SYM-AM-18-061

PROCEEDINGS
OF THE
FIFTEENTH ANNUAL ACQUISITION RESEARCH SYMPOSIUM

WEDNESDAY SESSIONS
VOLUME I

Acquisition Research:
Creating Synergy for Informed Change

May 9–10, 2018

Published April 30, 2018

Prepared for the Naval Postgraduate School, Monterey, CA 93943.

ACQUISITION RESEARCH PROGRAM
GRADUATE SCHOOL OF BUSINESS & PUBLIC POLICY
NAVAL POSTGRADUATE SCHOOL

Contractual Flow-Down Clauses: Deterrence to Non-Traditional Defense Contractors From Doing Business With DoD

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Abstract

Section 887 of the National Defense Authorization Act (NDAA) for Fiscal Year 2017 directed the Secretary of Defense to conduct a study of contractual flow-down clauses related to major defense acquisition programs (MDAPs) and subcontractors. The MDAP data sample indicates no clear misapplication of flow-down clauses from prime contractors to subcontractors; however, the significant number of flow-down clauses reflects the voluminous nature of the Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS). The existing and growing burden of regulatory compliance will reduce private sector participation in MDAPs, and the possibility exists that in the future, the Department of Defense may not have ready access to advanced technologies and capabilities for MDAPs that reside in the private sector due in part to this regulatory burden.

Introduction

Project Background

The Congress perceives that regulatory burden may deter many types of innovative firms from doing business with the Department of Defense (DoD) and that prime contractors exacerbate the reluctance of firms to engage in defense business by overzealously extending regulatory requirements to subcontractors.

In this context, the Congress, in the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2017 (Public Law 114-328), Section 887(a), required the Secretary of Defense to "conduct a review of contractual flow-down provisions related to major defense acquisition programs on contractors and suppliers, including … nontraditional defense contractors."

As directed by Section 887(b), the DoD asked the Institute for Defense Analyses (IDA) to conduct the required review, specifically to

- Determine if there are instances in which flow-down clauses in contracts between DoD and prime contractors have been misapplied to the prime's subcontractors, through sampling of a limited number of major defense acquisition programs (MDAPs). The focus will be on clear misapplications and not administrative or extraneous misapplications, due to schedule and resource limits.
- Conduct literature reviews and interviews with governmental and commercial sector personnel in order to help determine the effect, if any, of Federal

Acquisition Regulation (FAR)/Defense Federal Acquisition Regulation Supplement (DFARS) flow-down provisions on DoD MDAPs in terms of access to advanced research and technology capabilities available in the private sector.

Defining FARS, DFARS, and Contract Flow-Downs

The FAR and its specified contract clauses control and shape most acquisitions by U.S. government executive branch agencies. Broadly stated, the FAR is a publicly accessible set of rules that controls almost all U.S. government contracting with the global commercial economy. It is a codification of general and permanent rules or regulations published by executive branch departments and agencies in the Code of Federal Regulations (CFR). The FAR represents Parts 1 through 53 of Title 48 of the CFR.[1]

Most federal agencies—including the DoD—have their own unique supplements to the FAR. The DFARS implements FAR policies and procedures and supplements the FAR to meet DoD-specific needs (Manuel, Halchin, & Lunder, 2015). The DFARS contains authorized deviations from the FAR as well as requirements of law, DoD-wide policies, and so forth. The DFARS needs to be read in conjunction with the FAR, as the FAR is the primary set of acquisition rules.[2]

When federal agencies undertake acquisitions, the FAR provides the basis for contract clauses that form the legally enforceable agreement between the U.S. government and a private contractor. In turn, when this same private contractor contracts with another firm to help execute the government's contract, this second firm becomes a U.S. government subcontractor. The first firm is identified here as the prime contractor. The prime contractor, in their contract with the subcontractor, will "flow-down" a number of the original contract clauses from the government contract. These are referred to hereafter as *flow-down clauses*. In general, our research seeks to understand the impact of these government flow-down clauses on actual and potential government subcontractors.

Analytical Approach

The NDAA reviews language focused on subcontractors and their contributions to the overall excellence of DoD military technical systems. These contributions are overwhelmingly regulated by the contractual relationship between the prime and subcontractor but are nevertheless shaped by FAR/DFARS flow-down clauses. Our analytical approach to this general issue and the specific areas of emphasis described by the NDAA began with first understanding the dynamic nature of the FAR/DFARS themselves. These regulations are living documents updated monthly. We established the December 2016 version of the FAR/DFARS as our baseline. Given their importance to commercial industry, contracting departments within commercial defense companies specialize in FAR/DFARS interpretation and application to DoD contracts. In turn, the FAR/DFARS have generated a broad set of written literature. The research team first examined this literature and then proceeded to interview government and commercial FAR/DFARS specialists with an emphasis on commercial primes and subcontractors. These

[1] The FAR is available at https://www.acquisition.gov/browsefar.
[2] The DFARS is available http://www.acq.osd.mil/dpap/dars/dfarspgi/current/. The DFARS is often accompanied by PGI memos.

interviews sampled current FAR/DFARS application and practice, solicited commentary on administrative burdens, and worked to understand subcontractor participation in DoD projects that addressed wider congressional concerns. Finally, the IDA team obtained copies of specific contracts between prime contractors and the government and then obtained related subcontracts to sample the practice of flow-down clauses over a range of MDAP types.

Source Data

We used three sources of data and information for this paper. First, we examined previous academic and commercial trade literature in and around the general subject area. We used a variety of subscription databases and publicly available information. Such information was instructive for understanding legal and business implications of FAR/DFARS flow-down clauses. Overall, the literature specifically addressing flow-down clauses is a relatively limited subset of the wider literature of FAR/DFARS and government contracting. Second, we employed qualitative research methods to supplement our literature review by interviewing industry and government representatives to gain practical insights. Last, we obtained copies of prime contracts from the DoD for a small number of MDAPs and then contacted the prime contractors to obtain a small sample of subcontracts pertaining to each prime MDAP contract. Each subcontract required non-disclosure agreements (NDAs) with the prime.

Flow-Down Clauses

FAR/DFARS flow-down clauses derive from the situation that most of the cost of an MDAP is driven by subsystems and components provided by subcontractors[3] to the prime. It is not unusual for the prime to only account for 10–20% of the total MDAP cost. Subcontractors—inclusive of basic parts and material suppliers that feed the upper tiers of the supply chain—account for the bulk of the defense industrial base (Gansler, 2011, pp. 132–133). MDAP prime contractors are often viewed as integrators of systems and parts and not necessarily as weapons manufacturers (Gansler, 2011; GAO, 2010).[4]

To produce and deliver an MDAP to the DoD, prime contractors enter into contracts with an array of firms. The vast majority of MDAP prime contractors are well-known major defense firms. The first tier of subcontractors are a diverse group of firms—it is not uncommon for some of the key first-tier subcontractors to be other large defense or industrial manufacturers. Below the first tier subcontractors are additional tiers that provide sub-components, parts, commodity type items (e.g., fasteners), and various basic materials. The subcontractors will often have contractual arrangements among themselves (e.g., a first tier provider of a major subsystem will obtain parts from a second tier and, in turn, the second tier parts firm will obtain raw materials from a third-tier firm).

The government nominally has no role in these subcontracts. By well-established legal precedents, the U.S. government has no "privity of contract"[5] with any of the two

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[3] *Subcontractor* is generally defined as any firm that supplies materials or provides services for a prime contractor or for a higher tier subcontractor (FAR 44.101).

[4] The following are estimates on percentage of costs driven by subcontractors of all tiers: (1) ships: 82–88%, (2) missiles: 70–80%, and (3) fighter aircraft: 80%.

[5] The U.S. government is not a direct party to the subcontract.

parties in a subcontract; the subcontract is viewed in the courts as exclusively between the commercial prime contractor and their subcontractor. In practice, subcontracts[6] under a DoD prime contract are "hybrid" contractual documents (Feldman, 2009).[7] They are combinations of clauses from the Uniform Commercial Code (UCC) as enacted by the various states (e.g., California or Connecticut), industry-preferred commercial clauses, and governmental clauses. Although the U.S. government disclaims any direct responsibility or liability for subcontracts, it does maintain a measure of control by both maintaining the right to approve subcontracts themselves and to direct the introduction of the flow-down clauses.[8] The clauses themselves are contained in FAR Part 52[9] and DFARS Part 252.[10]

The most common means of government control over subcontracts is through its mandatory flow-down contract clauses. These are clauses the government insists will be placed in almost all subcontracts with only limited exceptions.[11] These clauses are written and mandated to protect the government's rights and interests within the overall project. They can serve to promote formal national security interests such as preventing espionage and business fraud, but also to shape procurement practices and promote socio-economic policies (Feldman, 2009, p. 254). Congressional interest has been piqued by the flow-down of product-unrelated government policy items such as the following:

- **52.237-11 Accepting and Dispensing of $1 Coin (Sept. 2008).** All business operations conducted under this contract that involve coins or currency, including vending machines, shall be fully capable of accepting $1 coins in connection with such operations.
- **52.223-18 Encouraging Contractor Policies to Ban Text Messaging While Driving (Aug 2011).** The Contractor is encouraged to adopt and enforce policies that ban text messaging while driving.
- **52.204-10 Reporting Executive Compensation and First-Tier Subcontract Awards (Oct 2016).** First-tier subcontract information … with a value of $30,000 or more, the Contractor shall report the information at http://www.fsrs.gov for that first-tier subcontract.

The legal literature and commentary does make a distinction between mandatory flow-down clauses and non-mandatory flow-down clauses. While this is a relevant legal

[6] *Subcontract* in this context is related to purchase of good or services substantially or directly related to the performance of the MDAP prime contract.
[7] The primary body of governing law for subcontracts is commercial contract law—generally expressed in the individual State UCC.
[8] For example, subcontracts identified by the contracting officer as of a critical nature or high value, in order to protect the government's interests (FAR 44.201).
[9] FAR Part 52: Solicitation Provisions and Contract Clauses. This is a matrix of provisions and clauses with reference to the particular CFR Title 48 section that prescribes a particular provision or clause.
[10] DFARS Part 252: Solicitation Provisions and Contract Clauses.
[11] In theory, FAR/DFARS flow-downs can extend to an infinite tier of subcontractors. The limited exceptions are contained in the FAR/DFARS themselves.

distinction in drafting subcontracts, for the purposes of this research, it is less relevant.[12] The mandatory flow-down clauses are certainly non-negotiable and must be flowed down.[13] However, some of the non-mandatory clauses can be as important in terms of promoting government policy,[14] ensuring that the subcontractor will provide adequate support or cooperation to enable the prime contractor to meet its contractual obligations, or in protecting the prime's financial position vis-à-vis subcontractors from unilateral government action.[15] The architecture of clauses in a subcontract is a result of the prime contractor's contracting personnel, industry practice, and government mandates and emphasis, along with the negotiating positions of the prospective subcontractor.

Among congressional concerns, there are additional suggestions of a growing quantity of FAR/DFARS clauses increasing the size of flow-down contracts. As determined on the basis of clause change date, Figure 1 and Figure 2 show the latest issue dates for 586 current FAR clauses and 377 DFARS clauses, respectively. The data are derived from a study performed by Richard Ginman (2016) and used with his permission. Figure 1 shows a large number of clauses revised in 1984 due to the evolution of the FAR system in the early 1980s from the older Armed Forces Procurement Regulations. Since that time, generally between one and 30 FAR clauses have been issued, modified, or amended annually. The exception was a post-1984 high point in 2014 with approximately 50 clauses either changed or newly issued. The trend of issues from 2014 to 2016 appears to be departing from the historical norm. This period is too short to make firm conclusions, but is suggestive of concern expressed in the NDAA.

[12] The literature and legal professional materials also note that clauses may be flowed down by reference (e.g., FAR part number), full text of the FAR/DFARS clause, and as substantially the same as the FAR/DFARS clause. While important for legal drafting, this is not relevant to this research.
[13] Some examples of mandatory clauses that could be included in a subcontract are FAR 52.203-7: Anti-kickback Procedures, and FAR 52.215-23: Limitations on Pass-Through Charges.
[14] E.g., FAR 52.225-1: Buy American.
[15] E.g., FAR 52.249-2: Termination for Convenience of the Government. If the prime does not include this clause in its subcontract, it will not have a right to terminate the subcontract.

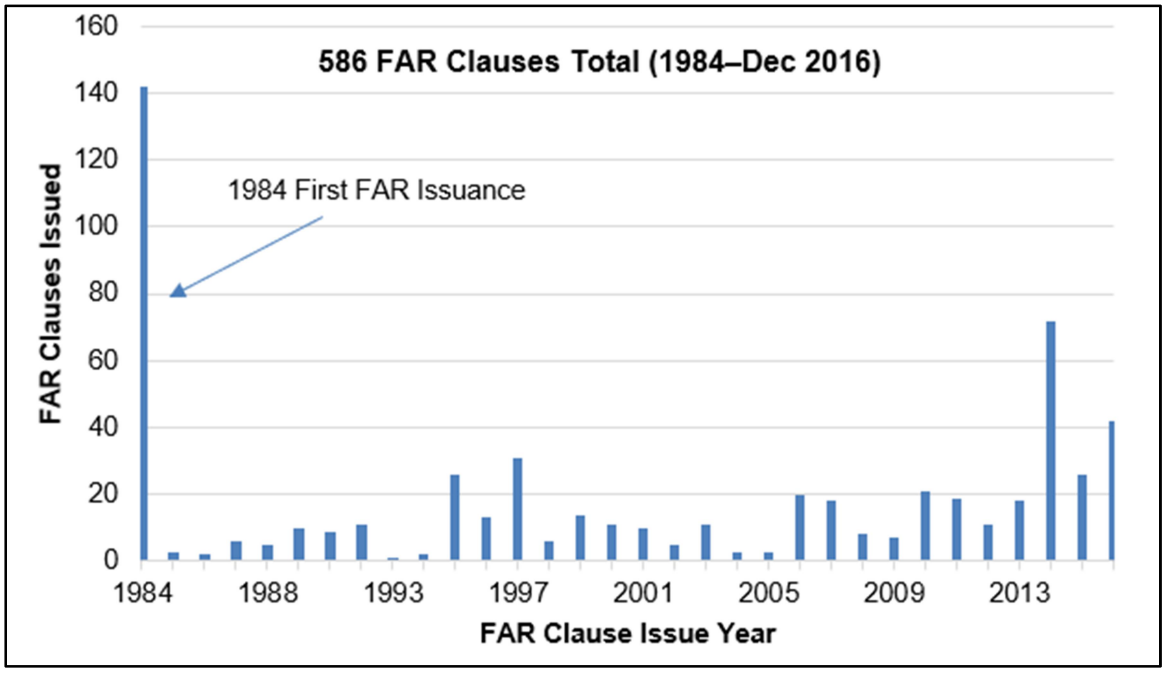

Figure 1. Basic FAR Clause Issue Data
(Ginman, 2016)

DFARS issue or re-issue dates shown in Figure 2 suggest extensive efforts to revise its clauses since approximately 2008. The chart displays the changing number of clauses by year—the data do not distinguish between new issues and re-issues. The chart shows an overwhelming spike of issues around 1991. These issues were connected with the July 1989 Defense Management Report, which "concluded that much of the stifling burden of Department of Defense (DoD) regulatory guidance, including the Defense Federal Acquisition Regulation Supplement (DFARS) was self-imposed" (DoD, 1991). After this activity, between 1991 and 2008, there were occasional spikes of activity with otherwise relatively small numbers of annual revisions. However, after 2008, the rate of issue or revision increased notably, and in the period since 2012, each year exceeds all previous issue years except for 1991.

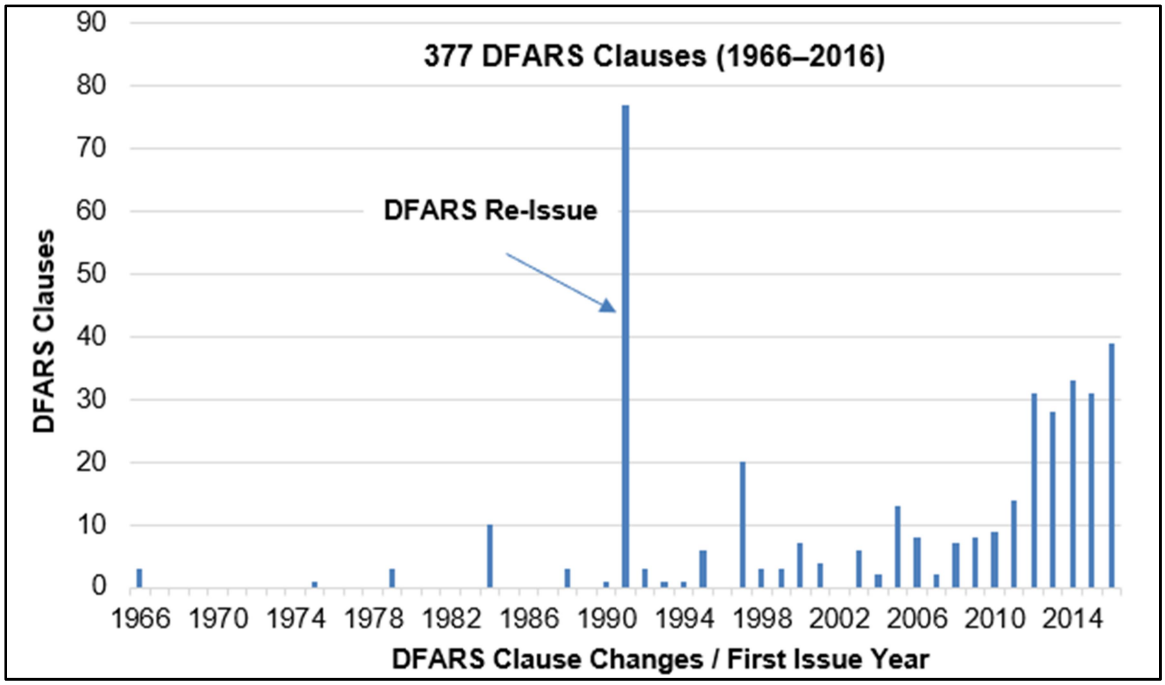

Figure 2. Basic DFARS Clause Issue Data
(Ginman, 2016)

Statutes are a rich source of new regulations. NDAA Title VIII is the ordinary source for statutory changes to the DoD acquisition and contracting regulations and the CFR. Final publication in the CFR represents a formal change to the FAR/DFARS. In addition to NDAA Title VIII, specific legislation can also lead to FAR/DFARS changes. Figure 3 also counts the number of sections in specific legislation such as the 2009 Weapon Systems Acquisition Reform Act (WSARA), the Services Acquisition Reform Act (SARA), and the Acquisition Improvement and Accountability Act of 2007. The assumption here is that the greater number of sections of either the annual NDAA Title VIII or specific legislation, the more likely that a change to the FAR/DFARS is to occur. Figure 3 shows the trend line for the total number of sections.

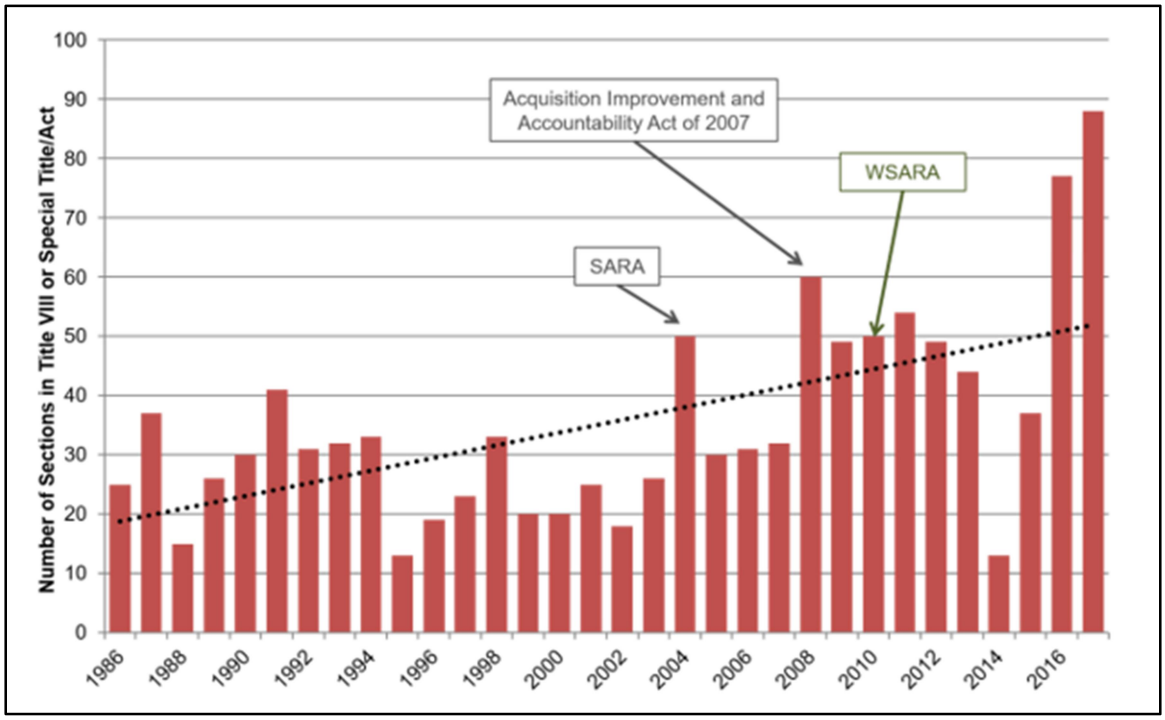

Figure 3. NDAA and Policy Direction Sections
(NDAAs FY 1986–FY 2017)

Review and Analysis

Potential Misapplication of MDAP Flow-Down Clauses

A nearly universal commercial attitude toward government contracts and their associated FAR/DFARS clauses is one of burden. They are perceived to impose administrative burden on both primes and subcontractors, and set government and the DoD apart from other commercial partners. Yet the FAR/DFARS exist to fulfill legitimate government purposes. Beyond this, the NDAA expresses the concern that some FAR/DFARS clauses are inappropriately applied to subcontractors—that there is a clear misapplication of mandatory and customary clauses by prime contractors to their subcontractors. The working hypothesis suggested by the NDAA is that primes are reacting to U.S. government contracting officers who are using standard sets of clauses (1) disconnected from the factual situation of the MDAP or (2) to simply avoid risk by adding extraneous clauses; in turn, prime contracting personnel are seeking to eliminate or minimize risk exposure by flowing down the proverbial “kitchen sink” of clauses.

To address this hypothesis, the research team worked with a set of major defense contractors with whom the DoD has contracted to develop and produce a diverse set of MDAPs—Raytheon, General Atomic, BAE, General Electric, and General Dynamics.[16]

The research team requested from the participating contractors that they allow us to obtain copies of their first-tier subcontracts.[17] These subcontracts were limited to one major program per contractor. Proprietary data issues were addressed by non-disclosure agreements with all firms. Discussions with the primes revealed that all five use standardized contracts for dealing with their first-tier subcontractors; therefore, the same set of FAR/DFARS clauses and other commercial terms were flowed-down to all first-tier subcontractors.

Table 1 shows FAR flow-down clauses in each subcontract in the wider context of the total FAR clauses in the prime contract (first row). Total subcontract clauses by MDAP contract are shown in the second row, together with the percentage of this number relative to the number in the first row. This total number of subcontract clauses is broken down between the number of clauses that are actual flow-downs from the prime contract (third row) and those typically flowed from prime contract Terms and Conditions (T&C) unrelated to the U.S. government–associated flow-down clauses (fourth row).

Table 1. FAR Prime Contract Clause Flow-Downs

Statistic	MDAP 1	MDAP 2	MDAP 3	MDAP 4	MDAP 5
Total Number of FAR Clauses in Prime Contract	**123**	**73**	**140**	**76**	**99**
Total Number of FAR Clauses in Subcontract (Percent of Prime Contract Clauses)	**97 (79%)**	**110 (151%)**	**81 (58%)**	**78 (103%)**	**83 (84%)**
Specific FAR Clauses in DoD Prime Contract Flowed Down to Subcontractor	70	43	51	39	80
Additional FAR clauses from Prime T&C to Subcontractor	27	67	30	39	3

For example, under MDAP 1, a total of 123 FAR clauses were present in the prime contract, 70 of which then became clauses identifiable in the prime's subcontracts. In addition to these 70, 27 FAR clauses were also present in the subcontracts—additional FAR clauses from the prime contract's standard T&C.[18] Together, these two sources generated a total of 97 FAR clauses identifiable in the subcontract. This total of 97 represented 79% of the total FAR clauses contained in the prime contract.

[16] The largest U.S. defense firm, the Lockheed Martin Corporation (LMC), declined to participate in the research. LMC indicated they would participate in the research if their MDAP contracts were modified to cover the increased scope of work entailed by this effort; however, the responsible command with budget authority declined. To our knowledge, the prime contractors who did participate did not make similar requests.
[17] Obtained from DAMIR.
[18] The clauses in the prime's Terms and Conditions were direct references to FAR/DFARS clauses.

The construction of T&C varies by firm and their internal contracting practices, but the prime's T&C can be a significant source of subcontract FAR clauses.[19] MDAP 2 and its unidentified prime contractor placed a significant number of clauses in its subcontract and then added more from T&C—as a result, for MDAP 2, the total number of clauses in its subcontract represented 151% of the total number of clauses in its own prime contract. T&C generated more clauses than the original contract itself.

Considering the sample size and research limitations, it is difficult to categorize the variation in quantity of FAR clauses flowed down to subcontractors. Discussions with government and private sector contracting personnel suggest the primary drivers are (1) prime contractor corporate legal and risk management policies; (2) the need for contract standardization, since primes often have thousands of contracts; and (3) the specialization of firms in the defense industry (especially the prime to first-tier sample) that have financial, accounting, legal, and other compliance systems in place to manage U.S. government/DoD contracting requirements, regardless of whether the firm is a prime contractor or subcontractor—and therefore are accustomed to a significant number of FAR/DFARS clauses and generally accept them.

A legal principle called the Christian Doctrine (*G.L. Christian & Assocs. v. United States,* 1963) was also noted by some contracting experts. A Federal Court of Appeals ruled that a mandatory contract clause that conveys a deeply ingrained strand of public procurement policy is considered to be included even if it is not in the agreement between the U.S. government and the contractor. The same experts noted that, in addition to the reasons cited in the preceding paragraph, the primes may add flow-down clauses to their T&C in view of the Christian Doctrine. For example, if the U.S. government or DoD contracting officer unintentionally omitted a mandatory clause, the prime will still be bound by the omitted FAR/DFARS clause. Thus, as corporate protection vis-à-vis its subcontractors, the prime will include all mandatory clauses in its T&C. Although this subject matter is outside the scope of this research, this legal doctrine—established via federal court ruling—should be acknowledged when examining flow-down clauses.

Once the research team had defined the set of contracts/subcontracts and their respective clauses, we analyzed the nature of the clauses themselves to ascertain if any of the FAR flow-down clauses were misapplied by the primes to their subcontractors. As noted earlier, the focus was on clear misapplications and not administrative error or extraneous contracting oversights. An administrative error was judged by evaluating the clause in light of the overall context of the contract and the likely work it generated to achieve compliance. If an included clause was irrelevant to the contract and it required no work to achieve compliance, it was evaluated as an error. Alternately, if review of the contract clause found no government interest in its actual application and its compliance generated work on behalf of the contractor, the clause was judged a "clear misapplication."

To assist in this analysis, we used Ginman's (2016) categorization of FAR and DFARS clauses as *mandatory, optional,* or *neither mandatory nor customary*. Mandatory clauses are those required to be flowed-down to subcontractors. Optional clauses may also be referred to as non-mandatory (i.e., not specifically required by the FAR/DFARS)—the

[19] We did not address Uniform Commercial Code (UCC) and other commercial terms as they are outside the scope of this research effort.

legal literature often refers to such clauses as *discretionary* or *recommended*. The practicalities of contract and financial management, adherence to U.S. laws and regulations, and need for the prime contractors to protect their legal, financial, and reputational interests deem large numbers of these so-called non-mandatory clauses to be effectively required. In this paper, we refer to Ginman's (2016) optional clauses as *customary* because the prime contractors require these clauses to produce the MDAP while adhering to U.S. government laws and regulations in a manner that protects the prime contractors' legitimate interests. The third category—*neither mandatory nor customary*—consists of clauses deemed not required to be flowed-down to subcontractors.

You may recall that in Table 1, the third row indicates the number of DoD-Prime FAR contract clauses that were flowed down to the subcontractors (e.g., for MDAP 1, there were 70 such clauses). In Table 2, we take those clauses and apply Ginman's (2016) analytical tool to break down the DoD-Prime FAR clauses that were flowed down to subcontractors into our three categories (mandatory, customary, and neither mandatory nor customary). We also include another row entitled "Solicitation Provisions"[20] and conclude with a summary row entitled "Misapplications."

Table 2. FAR DoD-Prime Clauses Flowed Down From Prime to Subcontractor

	MDAP 1	MDAP 2	MDAP 3	MDAP 4	MDAP 5
Total	**70**	**43**	**51**	**39**	**80**
Mandatory	42 (60%)	25 (58%)	30 (59%)	25 (64%)	33 (41%)
Customary	22 (31%)	16 (37%)	13 (25%)	11 (28%)	30 (38%)
Neither Mandatory nor Customary	6 (9%)	2 (5%)	7 (14%)	3 (8%)	17 (21%)
Solicitation Provisions	0	0	1 (2%)	0	0
Misapplications*	**4 (6%)**	**0**	**1 (2%)**	**0**	**0**

* Flow-downs that appear to be administrative error or contract drafting oversight, not necessarily a clear misapplication

In analyzing if there were clear misapplications, we examined all of the clauses that are not categorized as mandatory to determine if they appeared to be reasonable or within the realm of expected FAR clauses when considering the subject matter of the MDAP. Due to research constraints, we were not able to analyze each FAR clause in exacting detail. Such an intensive analysis may be extremely challenging, if not impractical, as we did not have insight into the prime-subcontractor negotiations, past histories between the firms, MDAP program specifics, prime corporate policies on legal and risk management, and a host of other variables. Therefore, our approach was one of general reasonableness within the general construct of the prime MDAP contract type, size of the contract, and recognition

[20] We included this row in the analysis because we came across a number of solicitation provisions that were apparently unintentionally flowed down from the prime to the subcontractor.

that the subcontractors are first-tier and almost certainly have ample negotiating abilities and resources.[21]

As can be seen in Table 2, only two of the five MDAP subcontracts examined were assessed as having misapplications; however, even these are not clear misapplications. MDAP 1 contained the most clauses assessed as misapplication (four, or 6%) and MDAP 3 had one solicitation provision. We considered the bulk of neutral FAR clauses—neither mandatory nor customary—as benign, and therefore not clear misapplications according to the reasonableness standard described above.[22]

We next reviewed those FAR clauses incorporated by reference or verbatim[23] in the primes' T&C[24] that are accepted by the subcontractors. We found the primes' T&C to be an unexpected source of additional FAR clauses that were included in the prime-to-subcontractor agreements.

As shown in Table 3, the misapplication totals in the T&C are larger than those in the contracts, using the same methodology described above. Clause misapplication was as high as 19% in MDAP 1, but assessed as below 10% in MDAPs 2, 3, and 4, and zero for MDAP 5. Once again, pursuant to a reasonableness standard (and considering the other factors noted), we did not observe clear misapplications of flow-down clauses. The misapplications that appeared were mainly nuisance clauses; that is, primarily solicitation provisions that were apparently inadvertently captured in standardized agreements.

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[21] At least two of the subcontractors are major U.S. defense contractors (and primes on other DoD MDAPs) and others are publicly listed manufacturing firms with global operations.

[22] We identified a small number of clauses that were not solicitation provisions for MDAP 1 that seemed inapplicable; however, the appearance was more of administrative error or extraneous clauses of no importance. For example, FAR 52.237-02 (Protection of Government Buildings, Equipment and Vegetation) seems not applicable in view of the nature of the contract; and 52.242-03 (Penalties for Unallowable Costs) deals with indirect rates and is not considered a flow-down clause.

[23] An indication of the specialization in DoD business or strong familiarity in contracting with the U.S. government is that incorporation of FAR clauses in the subcontracts was by reference. That is, only the FAR clause and title were listed, without clause language or reference to FAR clause prescription contained elsewhere in the FAR.

[24] Primes' T&C refer to the obligations accepted by the parties via private contractual arrangement. As noted earlier, most commercial contracts are governed by the UCC. The contracts we examined are a hybrid of UCC and FAR/DFARS.

Table 3. FAR Clauses Flowed Down From Prime to Subcontractor via Primes' T&C

	MDAP 1	MDAP 2	MDAP 3	MDAP 4	MDAP 5
Total	**27**	**67**	**30**	**39**	**3**
Mandatory	17 (63%)	22 (33%)	17 (57%)	26 (67%)	0 (0%)
Customary	4 (15%)	30 (45%)	10 (33%)	7 (18%)	3 (100%)
Neither Mandatory nor Customary	1 (4%)	9 (13%)	1 (3%)	3 (8%)	0
Solicitation Provisions	5 (19%)	6 (9%)	2 (7%)	3 (8%)	0
Misapplications*	**5 (19%)**	**6 (9%)**	**2 (7%)**	**3 (8%)**	**0**

* Flow-downs that appear to be administrative error or contract drafting oversight, not necessarily a clear misapplication

For both sets of FAR flow-down clauses examined—those from the DoD that the prime passed to the subcontractors and those that the primes appropriated from the FAR and flowed down—we did not observe clear misapplication of FAR clauses. Since the parties to the subcontract agreements are veteran DoD contractors, we can assume that they are sophisticated in such matters, regularly deal with each other concerning MDAPs, and therefore have refined their legal processes to reflect the realities of DoD contracting.

We continued our examination of flow-down clauses by analyzing DFARS clauses, using the same methodology and analytical approach as with the FAR clauses. The results were comparable to the FAR flow-downs. Flow-down of prime contract clauses were sometimes less than the total clauses in the prime contract, but, again, flow-down of T&C clauses proved highly variable. As shown in Table 4, the prime contractors for MDAP 2 and MDAP 4 made extensive use of the T&C section of their contracts to generate subcontractor clauses.

Table 4. DFARS Prime Contract Clause Flow-Downs

	MDAP 1	MDAP 2	MDAP 3	MDAP 4	MDAP 5
Total Number of DFARS Clauses in Prime Contract	93	35	78	41	56
Total Number of DFARS Clauses in Subcontract (Percent of Prime Contract)	88 (95%)	74 (211%)	55 (71%)	64 (156%)	46 (82%)
Clauses in DoD-Prime Contract Flowed Down to Subcontractor	60	26	38	18	41
Additional DFARS Clauses from Prime T&C to Subcontractor	28	48	17	46	5

We scored DFARS clause misapplications with results similar to those obtained for FAR clauses. Misapplications were present, yet were of small numbers, and we did not observe clear misapplications. However, another interpretation of these data is worth addressing—whether the intent of misapplication scoring is to help understand the discretionary dimension of subcontracting; that is, to understand if prime contractors might be burdening subcontractors with flow-downs either to reduce their own contract risk with the government or from a misunderstanding of government intent. This is a broader

interpretation of “misapplication”; the data can be interpreted to mean that prime contractors used their discretion to make misapplications, but that this discretion included clauses that were judged to be neither mandatory nor customary. This broader interpretation suggests that an element of independent choice exists among prime contractors regarding their imposition of subcontract clauses in their subordinate contracts. In evaluating these additional clauses, all appear appropriate and justified, but this wider interpretation does help scope the dimension of the broader problem to include prime contractor discretion.

Table 5 summarizes DFARS clauses from the DoD-Prime MDAP contracts that were flowed down to the first-tier subcontractors. The pattern and results mirror those of the FAR clause flow-downs shown in Table 2 (i.e., no clear misapplications and solicitation provisions being the prime generator of apparent administrative error).

Table 5. DFARS DoD-Prime Clauses Flowed Down From Prime to Subcontractor

	MDAP 1	MDAP 2	MDAP 3	MDAP 4	MDAP 5
Total	**60**	**26**	**38**	**19**	**41**
Mandatory	34 (57%)	14 (54%)	20 (53%)	9 (47%)	19 (46%)
Customary	16 (27%)	6 (23%)	13 (34%)	5 (26%)	13 (32%)
Neither Mandatory nor Customary	10 (17%)	4 (15%)	3 (8%)	4 (21%)	8 (20%)
Solicitation Provisions	0	2 (8%)	2 (5%)	1 (5%)	1 (2%)
Misapplications*	**4 (7%)**	**2 (8%)**	**2 (5%)**	**1 (5%)**	**1 (2%)**

* Flow-downs that appear to be administrative error or contract drafting oversight, not necessarily a clear misapplication

As with the FAR clauses, the primes also apparently used their discretion and included DFARS clauses that are neither mandatory nor customary; however, utilizing the reasonableness standard, we did not observe clear misapplications. The clauses appear harmless and may even facilitate contract management.

Last, the DFARS clauses included in the primes’ T&C—but not in the DoD-Prime MDAP contract—corresponded to what we observed in the FAR clauses appropriated by primes for incorporation into their T&C (shown in Table 3). The results are shown in Table 6. We observed no clear misapplications in these data per our analysis.

Table 6. DFARS Clauses Flowed Down From Prime to Subcontractor via Primes’ T&C

	MDAP 1	MDAP 2	MDAP 3	MDAP 4	MDAP 5
Total	**28**	**48**	**17**	**46**	**5**
Mandatory	17 (61%)	22 (46%)	11 (65%)	26 (57%)	2 (40%)
Customary	6 (21%)	18 (38%)	3 (18%)	14 (30%)	2 (40%)
Neither Mandatory nor Customary	1 (4%)	4 (8%)	0	1 (2%)	1 (20%)
Solicitation Provisions	4 (14%)	4 (8%)	3 (18%)	5 (11%)	0
Misapplications*	**6 (21%)**	**4 (8%)**	**3 (18%)**	**5 (11%)**	**0**

* Flow-downs that appear to be administrative error or contract drafting oversight, not necessarily a clear misapplication

Overall, we found that prime contractor misapplication of FAR/DFARS clauses occurs, but we did not observe clear misapplications of flow-down clauses. Quantitatively, the noted misapplications appear small within this limited sample of first-tier subcontracts. Interactions with contracting departments of prime contractors during our research left an impression of highly skilled and experienced personnel who manage large volumes of contract work via standardization. We conclude that first-tier subcontractors experienced in defense work are likely to be equally expert in FAR/DFARS provision. Often prime contractors and their contracting organizations act as subcontractors themselves and carry this expertise into this role. As discussed elsewhere in the paper, the choice to become a government contractor appears to be a choice not taken lightly without some knowledge of the skills necessary to be a successful participant.

Impact of Flow-Down Clauses on Participation of Subcontractors on DoD Contracts and DoD's Access to Advanced Research and Technology Capabilities

The 2017 NDAA appears to suggest that subcontractor participation rates could vary inversely with the regulatory burden[25] of flow-down clauses. In turn, the DoD's ability to access advanced research and technology capabilities available in the private sector (non-traditional DoD contractors) could be stymied.

The wider issue evident in the NDAA is the concern that the technology of future military advantage is increasingly emanating from commercial industry sectors wider than the ordinary defense industrial base. Specifically, the concern is that a new set of military advantages is developing beyond the research and development (R&D) directed by the U.S. government and DoD. In its review of the 2017 NDAA, the Senate Armed Services Committee (SASC) stated, "DOD has struggled to tap into the technological advancements that are increasingly being driven not by large defense contractors, but by commercial technology firms that generally choose not to do business with the DOD." The SASC stated it believes these firms have been generally deterred by the unique demands of the defense acquisition system, including acting as subcontractors, in light of FAR/DFARS flow-down provisions (U.S. Senate Armed Services Committee, 2017).

In general, administrative burden represents a cost of doing business with the DoD and the wider U.S. government. Ordinarily, cost is associated with a contractor or vendor; it is an attribute of the product to be purchased by the government. In contrast, FAR/DFARS provisions represent conditions or information the government expects from its contractors in addition to the production of the contracted service or good. These requirements are not useless—they assist the DoD in its responsibilities to the U.S. taxpayer, and they seek to avoid fraud, malfeasance, and waste. However, they do require the prime federal contractor to achieve certifications and share information in a way that distinguishes these contracts from almost any other type of commercial exchange. These provisions clearly represent an additional cost to both the prime providers of federally procured products and—in the case of flow-down provisions—to the prime's subcontractors.

To do business directly or indirectly with the DoD and the U.S. government, contractors must often must make a conscious addition to their overhead costs to administer

[25] *Regulatory burden* in this context means cost and time spent on compliance with FAR/DFARS. This is inclusive of tracking, training personnel, maintaining databases, ensuring subcontractors/vendors are in compliance, etc.

the FAR/DFARS required provisions: U.S. government and DoD contracting expertise must be recruited, internal accounting practices must be modified, and hiring and reporting provisions must be implemented. This essentially becomes an element of overhead if the business owner plans to systematically seek DoD and U.S. government contracts now and in the future—in effect, it becomes a part of the cost basis for products produced for the prime contractor.

This requirement for firms to configure themselves for DoD and government contracting effectively creates the situation feared by the NDAA: Firms often must make a strategic decision to become a DoD subcontractor. It is not a casual decision. The requirements are unusual and distinctive from ordinary commercial contracting. Essentially, FAR/DFARS flow-down requirements serve to make the DoD and the U.S. government a unique customer for all but the simplest commercial items. The imposed costs codified in the FAR/DFARS provisions can effectively raise costs for government purchases. These additional imposed costs may be charged back to the government in the form of higher prices, particularly if the firm is not required by the circumstances of the contract to trim its prices. In effect, the additional costs of FAR/DFARS flow-down provisions may frequently be paid for by the government itself in terms of higher prices.[26]

Our independent research was recently validated in a Government Accountability Office (GAO) report concerning DoD acquisitions and challenges in attracting non-traditional firms (i.e., firms that do not traditionally do business with the DoD either directly or indirectly as subcontractors) to do business with the DoD (GAO, 2017). This GAO report is noteworthy in that the same major deterrence factors—in addition to regulatory burden and compliance—are universally expressed by government and private sector members of the U.S. defense industrial base. The report noted the variety of factors affecting participation—with FAR/DFARS clauses being one (GAO, 2017).[27]

The issue of DoD access to advanced research and technology capabilities is closely related to subcontractor participation rates in DoD contracts. The underlying presumption in the 2017 NDAA is that non-traditional contractors possess advanced technologies and capabilities that are not readily accessible in the present DoD universe of prime contractors and subcontractors—and these advanced technologies are much needed by the DoD.

One point not directly discussed earlier is the role of prime contractors in recruiting specific types of subcontractors. Since prime contractors are in active competition for large DoD contracts, they are often more likely to recognize problems faster than the DoD does. The current business model of a prime contractor is to form teams in order to deliver solutions that meet DoD needs with the prime as the integrator of systems and technologies.

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[26] Interviews with firms that do business with the DoD and non-DoD government entities suggest some costs cannot be passed on to the commercial sector; thus, profit margins may be negatively affected.

[27] Other major factors identified by the GAO and uncovered by IDA analysts in preparing this paper were (1) the complexity of the DoD's acquisition process, (2) an unstable budget environment, (3) a lengthy contracting timeline, (4) an inexperienced DoD contracting workforce, and (5) intellectual property rights concerns. The cost of regulatory compliance was also addressed as part of U.S. government/DoD contract clauses.

A successful MDAP bidder will be held responsible for failing to deliver technological solutions for key weapon systems.

We discussed this perspective with a limited set of prime contractor personnel, and identified a general sense that the current subcontracting regimes allow sufficient flexibility to recruit necessary subcontractor technology through a variety of contractual and business arrangements. However, these contracting delivery teams often specialize in DoD work and may not be achieving the most advanced or cost-effective technological solutions—that is, they may be re-inventing technologies and capabilities that could be obtained in the commercial market.

In contrast, we received comments from DoD's Defense Innovation Unit (Experimental; DIUx)[28] that many technology firms in the commercial sector are either unaware of DoD needs or are aware of the potential for business with the DoD but refuse to contend with the obstacles identified (see footnote 27). These comments echo the fears of the Congress; the widely reported 2014 withdrawal of the Google-owned Schaft Robot from a Defense Advanced Research Projects Agency (DARPA) competition helps to support these concerns (Templeton, 2014; Hoffman, 2014). Google is reported to avoid military contracts by corporate policy. The Schaft robot was a leading design in the DARPA competition when Google purchased its parent company and then partially withdrew from the competition.

Another important economic perspective on this issue is the possibility that the DoD is no longer the dominant driving force in many of these areas of new technologies (GAO, 2017).[29] Even if the DoD is allotted more funds for R&D, due to the many obstacles to doing business with the DoD, it is not clear that certain non-traditional contractors will participate.

Government regulatory burden constitutes an additional potential cost placed on government contractors and thus demotes the DoD in contractor preferences as a customer. If these companies can identify sufficient customers among many to satisfy their total profit expectations, they will choose the customers yielding the greatest profit margin and serve others as an afterthought. In turn, competitors of these first-tier companies will pivot to service these second-tier customers. There is a sense within the NDAA that the DoD has slipped into this category for certain types of technology: that DoD technical demands at best parallel other customers such as retail consumers and may even lag this standard, thus creating a rational condition of the DoD as a second-best customer. This is a speculative hypothesis subject to future examination.

In interviewing DoD personnel, the current perception is that the barriers to doing business with the DoD—including flow-down clauses—have not yet barred access to advanced technologies and capabilities. However, there are apparent costs and delays. We were informed of instances in which DoD R&D personnel seeking access to certain

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[28] Defense Innovation Unit (Experimental): https://www.diux.mil/. DIUx was established to build relationships with commercial firms that have not previously done business with the DoD in order to obtain advanced technologies that may meet DoD needs. The goal is to avoid the current acquisition cycle and rapidly prototype concepts and deliver them to the Services.

[29] DoD spending on R&D was relatively flat for the 1987–2013 period, and private sector R&D spending skyrocketed. In 2013, DoD spent $75 billion, while the aggregate spending of U.S. firms on R&D was $341 billion.

technologies had to contract via a third party (e.g., a university or not-for-profit) to obtain the technology, as certain firms do not wish to deal with U.S. government/DoD regulatory burdens. The cost then increases, as the third party takes a portion of the DoD R&D funds[30] as part of the arrangement and the DoD faces delays in receiving the technology. We understand similar situations arise when MDAP primes that need to obtain certain technologies experience additional costs and delays.[31]

In summary on this issue, we conclude that FAR/DFARS flow-downs do have an impact on firm participation in DoD contracts; however, the flow-down clauses have not yet created access problems with regard to advanced technology and capabilities. Nonetheless, flow-down clauses are yet another barrier (and an additional cost) to doing business with the DoD and tend to isolate the DoD from technologies in the commercial sector—in particular with the growth of the FAR/DFARS over the years. The situation is not expected to improve at its current trajectory and could plausibly hinder access to advanced technologies unless reforms and improvements are implemented. We deem primary research into this area to be a very high priority.

Conclusion and Recommendations

Subcontractor Participation and DoD Access to Advanced Technologies for MDAPs

Cases exist in which commercial firms have strategically chosen not to pursue DoD business. Our research suggests that the inherent regulatory burden of FAR/DFARS flow-down clauses is one of several factors influencing subcontractor participation—and eventually DoD access to advanced research and technology. Other factors include profit potential, market size, funding stability, intellectual property, and the complexity and length of the DoD acquisition process. It is also clear that the DoD is no longer the driving force for some advanced technologies associated with relatively lucrative commercial markets. Some innovative firms have chosen to pursue advanced technology and profits in these markets rather than engage in the complexities and lesser profits of DoD business—either directly as a prime or as a subcontractor. Removing unnecessary regulatory burdens—including flow-down clauses—can certainly assist in improving the DoD acquisition process, but further research is necessary.

Misapplication of Flow-Down Clauses

In order to quantify the impact of FAR/DFARS flow-down clauses, we compared five prime MDAP contracts with five corresponding subcontracts. In this sample, we found no widespread practice of burdensome flow-down misapplication. However, we did find administrative errors, measured at 1–10% of the total number of flow-down clauses. Aside from possible misapplication and error, the primary driver of flow-down clauses appears to be the ever-expanding size of the FAR/DFARS, along with prime contractors' attempts to manage their large number of subcontracts through rote standardization. As part of this larger issue, a certain number of flow-downs appear driven by defensive risk management on the part of the DoD and its prime contractors.

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[30] The IDA team was told that fee percentages range from 5–20%.

[31] Although outside of the scope of this paper, we understand that DoD prime contractors will use various legal mechanisms such as licensing agreements to obtain technologies. There are costs and delays associated with such actions.

Recommendations

Based upon our analysis, we recommend the following:

- Conduct primary research on non-participating firms that possess technologies of interest to the DoD to understand incentives/disincentives, and propose legal and regulatory changes that may encourage their participation.
- Learn from Defense Innovation Unit (Experimental; DIUx) experiences—including statutory and regulatory changes to incorporate insights.
- Per Executive Order (EO) 13777, cull FAR/DFARS of regulations that do not directly affect the quality and performance of the acquired product in order to reduce the volume of regulations and flow-downs.
- Analyze regulations in order to quantify costs to assist in reduction of FAR/DFARS clauses.
- Restrict new regulations to those that can accelerate weapons development and production and achieve cost efficiencies.

Summary

In summary, all of the above issues are intertwined and directly affect the cost, technical abilities, and scheduled deployment of DoD MDAPs or other end products. They should be analyzed and recommendations should be implemented as part of a wider DoD acquisition reform effort.

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Acknowledgments

The research for this paper was funded by the Office of the Secretary of Defense. We thank them for their support.

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