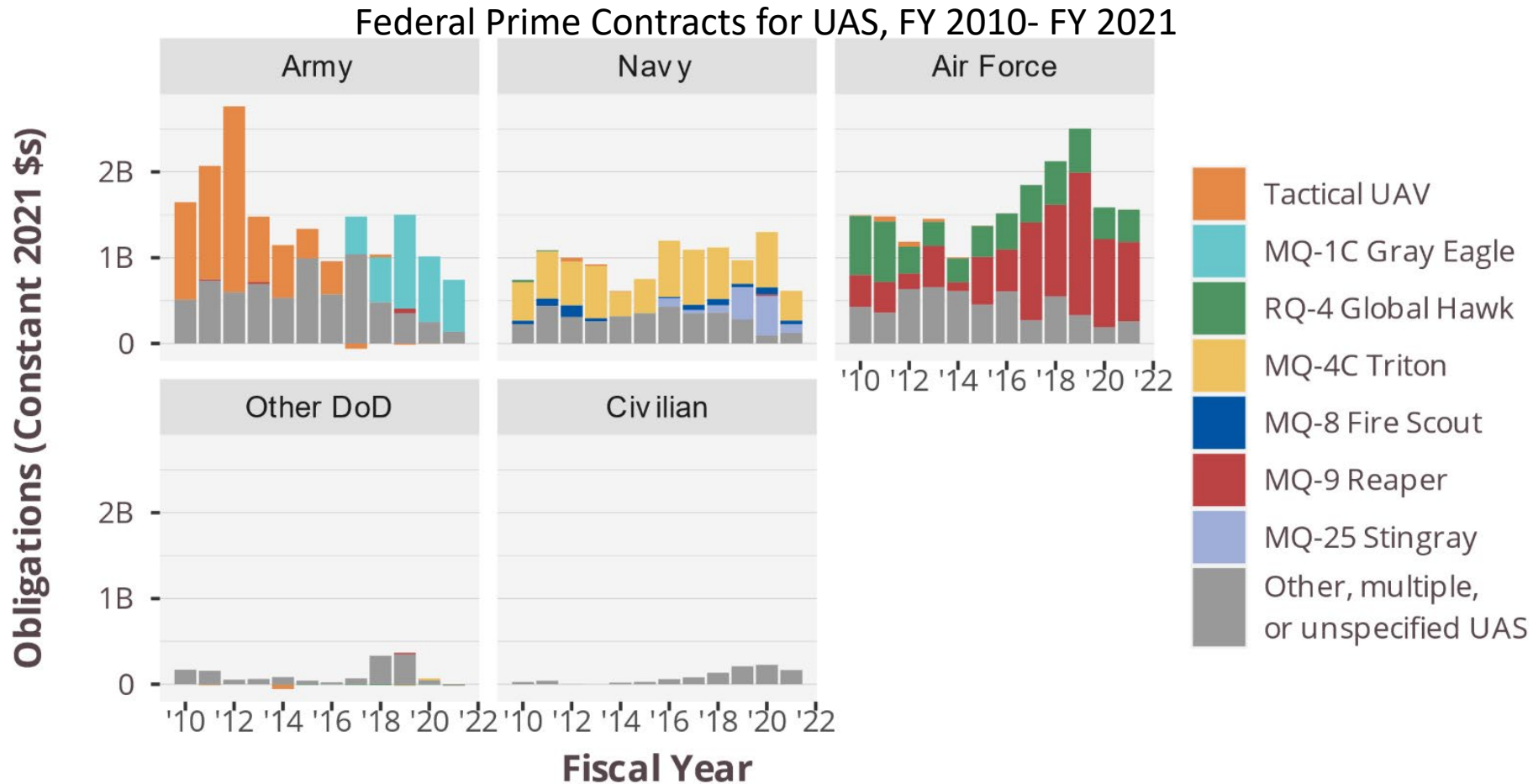
Classifying Systems

Category	Concept	Operational Complexity	Common Uses	Examples
Unarmed UAS	Long kill chain	High	Artillery spotting, battlefield surveillance	DJI Drones, Global Hawk, PD-2
Armed UAS	Short kill chain and long kill chain	Moderate	As above, as well as tracking and destroying targets needing long-term monitoring	Reaper, TB2
Loitering Munition	Self-contained kill chain	Low	Suppression of enemy air defenses, precision strikes requiring target verification	Switchblade, Harop

SIPRI Data Captures the Global Market, but Requires a Specific Research Approach

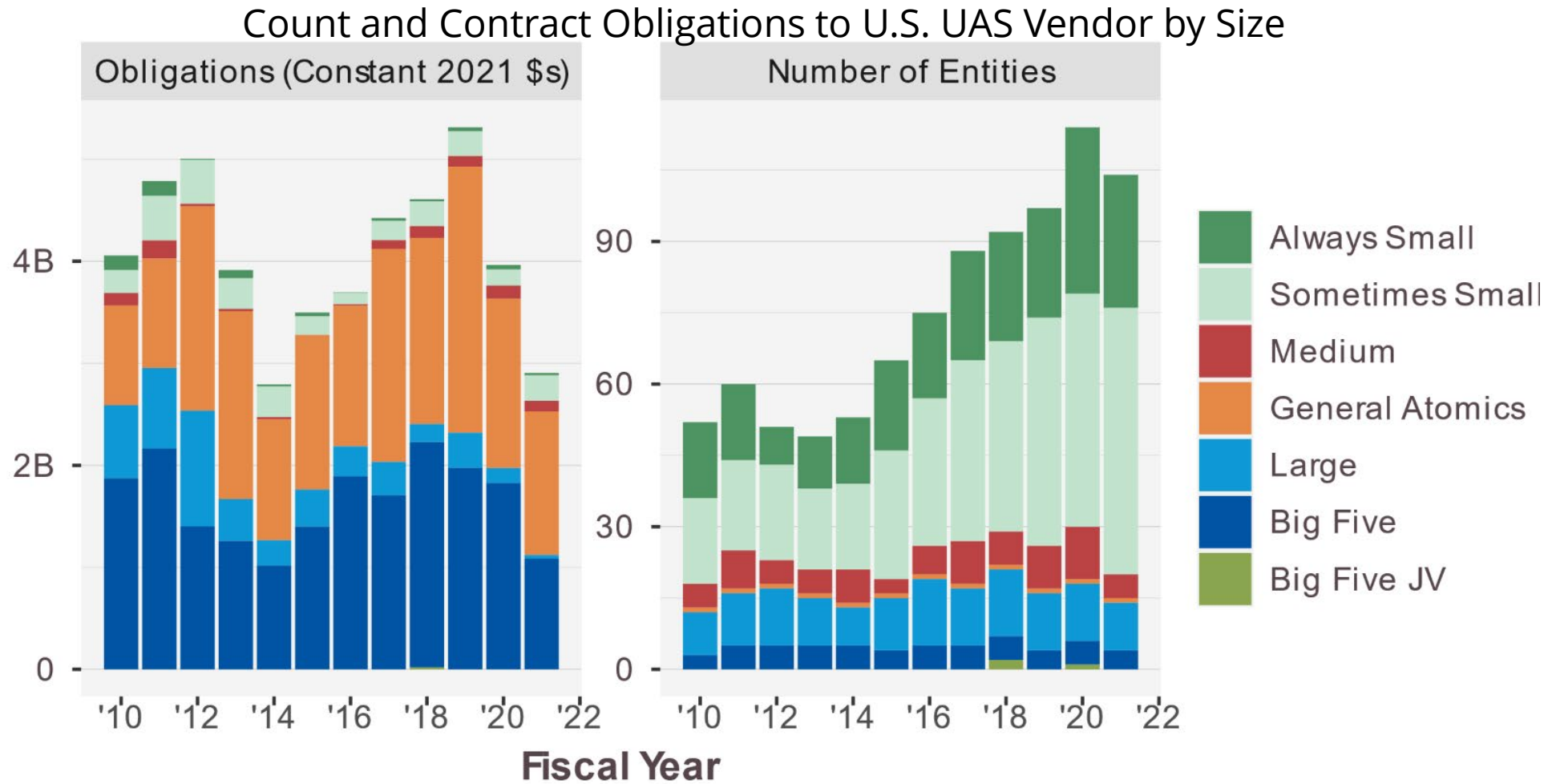
- The Stockholm International Peace Research Institute (SIPRI) tracks deliveries of weapon systems worldwide.
- SIPRI uses its own intern quantification metric called Trend Indicator Value (TIV).
- Using TIV as opposed to unit count can skew analysis.

U.S. Buying Focused Largely on Large Systems that Offered Capabilities for Low-Intensity Conflict



Source: FPDS; CSIS analysis.

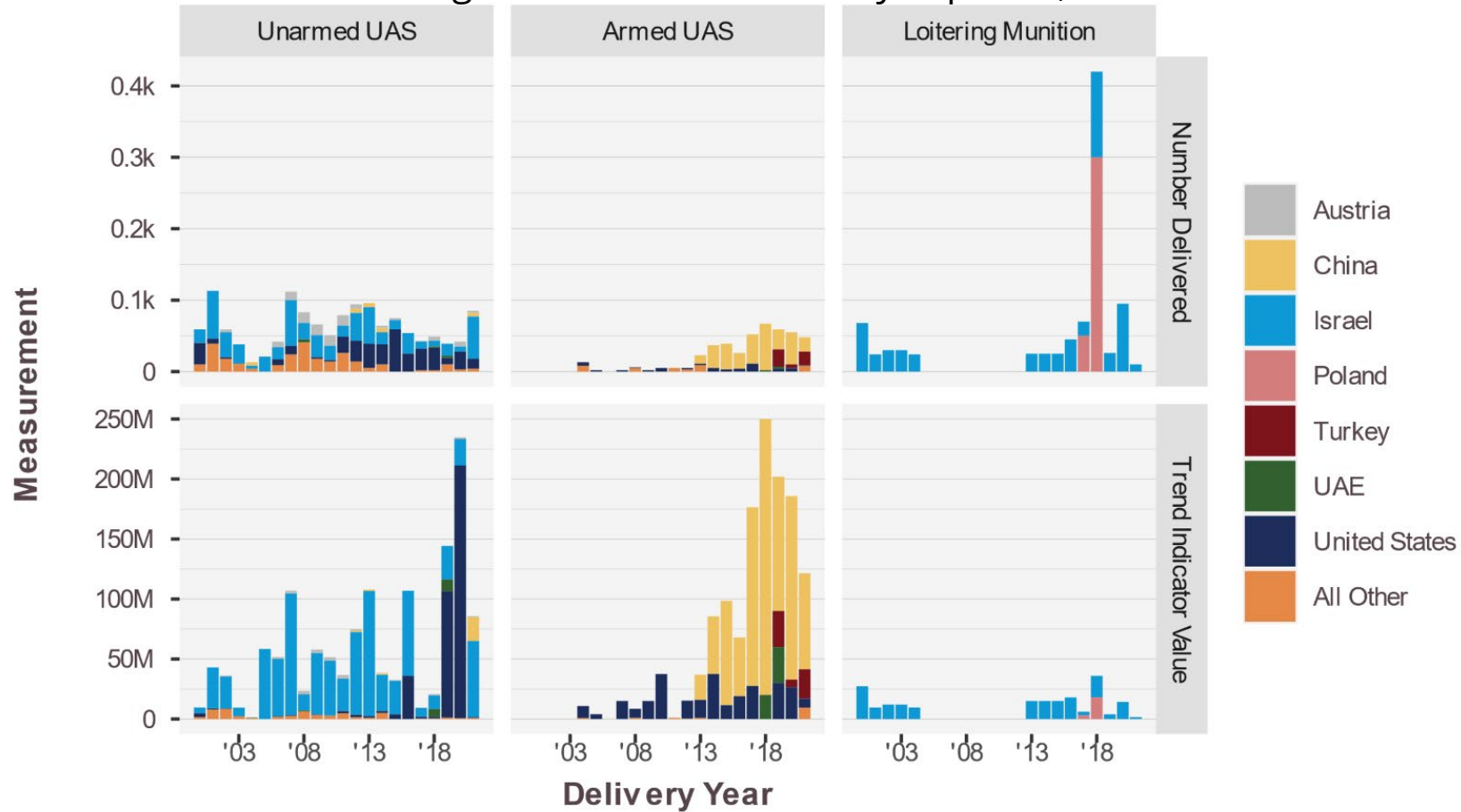
Unlike Other Sectors, the UAS Market is not Dominated by Legacy and Big 5 Contractors



Source: FPDS and CSIS analysis.

China, with limited Export Controls, is the Dominant Exporter of Armed UAS, with Israel also Playing an Important Role

UAS and Loitering Munitions Deliveries by Exporter, 2000-2021



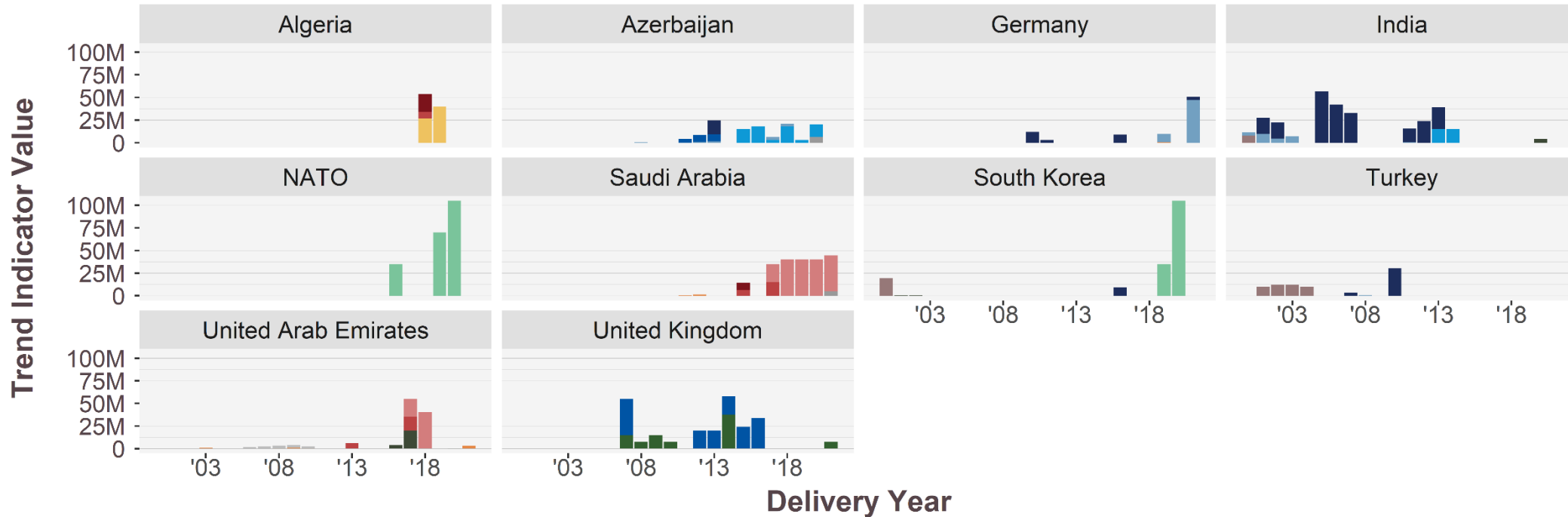
Source: SIPRI Arms Transfers Database, June 12, 2022, <https://www.sipri.org/databases/armstransfers>;
CSIS analysis.

The Global UAS Market is Evolving, and Will Continue to Change as Technology and Missions Advance

- The U.S. military continues to invest in large UAS.
- Small and medium companies are major players in the UAS market, signaling a potential testbed for approaches to harnessing innovation.
- China has become a dominant player in the international market.

Back Up

Top 10 Importers by Platform and Seller, 2000-2021

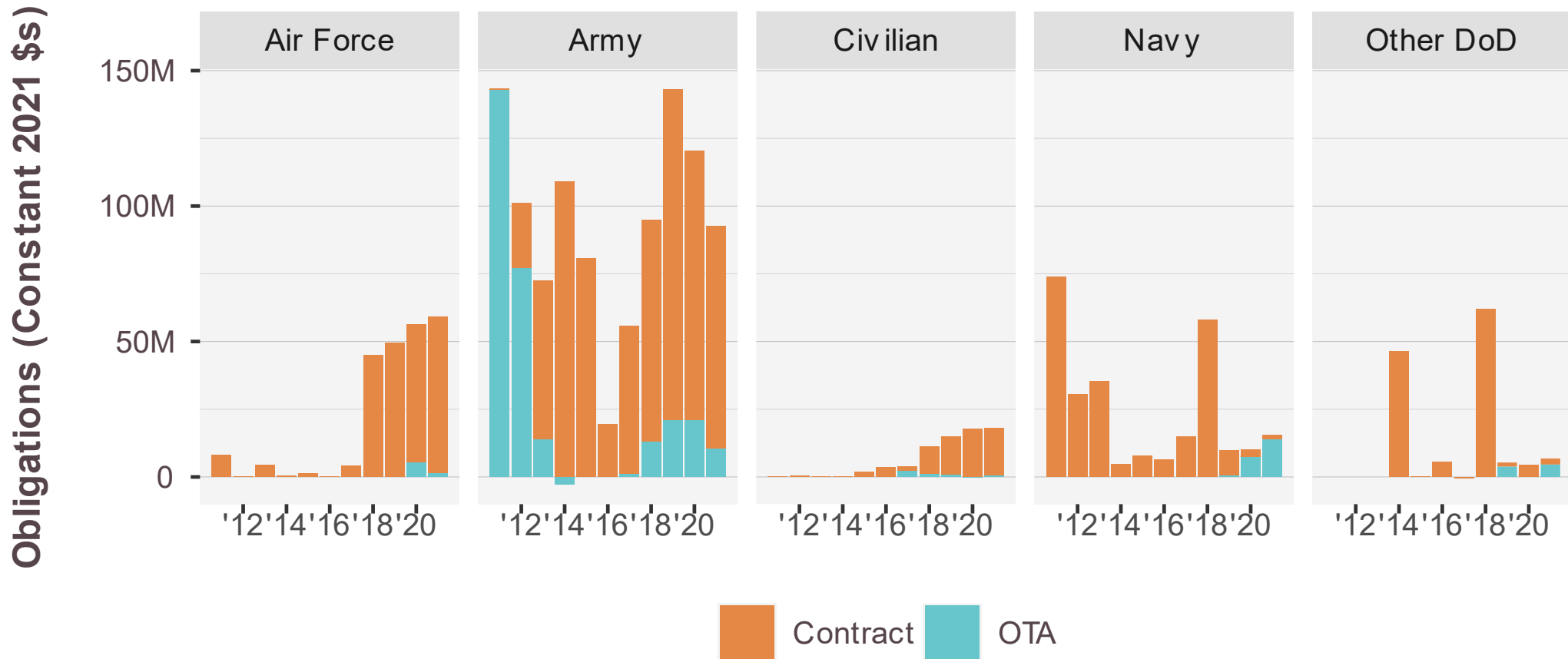


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|-----------------------------|-------------------------------------|-------------------------------------|
| ■ Austria (Camcopter S-100) | ■ Israel (Hermes-450) | ■ United States (MQ-9 Reaper) |
| ■ China (CH-3/CH-4) | ■ Israel (Other UAS) | ■ United States (RQ-4A Global Hawk) |
| ■ China (Wing Loong-2) | ■ Israel (Loitering Munitions) | ■ United States (Other UAS) |
| ■ China (Other UAS) | ■ Turkey (Bayraktar-2/Karayel) | ■ All Other |
| ■ Israel (Heron) | ■ UAE (Yabhon United-40 & Flash-20) | ■ Unlabeled |

Source: "SIPRI Arms Transfers Database," SIPRI, June 12, 2022, <https://www.sipri.org/databases/armstransfers>; CSIS analysis.

Back Up

Federal Obligations for UAS using Any Commercial Authorities or OTA, FY 2011- FY 2021



Source: FPDS; CSIS analysis.