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CONTRACTING AT THE ENTERPRISE LEVEL “101”: TERMS, PRINCIPLES, AND ISSUES

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Very little of what the Department of Defense (DoD) consumes in goods and services is produced internally. Acquisition is the primary process by which the Department of Defense procures these goods and services, and contracting is one of its activities. But while the Federal Acquisition Regulation and hosts of laws, policies, and regulations govern defense contracts, they do not always suggest whether contracting is the best answer, nor do they help assess the quality of a contract. Metaphorically speaking, they build the contract vehicles, but do not teach leaders how to drive them.

At the strategic level, the question of whether to contract or not is largely moot, as the DoD could not possibly internally replicate all the capabilities of the defense industry. Instead, the questions surround best fit. *When DoD desires goods and services in support of requirements, it exercises a fair and equitable competitive bidding process to select a vendor, leading to the negotiation of a contractual agreement at reasonable cost to the*

taxpayer. Each of the phrases in this sentence is worth parsing:

Desired goods and services in support of requirements – Specifying ‘requirements’ is much more difficult than it may seem, and problems with requirement specifications are legend among defense acquisitions. Products that are stable in their development and already commercially available are the simple cases. For these, DoD can be precise with its requirements and direct comparison among vendors is easy. However, these calls fall in the minority. The following cases are more common and far more complex:

- Manning – Matching an organizational requirement with the designated skills, knowledge, and abilities of people (SKA). Complex because requirements rarely translate neatly into precise SKAs, especially at higher headquarters levels.

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- **Dynamic Industries** – Seeking important capabilities that are still evolving. DoD clearly prefers not to procure something that it obsolete by the time it arrives in service member hands. However, staying on the ‘cutting edge’ may require flexibility in the requirement.

Fair and equitable competitive bidding process – Philosophically, the U.S. holds competition in high regard because it, in theory, either raises quality or lowers the price. Fairness and equitability are conditions that further open competition, maximizing the numbers of potential competitors. Unfortunately, factors ranging from outright corruption to well-intended laws aimed at promoting certain types of vendors (e.g., disabled, veteran, small business, and others) may restrict competition, potentially lowering the cost/benefit ratio or shutting out potential vendors. Many acquisition laws and policies are intended to remove such barriers, preventing anyone from gaining an unfair advantage or unduly profiting. Of course, these do not insulate the process from challenge or protest from unchosen vendors.

Production of a contractual agreement – Once the process is complete and a contractor selected, the contract is negotiated to establish the final obligations of both parties. However, despite the openness and transparency associated with the bidding process, negotiations take place without complete information from either side. This is not necessarily intentional but occurs naturally due to the nature of government contracts.

At reasonable cost – How much a private citizen is willing to pay (i.e., purchase price) is not a true measure of the procurement cost.

Apart from acquisition specialists, military officers receive little or no education or training in contracting beyond operational support, which only became an important subject since the turn of the 21st century.

This paper covers four important topics for defense managers entering the senior levels, and the intent is to synthesize theory with matters of practice. First, the paper presents the broader perspective of government contracting and the implications on governance from a political economy perspective. Senior leaders continuously face questions regarding whether to pursue a contract for some purpose. The typical training approach is to arm senior leaders with knowledge of the laws and regulations. Rather than address whether a senior leader *could* pursue such actions, this paper focuses on whether they *should*, and what are the broader implications of contracting actions on federal governance (and state, with respect to the National Guard, for example).

Second, the paper presents terms, concepts, and theories of contracting from economics and applies them to the military strategic environment. What is the nature and character of contracting actions? How does one assess the fairness and equitability that the acquisition process promises? What constitutes valid measures of performance or effectiveness for a common acquisition system? Again, the purpose is to step away from considerations of the process of contracting and allow a strategic and critical evaluation of how well the system is servicing the requirement.

Third, the paper provides a framework for synthesizing these principles into future acquisition decisions. It offers some simple case studies for critical evaluation of these concepts.

Finally, the paper provides a summary of the types of enterprise-level contracts described in the Federal Acquisition Regulation (FAR), Part 16, as of 2021. The FAR applies to all federal contracts, including those let by the Department of Defense, so it is recommended that senior leaders familiarize themselves with the terms and conditions written in the FAR.

I. IMPACTS OF OUTSOURCING ON GOVERNANCE

What does it mean to outsource? For government, outsourcing is the transfer of active performance for a government function to the private sector. It is not an abdication of responsibility, as the requirement for the function remains with the government if the population deemed it be so. However, the government may be ill-suited to perform the function internally and contracting with a private entity would be more cost-effective. But as the government outsources, it incurs other costs related to the establishment, administration, and monitoring of the contracts.

Traditionally, the U.S. government let contracts for three things – (1) goods, (2) services, and (3) military weapon systems. Since the terrorist attacks of September 11, 2001, the U.S. government's use of outsourcing has expanded tremendously, therefore also expanding the government's administration and oversight requirements. The contracts included:

*intelligence, warfare, development of government infrastructure, disaster relief, ... military targeting selection, interrogation of detainees, border control, security training, surveillance system design, intelligence operations management, control over the collection and use of classified information, and significant military support in a combat zone.*¹

This section the political economy of such outsourcing decisions. These question regard the boundary between what is 'inherently governmental' versus not, what governs the handling of commercial activities, and various myths surrounding the relationship between Congress and the military regarding contracts and outsourcing.

What is 'Inherently Governmental'?

An *inherently governmental function* "is one that, as a matter of law and policy, must be performed by federal government employees and cannot be contracted out because it is intimately related to the public interest."² While there is general consistency between law and policy with regards to the definition, they elaborate differently. As the government, and by extension DoD, continues to diversify in its

responsibilities and functions, the question what falls inside or outside the definition continuously surfaces. This includes crises or major challenges such as budgetary shortfalls. In the 2000s, there have been cycles of insourcing and outsourcing of the same or similar functions, ostensibly to save money or correct a deficiency.

The primary statutory document defining and describing inherently government is the Federal Activities Inventory Reform (FAIR) Act of 1998. For the purposes of this paper, the most important elements of the Act are in paragraph 5(b) and (c) comprising what is included and excluded from the definition. This effectively describes how functions *should be* categorized. Below reproduces these sections in full:³

(B) *FUNCTIONS INCLUDED* – *The term includes activities that require either the exercise of discretion in applying Federal Government authority or the making of value judgments in making decisions for the Federal Government, including judgments relating to monetary transactions and entitlements. An inherently governmental function involves, among other things, the interpretation and execution of the laws of the United States so as –*

- (i) *to bind the United States to take or not to take some action by contract, policy, regulation, authorization, order, or otherwise;*
- (ii) *to determine, protect, and advance United States economic, political, territorial, property, or other interests by military or diplomatic action, civil or criminal judicial proceedings, contract management, or otherwise;*

¹ Jody Freeman and Martha Minow, "Introduction: Reframing the Outsourcing Debates" (pp. 1-20), in Jody Freeman and Martha Minow (eds.), *Government by Contract: Outsourcing and American Democracy* (Harvard Business Press, 2009), 2.

² John R. Luckey, Valerie B. Grasso, and Kate M. Manuel, *Inherently Governmental Functions and Department of Defense Operations:*

Background, Issues, and Options for Congress (Washington, DC: Congressional Research Service, 2009), 1.

³ *Federal Activities Inventory Reform*, Public Law 105-270, 5, <https://www.congress.gov/105/plaws/publ270/PLAW-105publ270.pdf>

- (iii) to significantly affect the life, liberty, or property of private persons;
 - (iv) to commission, appoint, direct, or control officers or employees of the United States; or
 - (v) to exert ultimate control over the acquisition, use, or disposition of the property, real or personal, tangible or intangible, of the United States, including the collection, control, or disbursement of appropriated and other Federal funds.
- (C) FUNCTIONS EXCLUDED – *The term does not normally include –*
- (i) gathering information for or providing advice, opinions, recommendations, or ideas to Federal Government officials; or
 - (ii) any function that is primarily ministerial and internal in nature (such as building security, mail operations, operation of cafeterias, housekeeping, facilities, operations and

maintenance, warehouse operations, motor vehicle fleet management operations, or other routine electrical or mechanical services).

The Federal Acquisition Regulation (FAR), Part 7, Paragraph 503(c) establishes twenty categories of inherently governmental functions while Paragraph 503(d) establishes nineteen categories that are not. Table 1 offers a sample of these functions. Note the relationship between prioritizing budget requests, which is inherently governmental per subparagraph (c)(6), and budget preparations, which is not per subparagraph (d)(1). Similarly, while developing regulations can be outsourced per subparagraph (d)(4), developing policy undergirding those regulations is considered inherently governmental under subparagraph (c)(5).

Table 1. *Samples of Inherently and Non-Inherently Governmental Functions as Listed in the Federal Acquisition Regulation*⁵

| Inherently Governmental (Part 7, Para. 503(c)), selected subparagraphs | Not Inherently Governmental (Part 7, Para. 503(d)), selected subparagraphs |
|--|--|
| (1) Conducting criminal investigations | (1) Budget preparation activities (modeling, cost analyses, etc.) – see para (c)(6) |
| (3) Command of military forces | (2) Reorganization or planning activities |
| (4) Foreign relations and foreign policy | (3) Analyses, feasibility studies, and strategy options |
| (5) Agency policy and applying regulations | (4) Developing regulations – see para (c)(5) |
| (6) Prioritizing budget requests | (8) Technical evaluation of contract proposals |
| (7) Directing and controlling Federal employees | (9) Assisting in developing statements of work |
| (8) Directing and controlling intelligence and counter-intelligence | (13) Serving as agency representatives or employees |
| (9) Selecting individuals for government service | (16) Constructing buildings or structures secure from eavesdropping or intrusion. |
| (10) Approval of position descriptions and performance standards for Federal Employees | (17) Inspection service |
| (12) Procurement – determining requirements, selecting and awarding contractors, administering, assessing, and terminating contracts | (18) Legal advice and interpretations of statutes to government officials |
| (16) Budget policy, guidance, and strategy | (19) Special law enforcement or security activities not involving criminal investigations (e.g., prisoner detaining) |
| (20) Drafting of Congressional testimony and responses to Congressional correspondence. | |

⁵ Federal Acquisition Regulation, Part 7 – Acquisition Planning (Washington, DC: Acquisition.GOV), accessed 6 May 2021, https://www.acquisition.gov/far/part-7#FAR_7_503

What is 'Commercial' Activity and How is that Determined?

OMB Circular A-76 is titled *Performance of Commercial Activities*, and it is inferred from the policy that the term "commercial" applies to all functions not inherently governmental.⁶ Much of the policy governs determining suitability of government employees performing commercial activities – what would be in-sourced versus out-sourced. A-76 requires agencies to perform "two annual inventories that categorize all activities performed by government personnel as either commercial or inherently governmental."⁷ Thus, there is routine opportunities to realign such activities for cost-effectiveness or other reasons.

Historically, the movement of government activities into and out of the private sector has cycled. The FAIR Act itself was the result of a Clinton administration desire for more out-sourcing, a direction the subsequent Bush administration furthered, especially regarding operations in the Middle East.⁸ The Obama administration worked to reverse this as they felt the increased use of contractors potentially included the transfer of inherently governmental work into private hands.⁹

Determinations can also come about judicially and administratively. Judicial decisions can impose specific determinations of activities as inherently government, as they carry the force of law.¹⁰ Meanwhile, the Government Accountability Office (GAO) may offer opinions about such determinations and make recommendations to executive branch agencies, especially when they find contracted activities that appear inherently governmental. GAO also provides Congress information about the efficacy of government oversight of contracted activities,

which may indirectly raise questions about whether in-sourcing or out-sourcing is more effective. Finally, the President may declare an activity to be inherently governmental through Executive Orders.¹¹

Making the Determination

The most current resource is the Office of Federal Procurement Policy (OFPP) Policy Letter 11-01 which includes two tests to determine whether a function should be deemed inherently governmental. The first test regards the *nature of the function* and is defined below in full:

*Functions which involve the exercise of sovereign powers of the United States are governmental by their very nature. Examples of functions that, by their nature, are inherently governmental are **officially representing the United States** in an inter-governmental forum or body, arresting a person, and sentencing a person convicted of a crime to prison. A function may be classified as inherently governmental based strictly on its uniquely governmental nature and without regard to the type or level of discretion associated with the function (emphasis added).¹²*

The second test regards the *exercise of discretion* and contains provisions both for determination of inherently governmental and on suitability for the use of contractors. The following provision governs determination:

*A function requiring the exercise of discretion shall be deemed inherently governmental if the exercise of that discretion **commits the government to a course of action where two or more alternative courses of action exist and decision making is not already limited or***

⁶ Office of Management and Budget, *Performance of Commercial Activities*, OMB Circular A-76 (Washington, DC: Office of Management and Budget), para. 4.a., accessed 6 May 2021, https://www.whitehouse.gov/wp-content/uploads/2021/01/a76_incl_tech_correction.pdf (Hereafter "OMB Circular A-76.")

⁷ OMB Circular A-76, "Performance of Commercial Activities," Attachment A, para. A-1.

⁸ Luckey, Grasso, & Manuel, *Inherently Governmental Functions*, 6.

⁹ Luckey, Grasso, & Manuel, *Inherently Governmental Functions*, 6.

¹⁰ Kate M. Manuel, *Definitions of 'Inherently Governmental Function' in Federal Procurement Law and Guidance* (Report #R42325, Congressional Research Service, December 23, 2014), 19.

¹¹ Manuel, *Definitions of "Inherently Governmental,"* 17-18 includes a listing of functional that the Government Accountability Office (GAO) has deemed to be inherently governmental. However, their judgments follow specific cases and do not apply in the abstract. Also, GAO's position are not binding, although they carry weight with Congressional members.

¹² Office of Management and Budget, "Publication of the Office of Federal Procurement Policy (OFPP) Policy Letter 11-01, Performance of Inherently Governmental and Critical Functions, *Federal Register* 76, no. 176 (September 12, 2011): 56227-56242, 56232, <https://www.govinfo.gov/content/pkg/FR-2011-09-12/pdf/2011-23165.pdf>. Hereafter "OFPP Policy Letter 11-01."

guided by existing policies, procedures, directions, orders, and other guidance that:

- (I) identify specified ranges of acceptable decisions or conduct concerning the overall policy or direction of the action; and
- (II) subject the discretionary decisions or conduct to meaningful oversight and, whenever necessary, final approval by agency officials (*emphasis added*).¹³

Other provisions govern determining when outsourcing is acceptable even when the function “has the potential for influencing the authority, accountability, and responsibilities of government officials.”¹⁴ For example, it is OK for contractors to develop options, provide advice and recommendations, or implement a course of action, so long as the decision to act remains with the government official. However, it is not appropriate to out-source so much of a function that the government abdicates its discretion. As law professor Paul Verkuil asked, “Should the exercise of government authority by the officers of the United States involve more than rubber-stamping the work of private contractors?”¹⁵ Per the policy, the answer is clearly no:

*A function is not appropriately performed by a contractor where the contractor’s involvement is or would be so extensive, or the contractor’s work product so close to a final agency product, as to effectively preempt the Federal officials’ decision-making process, discretion or authority. ... This requires that a sufficient number of in-house personnel with the appropriate training and expertise be available and remain available through the course of the contract to make independent and informed evaluations of the contractor’s work, approve or disapprove that work, perform all inherently governmental functions, and preclude the transfer of inherently governmental responsibilities to the contractor.*¹⁶

¹³ OFPP Policy Letter 11-01, 56232.

¹⁴ OFPP Policy Letter 11-01, 56232.

¹⁵ Paul R. Verkuil, *Outsourcing Sovereignty: Why Privatization of Government Functions Threatens Democracy and What We Can Do About It* (Cambridge University Press, 2007), 110.

Civil-Military Relationships and Contracting

Prior to attaining senior leadership, military officers typically have very limited dealings with Congress. However, officers understand that Congressional oversight and influence over the military is great, and military culture is very different from political culture. Consequently, a number of myths have surfaced regarding the nature of relations between Congress and the military, myths that some commentators say has little to no empirical support. Kenneth Mayer offered four such myths:

- *Myth 1:* Congress supports (or refuses to cancel) major weapons systems and programs on the basis of direct benefit to their districts
- *Myth 2:* Congress also bases support according to corresponding contributions from defense contractors
- *Myth 3:* The Pentagon awards defense contracts so to curry favor from important Members
- *Myth 4:* Members can demand defense contracts to be awarded to firms in their districts¹⁷

Mayer suggested that these myths flourish in part because of generalizations -- “It is always possible to find some members of Congress whose support for a weapon system correlates with district or state benefit. Examples are often taken as proof of a causal relationship.”¹⁸ Also, many programmatic decisions pit multiple camps against each other which lead to these myths being perpetuated. For example, a choice between two weapon system programs often involves constituents and advocates for both programs. No matter which one wins, that decision can be decried for undue political influence. The competing pressures for and against every program means that the ‘loser’

¹⁶ OFPP Policy Letter 11-01, 56238.

¹⁷ Kenneth R. Mayer, *The Political Economy of Defense Contracting* (Yale University Press, 1991), 3.

¹⁸ Mayer, *Political Economy*, 4.

could always have an axe to grind, and the strengths of these myths means there will likely be sympathetic ears.

The emphasis on 'program' is important as Members are far more likely to concentrate on individual programs than they are to broader matters of policy related to national security. Member may lend direct support to a program whose primary contractor is in their district or which represents a long-standing relationship between DoD and a local defense company. However, Members will also vote against a program that might bring more jobs to their district, on the basis of factors ranging from poor communication of the program objectives to political party objectives, constituent positions, and the Members' personal convictions. For example, Members who do not consider defense their first priority for the discretionary budget are not likely to give full support to any military program even if it benefits their district.¹⁹

Also, analysis of subcontracting by prime contractors showed that it was the *contractors* more often responsible for the geographic distribution of subcontracts than Congressional action, allowing the prime contractors greater influence and access.²⁰ The ability to disperse stems from rapid increases in information technology capabilities and low-cost transportation that allow primes to avoid having to centralize in one place, and provide great flexibility to move.²¹

This brings about the first of two ethical concerns – *conflicts of interest*. Unlike the restricted access that military members have with Congress, defense contractors are able to lobby Congress directly and make campaign contributions. They do so for the purposes of competitive advantage in sustaining government work and seeking new work. Laws, policies, and

regulations exist to prevent such contracts from "compromising the public interest for private benefit."²² Certain conflicts of interest are clear, such as *quid pro quo* actions to bribe or reward government officials who unduly award contract work to an otherwise less-qualified firm. Others are far more difficult to detect such as *collusion*, where contractors band together to artificially inflate the bids or freeze out other competitors, and *undue political influence*, where a contractor influences government officials to out-source a function (on terms favorable to the contractor) that is performed by government personnel.²³

Fixing accountability constitutes the second ethical concern when problems arise with contracted work. There have been instances where government officials and contractors have attempted to blame each other for problems in contract performance.²⁴ As previously mentioned, laws and policies govern the limits of contractor activities to avoid subsuming inherently governmental functions. When a contract suffers from poor performance or there is a crisis, accountability ultimately rests with the government official responsible for the function, who in the U.S. system who are either *elected*, *appointed*, or in the case of military officers, *commissioned*.²⁵ These officials and the government employees under them must therefore be knowledgeable in matters of "human resource, financial, organization, information, performance, strategic, political, and media management" to provide effective contract management.

Implications

The biggest challenge for senior leaders is when external pressures, particularly regulatory and budgetary, exceed available government employee capacity to properly supervise

¹⁹ Mayer, *Political Economy*, 4.

²⁰ Mayer, *Political Economy*, 210-211.

²¹ Steven Cohen and William Eimicke, "Contracting Out: What is Contracting and Why is it Growing?" in Mark Bevir (ed.), *The SAGE Handbook of Governance* (Thousand Oaks, CA: Sage, 2013), 241.

²² Cheryl W. Gray and Daniel Kaufmann, "Corruption and Development," *Finance and Development* 35 (March 1989): 7-10, cited in Steven Cohen and William Eimicke, *The Responsible Contract Manager: Protecting the Public Interest in an Outsourced World* (Georgetown University Press, 2008), 26.

²³ Cohen & Eimicke, "Contracting Out," 246.

²⁴ A prominent non-military example was the establishment of the Health Insurance Marketplace under the Affordable Care Act of

2013. The problematic implementation resulted in government and contractors blaming each other for problem, and contractors similarly blaming each other. For example, see Tom Cohen, "Contractors blame government for Obamacare website woes," *CNN*, October 25, 2013, <https://www.cnn.com/2013/10/24/politics/congress-obamacare-website/index.html> and Robert Pear, "Contractors Assign Blame, but Admit no Faults of Their Own, in Health Site," *New York Times*, October 23, 2013, <https://www.nytimes.com/2013/10/24/us/politics/contractors-assign-blame-but-admit-no-faults-of-their-own-in-health-site.html>.

²⁵ Cohen & Eimicke, "Contracting Out," 246.

contractors performing outsourced tasks. Policies and regulations reinforce the need for government personnel to exercise oversight. Outsourcing a government activity does not constitute a zero-sum game – newly out-sourcing an activity to a contracted employee does not necessarily equate to the ability to eliminate a government position. The oversight and decision-making authorities would remain within the government agency and becomes an additional burden to one or more employees within it. On the other hand, contracting can be cost-beneficial as the personnel and administrative costs of the employee can be transferred to a contractor.

Another implication regards level of analysis and how inherently governmental functions can creep into contracting actions at a lower level. Consider a base services contract in which a Service has established a global contract for an activity performed at various bases. Although the Service contract may technically and legally comply with law and policy, if the Service's internal policies or organizational capacity restricts local commanders from exercising the same level of discretion, there is a danger that contractors at the local level may begin performing inherently governmental functions.²⁶

A third implication is the risk of the body of professional knowledge atrophying due to outsourcing. As the OFPP policy letter clearly states, agencies are expected to retain sufficient knowledge to exercise discretion. However, this places a burden on the government workforce to sustain that corporate body of knowledge, which often must be built over time and may necessitate

the establishment and sustainment of viable career paths. Yet doing so may undermine the intended cost-savings sought from outsourcing in the first place. Unfortunately, resource questions can overtake those of strategy, and it is too easy to forfeit a future investment in the corporate knowledge in favor of cutting costs to stay within the current annual budget.

Reflection Questions:

1. Identify an important function currently performed by DoD personnel. Does it qualify as inherently governmental? Or, is it done by DoD personnel based on force of habit or convenience? What would be the advantages and risks of outsourcing?
2. Identify an important function currently outsourced. What risks are associated with outsourcing that function? What risks might be incurred if attempting to insource that function and assign it to DoD personnel?
3. Identify a program (e.g., a weapons systems acquisition or procurement effort) where the DoD and Congress have conflicting interests. What are the interests at stake and what is the nature of the conflict? What could DoD do to alleviate the conflict?
4. Identify a DoD program that was ultimately cancelled or otherwise failed to deliver the needed capabilities. What were the challenges to fixing accountability, whether the problem was on the government side or the contractors?

²⁶ Manuel, *Definitions of "Inherently Governmental,"* 17-18.

II. ENTERPRISE-LEVEL CONTRACTING TERMS AND CONCEPTS

How does contracting at the enterprise-level differ from that of the operational level? This section explores those differences. Enterprise contracts tend to involve procurement of large quantities of goods and services distributed across a theater or a whole service, and government personnel may not have the requisite expertise to judge the quality of delivery. The principles described here will help you understand the context of the contract and the potential problems government officials may face throughout the contracting process.

The ordinary experience of most officers and mid-grade civilians in contracting is at the operational level, procuring goods or services for a local need (especially in an 'operational' environment such as a combat theater). The focus, as described in joint doctrine, is for joint force commanders to "obtaining supplies, services, and construction from commercial sources in support of joint operations," on the basis of:

... cost, performance, schedule, and contract oversight requirements as well as many other contract support-related matters (e.g., risk of contractor failure to perform, civil-military impact, operations security) across the joint force, to include USG departments and agencies and key multinational partners.²⁷

The doctrine focuses on a process that assumes the presence of decisions to exercise contracting. It includes establishing structures and procedures for planning, validating, and prioritizing requirements while ensuring legal sufficiency and oversight.²⁸ Key is the bounding of operational contract support to combatant-command directed operations that pre-determine the scope of what is permissible by the joint force. In the course of planning the operation, the nation and DoD have already made strategic decisions regarding the scope of contracting in an operation.

Contracting at the strategic level is far more complex because many of the higher-level decisions are unique to the contract action. Several concepts related to contracting are

invisible or less salient at the operational level that become much more salient strategically. The following primer introduces a few of these concepts and the roles they play in understanding contracting from a DoD, joint, or service perspective. For comparison purposes, it will also illustrate how these principles manifest differently in the operational environment.

Large- and Small-Numbers Bargaining and Bi-Lateral Dependency

Operational contracts often satisfy requirements for locally or commercially-available goods and services operating for a limited period of time. The ideal scenario is that in response to a requirement, a 'large' number of vendors would be available to bid on it. The meaning of 'large' in this context is not numeric, so much as a qualitative measure of pressure on the vendors to present a competitive bid, defined here as optimizing the benefit-to-cost ratio.²⁹ The larger the number of vendors, the more likely that competitive forces will allow the most suitable vendor to be identified. This is effectively the promise of *large-numbers bargaining*,³⁰ which would ordinarily provide the greatest benefit to the force.

Small-numbers bargaining is present in the opposite situation whereby the number of available vendors is much smaller. Competition plays less of a role in driving the benefit-cost ratio. For example, knowledge that competitors are fewer, vendors may "engage in opportunistic pricing"³¹ or be less diligent over the quality of the products or services.³²

²⁷ The Joint Staff, *Operational Contract Support*, Joint Publication 4-10 (Washington, DC: The Joint Staff, 2014), I-2. Hereafter "JP 4-10."

²⁸ JP 4-10, I-2.

²⁹ Among military officers, one often hears *cost-benefit ratio*. I inverted this intentionally to reflect the meaning that a larger proportional benefit is preferred from the government side.

³⁰ Oliver E. Williamson, "The Economics of Organization: The Transaction Cost Approach," *American Journal of Sociology* 87, no. 3 (November 1981): 548-577, 554.

³¹ Eric K. Clemons and Lorin M. Hitt, "Strategic sourcing for services: Assessing the balance between outsourcing and insourcing," *Operations and Information Management Working Paper*, Discussion Draft 4.2 (1997), 14.

³² James Wilson, "Adaptation to Uncertainty and Small Numbers Exchange: The New England Fresh Fish Market," *Bell Journal of Economics* 11, no. 2 (Autumn 1980): 491-504.

Also, as economist Oliver Williamson points out, a large-numbers bargaining situation at the time of contract award can turn into a small-numbers situation at the time of renewal.³³ For example, several vendors might compete for the first sustainment contract for a new weapons system. Because the solicitation represents a novel requirement and there is no incumbent, there might be a larger number of vendors competing for it. Some of these vendors may not actually have the capabilities on-hand but are competing based on being able to generate them if they are awarded the contract. The 'bid' constitutes a promise to deliver, not an indication of on-hand disposable capability. Large-numbers bargaining theoretically encourages vendors to bid lower so long as they demonstrate the ability to satisfy the requirement. Years later, as the contract is up for renewal or re-compete, the numbers of available vendors decreases because the incumbent vendor and the government may have developed a *bilateral dependency*, whereby the vendor's resources or capabilities are such that the government "cannot easily turn to alternative sources of supply."³⁴ The basis, according to Williamson, might include "specialized physical assets" (e.g., equipment), "specialized human assets" (e.g., particular subject matter experts), or "site specificity" (e.g., proximity to or high familiarity with the customer's environment).³⁵

The challenges of bilateral dependency are shown in the example of the award and subsequent revocation of a military travel services contract in Europe in the late 2000s. The incumbent served separate contracts for each of the three services. Under a DoD-level consolidation initiative, in 2008 eight companies were offered the ability to compete for a single

Europe-wide contract. The eventual winner was not the incumbent, and the transfer of responsibility occurred in 2010.

However, the transition went poorly. The new contract holder elected to re-hire many of the incumbent's workforce but the employees grumbled at lower pay and benefits, the incumbent's software system was designed for corporate travel and was maladaptive to the government's peculiar requirements. Also, the military travel offices did not fit the holder's business model – which relied mostly on on-line booking and customer independence. In practice, the demand for face-to-face customer-agent time greatly exceeded vendor expectations, so much that the government terminated the vendor for cause after only a few months. The former incumbent took over, rehired most of its former personnel, and *a priori* operations resumed.³⁶ This is a useful sample of bilateral dependency because the newer vendor lacked the situational awareness of the incumbent and the government was not able to adequately articulate the requirements in depth being satisfied by the incumbent. This led to the new vendor underbidding the contract and being unable to deliver expected services. In the meantime, travel services to DoD customers experienced unacceptable disruption.³⁷

Information Asymmetry

In contract theory, one party in a contracting scenario, either the customer or the provider, has better information of the situation than the other party. It is rare that both sides have the same and full information about the requirements or the capabilities available among vendors. This is not necessarily borne of an intent to deceive or withhold, but a natural outgrowth of the

³³ Williamson, "Economics of Organization," 554.

³⁴ Oliver E. Williamson, "The Theory of the Firm as Governance Structure: From Choice to Contract," *Journal of Economic Perspectives* 16, no. 3 (Summer 2002): 171-195, 176.

³⁵ Williamson, "Theory of the Firm," 176.

³⁶ For the 2008 solicitation and award, see Kent Harris, "DoD to consolidate travel plans for those in Europe," *Stars and Stripes*, August 18, 2008, <http://www.stripes.com/news/new-travel-agency-to-take-over-at-most-europe-bases-1.100118>; For the 2010 reversion, see Seth Robson, "Sato Travel again gets contract to run travel officers in Europe," *Stars and Stripes*, August 4, 2010, <http://www.stripes.com/news/sato-travel-again-gets-contract-to-run-travel-officers-in-europe-1.113406?localLinksEnabled=false>; Kent Harris, "New Travel Agency to Take Over at Most Europe Bases," *Stars and Stripes*, March 19, 2010. The firm terminated for cause, Tzell

Airtrak Travel Group, filed an appeal that the government improperly stated that the ratio of travel requirements requiring in-person assistance was 50% with the rest accomplished via the automated Defense Travel System, when the data over the two months showed that DTS was used less than one percent of the time. Tzell had requested funding for additional on-site personnel to handle the in-person demand but were denied as the request was viewed as *anticipatory repudiation* of the contract -- meaning that the request was deemed indicative of the contractor having knowingly underbid. See Armed Services Board of Contract Appeals, Appeal of Tzell Airtrak Travel Group Corporation, ASBCA No. 57313, "Opinion by Administrative Judge Tunks on the Government's Motion for Summary Judgment," September 22, 2011, https://www.asbca.mil/Decisions/2011/57313_092211_WEB.pdf.

³⁷ ASBCA No. 57313, "Opinion."

complexity of matching goods and services to requirements. Francis Amagoh offered that task complexity is a factor, whereby the vendor knows better about how to complete the task than the government.³⁸ In a small-numbers bargaining scenario, the absence of competitors allows vendors to raise the price, possibly overcharging. Task complexity can be a disadvantage in complex tasks as "the agent will often learn something new about the difficulty of his task or the environment in which it is to be performed."³⁹

Asymmetric information, where one party to a contract has an informational advantage over the other, is a problem for government contracting and is generally unavoidable. The government contracts out precisely because it cannot produce the needed goods and services internally, and often does not have the same level of expertise as the vendors. Moreover, "vendors are unlikely to divulge all relevant information to governments during the various stages of contracting,"⁴⁰ especially information that would be disadvantageous during the solicitation and award processes. McAfee & McMillan (1986) describe the consequences for a defense contracting situation:

*The government cannot directly observe any bidder's expected production costs, and therefore it does not know which is the efficient firm. Each bidder must determine his bid in ignorance of the expected costs of his rivals. After a bidder has been selected, he is better informed than the government about the vagaries of the particular project; thus, the government is unable to observe how much effort the firm is making to limit production costs.*⁴¹

Two manifestations of information asymmetry are presented in the below subsections – *adverse selection* and *moral hazard*. Both are common issues surfacing in defense contracts.

Adverse Selection

Adverse selection occurs when the vendor can leverage information asymmetry before the contract is written, through the government's inability to assess the efficiency or effectiveness of the vendor in advance. In essence, the supplier may intentionally withhold or not be required to provide all necessary information that would render a truer or fuller picture of the bid, leaving the buyer as a disadvantage. The result may be lower quality goods or services or inefficient provision thereof.

A classic study of adverse selection was the Nobel-Prize winning essay by George Akerlof, "The Market for Lemons: Quality Uncertainty and the Market Mechanism."⁴² In the paper, Akerlof describes the process by which the used car market becomes induced to generate and sell increasingly inferior products. Summarizing, he found that conscientious owners who maintained their cars in good shape were held on to longer by their owners. Less-conscientious owners would shorten the shelf lives of their cars faster, thus pushing them to the used car market faster. However, buyers in the used car market cannot distinguish good used cars from bad in advance, rather they learn of the real quality after the purchase. Over time, both the quality of used cars decreased, as did expectations of the purchasers of used cars.

Consider the following illustration based on innovation and outreach such as conducted by the Defense Advanced Research Projects Agency (DARPA). DARPA routinely conducts 'challenges' intended to encourage defense industry, academia, and others to present innovative research and development solutions. (As an illustrative example only, consider the 2016 DARPA Cyber Grand Challenge, the "First All-Machine Hacking Tournament."⁴³ Prizes are awarded to winning entries, subject to U.S. -- the Cyber Grand Challenge winner is expected to

³⁸ Francis Amagoh, "Information Asymmetry and the Contracting Out Process," *The Innovation Journal: The Public Sector Innovation Journal* 14, no. 2 (2009): 1-14.

³⁹ Bengt Hölmstrom, "Moral hazard and observability," *The Bell Journal of Economics* (1979): 74-91, 88.

⁴⁰ Amagoh, "Information Asymmetry," 11.

⁴¹ R. Preston McAfee & John McMillan, "Bidding for contracts: a principal-agent analysis," *RAND Journal of Economics* 17, no. 3 (Autumn 1986): 326-338, 326.

⁴² George A. Akerlof, "The market for 'lemons': Quality uncertainty and the market mechanism," *The Quarterly Journal of Economics* 84, no. 3 (August 1970): 488-500.

⁴³ See Dustin Frazee, "Cyber Grand Challenge (CGC) (Archived), Defense Advanced Research Projects Agency, accessed 6 May 2021, <https://www.darpa.mil/program/cyber-grand-challenge>.

receive \$2M⁴⁴. Ideally, the results of the event would lead to greater DoD knowledge in cybersecurity and foster future capability development.)

There is a risk to such contests, however. Economic professors Ding & Wolfstetter (2011) showed the potential of an adverse selection problem two ways: (1) not all possible vendors enter such contests, and (2) it is not assured that all participating vendors submit their best work, because “innovators may withhold innovations that are worth considerably more than the prize.”⁴⁵ The contest may proceed, and the winner may claim the prize and subsequently become competitive for (or even win) a government contract for further development. However, the real winner may be the non-participant who subsequently markets a superior capability for more than the prize.

Signaling and *screening* are two processes for mitigating adverse selection problems. In signaling, the vendor attempts to provide credible information that reveals hidden information.⁴⁶ For example, if the DoD were to solicit bids for the development of a cybersecurity capability, vendors who have collected credentials (e.g., winning a Cyber Grand Challenge or other award) would reveal them in the bidding process to heighten their chances of winning. The challenge for the vendor is the risk or costs associated with pursuing such credentials in the first place.⁴⁷

Screening is action taken by the government to separate vendors into different pools according to a particular factor in ways that cause vendors to reveal such hidden information.⁴⁸ Applied to employment contracts, governments may use screening to either encourage or discourage certain types of candidates. Past work experience, education, and appearance and

presentation (e.g., as during an interview) are some common examples of screened factors for individual hiring decisions,⁴⁹ but they can be more elaborate. For example, if the government wants to avoid turnover, they may include inducements favorable to those seeking a long-term commitment (e.g., lower pay up front but assured pay increases over time); or if the government is facing reductions, may solicit temporary appointments that discourage more career-minded applicants.⁵⁰

As applied to defense contracts, screening actions can include past records of government contracts (especially negative experiences), preferential categories such as veterans’ preferences and small business, and presentations by the vendor candidates (e.g., at conferences or other venues where defense leaders may be in attendance). In the case of the U.S. government, screening actions are severely restricted and regulated to avoid impropriety. Nonetheless screening actions influence vendor behavior, often meaning the establishment of defense-specific departments to manage the vendor’s involvement in government contracts (including determining costs and benefits of acquiring credentials for signaling purposes).

Moral hazard

Adverse selection is a condition arising before the contract is let. *Moral hazard* is a condition arising afterward, occurring when one party in a contract can take undue risks entirely borne of the other party. Milgrom and Roberts explain two moral hazard situations in the case of a pair of simple transactions related to the breakdown of a car. In the first case, the unfortunate driver has the vehicle towed to a mechanic who begins work (effectively, a contractual agreement has therefore been made) and then says that the radiation is broken and

⁴⁴ Defense Advanced Research Projects Agency, “Cyber Grand Challenge: Rules,” November 18, 2014, https://archive.darpa.mil/cybergrandchallenge_competitorsite/Files/CGC_Rules_18_Nov_14_Version_3.pdf

⁴⁵ Wei Ding and Elmar G. Wolfstetter, Prizes and Lemons: Procurement of Innovation Under Imperfect Commitment, *RAND Journal of Economics* 42, no. 4 (Winter 2011): 664-680, 665.

⁴⁶ Paul Milgrom and John Roberts, *Economics, Organization, & Management* (Pentice-Hall, 1992), 154.

⁴⁷ The classic signaling game is described in Michael Spence, “Job Market Signaling,” *The Quarterly Journal of Economics* 87, no. 3 (August 1973): 355-374 through a labor market study in which

higher-productivity workers garnered educational credentials to reveal themselves as more productive, while the lower-productivity workers would not.

⁴⁸ Milgrom and Roberts, *Economics*, 156.

⁴⁹ Joanne Salop and Steven Salop, “Self-selection and Turnover in the Labor Market,” *The Quarterly Journal of Economics* 90, no. 4 (November 1976): 619-627, 619.

⁵⁰ Milgrom and Roberts, *Economics*, 157 describes the wage profile study by Salop and Salop, who also included mention of this as vendor ‘self-selection’ – that is, screening served to encourage vendors not meeting the profile to self-select out of solicitation.

must be replaced at greater cost. The driver does not know if the mechanic is truthful or fair with the price. Assume the driver agrees to the replacement, but again the car breaks down. The second mechanic alleges that the installation was done incorrectly and wishes to do a re-install, adding to the driver's cost. Again, the driver is at an informational disadvantage – is the second mechanic being truthful about the state of the car and the cost of the re-install?

They summarize the lessons of this vignette in the following two points.

- “When those with critical information have interests different from those of the decision, they may fail to report completely and accurately the information needed to make good decisions,” and
- “When buyers cannot easily monitor the quality of the goods or services that they receive, there is a tendency for some suppliers to substitute poor quality goods or to exercise too little effort, care, or diligence.”⁵¹

Moral hazard is a real and present condition in government contracts. When the government cannot adequately observe the contractor's performance, the contractor has available opportunity to underperform (referred to as “hidden action”⁵²) by cutting corners or further outsourcing to subcontractors who may be less accountable for their actions or less beholden to U.S. contracting law. Meanwhile, the government itself is not immune, as it can incur a moral hazard situation when in the role of supplier, such as funding security assistance programs for a foreign nation.

The latter was the subject of a January 2013 GAO report looking at joint doctrine on contracting in security force assistance efforts. The specific concern was that the U.S. government could not fully observe actions and consequences related to the assistance provided.

Along with “unintended consequences” and “perverse incentives,” auditors were concerned about moral hazards, “when recipients ... engage in riskier behavior (political oppression of their citizens, military aggression against their neighbors) than they would in the absence of the assistance.” This could be spurred by the recipient government itself in retaliation against insurgents or initiated by insurgents who assume the assistance will be used to consolidate power to their disadvantage. As the actions within the recipient nation cannot be observed (and therefore cannot be prevented), the risks of exposure would be borne by the U.S. Proponents for the assistance might be embarrassed or made politically vulnerable.⁵³

Moral hazard is also common among routine defense contracting actions, including procurement, employment, and service contracts. Procurement is particularly prone, as DoD is the sole buyer and defense industry consolidation reduces the numbers of potential suppliers for high-end weapon systems. Ergas and Menezes describe the potential for opportunism on the contractor's side due to the government's limited ability to monitor performance:

*Underinvestment in cost reduction, ‘scrimping’ on quality improvements which will reduce costs in periods in which the contractor does not bear cost responsibility (but increase costs subsequently), and an inadequate level of investment in, or disclosure of, innovations that are of net social value.*⁵⁴

As will be shown later, certain moral hazards are inherently present in certain types of government contracts. For example, a cost-plus-fixed-fee (CPFF) contract “provides the contractor with its regardless of the outcome of the contract ... [and] has no incentive to exceed the minimum effort.”⁵⁵ Moreover, there is little incentive for the contractor to reduce overhead costs through efficiencies, not only with respect to the current contract but to retain the “ability to perform future for the [government]” through

⁵¹ Milgrom and Roberts, *Economics*, 167.

⁵² Milgrom and Roberts, *Economics*, 167.

⁵³ Government Accountability Office, *DOD's Consideration of Unintended Consequences, Perverse Incentives, and Moral Hazards*, GAO Report #13-214R (2013).

⁵⁴ Henry Ergas and Flavio Menezes, “The Economics of Buying Complex Weapons,” *Agenda* 11, no. 3 (2004): 247-264, 251.

⁵⁵ Bruce R. Harmon and Scot A. Arnold, *Choice of Contract Type and Other Policy Initiatives for Reducing Contract Prices*, Report #D-5002 (Washington, DC: Institute for Defense Analyses, 2013).

new contracts.⁵⁶ Measuring overhead is highly misleading as well (one can hide overhead by subcontracting, for example), placing the government in a difficult position to demand cost savings through reduced contractor overhead.⁵⁷

Contract Incompleteness %%% add hold-up problem%%%

Traditionally, people view contracts as “complete” documents, specifying all aspects of the contractual relationship. When service members secure leases for off-post housing, the contracts typically lay out in detail all the provisions and responsibilities assigned between the service members and the property owners. Even in the simplest of cases, these documents become very long. In defense contracting, it may not be possible to reach agreement on every conceivable contingency facing the government and the vendor. Some contingencies may be higher priority, and the parties may mutually agree that other contingencies are too remote or too contentious to pursue without jeopardizing the contract negotiations.

An *incomplete contract* is one where gaps in the agreement exist in which the applicable laws of the state serve as a default mechanism. Thus, the two parties need not address every conceivable contingency, but they have the freedom to discuss matters where it is in both parties’ interests to codify in the contract rather than leave gaps. Uncertainty in the environment⁵⁸ and long development horizons⁵⁹ are factors that might call for incomplete procurement contracts, particularly high-tech where the contractor’s output is less certain.

The question arises as to how complete or incomplete a contract should be *a priori* (i.e., when the contract is let). In the previous example of leasing off-post housing, the contract is complete with the rent and conditions established *a priori*. Different types of government contracts, for example, incur different levels of incompleteness such as firm-fixed price (complete) to _____ (find

modern example/equivalent of FPIS, see Crocker, p. 130). There are costs (e.g., administrative) associated with pursuing greater completeness, and both parties must agree to those additional expenditures.

Generally, contracts become more complete as they proceed as new information spurs additional negotiations.⁶⁰ On the other hand, incomplete contracts increase the risk that either side will renege on the contract. The government may change the conditions, add requirements, or reduce the scope of a program. The contractor may fail to deliver the goods and services as specified in the contract, declare bankruptcy, or dissolve.

Comparing Enterprise-Level Contracting with Operational Contract Support

Operational Contract Support (OCS) operates under a particular set of conditions designed to maximize completeness, limit information asymmetry, and to maximize the benefits of competition to achieve operational effects at lowest risk to the mission and lowest cost. Joint Publication 4-10 says:

*The procurement process in a foreign contingency environment can be very prone to fraud, waste, and abuse (FWA). Commanders at all levels must take a proactive approach to fighting FWA and to conserving resources. Failure to do so can undermine the commander’s legitimacy to conduct military operations in a foreign environment and at home.*⁶¹

FWA is shorthand for various forms of deliberate opportunism by contractors due to moral hazard. ‘Deliberate’ characterizes conscious efforts to hide information, prevent oversight, and leverage the volatility and intensity of the operational environment for unwarranted gain (e.g., improperly profiting, or political favoritism). OCS contracts are, by their nature, more complete. Thus, the government’s formal contracting structure (e.g., laws, policies, and authorities) provide tools and guidance to

⁵⁶ Harmon and Arnold, *Choice of Contract Type*, 39.

⁵⁷ Harmon and Arnold, *Choice of Contract Type*, 39.

⁵⁸ Milgrom and Roberts, *Economics*, 133.

⁵⁹ Keith J. Crocker & Kenneth J. Reynolds, *The Efficiency of Incomplete Contracts: An Empirical Analysis of Air Force Engine*

Procurement, *The RAND Journal of Economics* 24, no. 1 (Spring 1993): 126-146, 144.

⁶⁰ Crocker and Reynolds, “The Efficiency of Incomplete Contracts.”

⁶¹ JP 4-10, I-14.

help leaders prevent FWA, and take recourse when they detect it.

At the enterprise-level, however, not all moral hazards lead to FWA, and in many cases contractors may take prudent risks to provide goods and services more efficiently while pushing the boundaries of the contract's specifications. The second-order effects may not manifest right away. The challenge for leaders is one of trust with the contractor – how many 'loopholes' must be closed without unduly shutting out competition?

Abdication of a contract in an operational environment is a very serious matter, such that DoD instructions requires that commanders prepare for it:

When the cognizant DoD Component Commander or geographic CCDR has a reasonable doubt about the continuation of essential services by the incumbent contractor during applicable contingency operations, the commander shall prepare a mitigation plan for obtaining the essential services from alternative sources. ... This planning requirement also applies when the commander has concerns that the contractor cannot or will no longer fulfill the terms of the contract [(e.g., due to threat levels, changes in host nation agreements, or political or cultural reasons.)]⁶²

It can be difficult to separate adverse selection from moral hazard.⁶³ However, in an operational environment, physical and political risks are great, and therefore the solicitation process should ensure that only vendors accepting the risks are able to compete (thereby reducing adverse selection).⁶⁴ The dynamics of an operational theater may lead to circumstances by which a contractor may no longer be able to perform, and although this is a manifestation of moral hazard, one should not necessarily equate it to FWA.

At the enterprise level, a DoD program encapsulates all activities, including contracts, leading to the development and sustainment of a capability. The threats to an enterprise-level government-contractor relationship are not so much physical or political but economic. For example, the contractor could become financially unstable and go under in the execution of the contract, or be maladaptive to changing needs of the program. Adverse selection is a distinct possibility if the causes of instability are rooted in the contractor's organization prior to contract award – that is, pre-existing problems within the company are made manifest afterward. Yet, the company may claim that the 'fault' lies with government for changing the requirements.

The implication is that leaders accustomed to OCS contracts may overlook certain conditions of the contracting environment at the enterprise level. Operational leaders accustomed to dealing with greater completeness of contracts may be less prepared to deal with incomplete contracts. The pursuit of completeness, which might increase comfort with and control over the contract may come across as invasive and drive potential vendors away.⁶⁵ Moreover, leaders may be more comfortable heading off the effects of moral hazard, such as monitoring contractor performance, and less comfortable addressing the potentiality of adverse selection at the time of contract development and solicitation.

Reflection Questions:

1. In the U.S., the defense industrial base has undergone a steady consolidation to a few major vendors, many of which are singularly capable of producing certain weapons systems. Under small-numbers bargaining, what are the potential effects on costs for weapons procurements? What can be done about it?

⁶² DoD 3020.41, page 12.

⁶³ Milgrom and Roberts, *Economics*.

⁶⁴ Elke Krahnmann, "The New Model Soldier and Civil-Military Relations" (pp. 247-266), in Marina Caparini, Deane-Peter Baker, and Andrew Alexandra, *Private Military and Security Companies: Ethics, Policies, and Civil-Military Relations* (Taylor & Francis, 2009), 255.

⁶⁵ For example, corporate leaders questioned the legitimacy of a new Department of Defense rule under its 2010s-era "Better Buying

Power 3.0" initiative that required firms to see Pentagon approval before spending on "internal research and development" (IRAD). Richard Whittle, "CEOs Question DoD's New IRAD Rule," *Breaking Defense* (blog), June 30, 2015, <http://breakingdefense.com/2015/06/ceos-question-dods-new-irad-rule/>.

2. Identify an example of a bi-lateral dependency, where a particular contractor has owned the contract for a specific service for a long period of time. If the next contract were to do to a different vendor, what would have to happen to ensure a smooth transition to the new vendor?
3. Given a current solicitation for goods or services, what are potential sources of information asymmetry (adverse selection or moral hazard), favoring either the government or the contractor? What are the risks? How can the solicitation be structured to mitigate those risks?
4. Identify a situation or requirement where incomplete contracts might be beneficial. What would be the advantages of contract incompleteness, and the risks? What can one do to mitigate those risks?
5. Apply the above questions to an operational contract scenario. To what extent do the risks of contracting increase? What are additional measures needed to mitigate those risks?

III. CONSIDERATIONS FOR OPTIMAL CONTRACT DESIGN

So what does 'right' look like? What should a leader consider as a requirement is being translated into a potential solicitation, to an offer, and through to completion and satisfaction of the contract's provisions? How should the leader ensure that the unit or command is properly postured to monitor contractor performance? The considerations in this section should help.

What makes for an effective, workable, and acceptable contract? It turns out to be more than simply finding the lowest-cost vendor for acquiring a good or receiving a service. Milgrom and Roberts (1992) identified four factors that contribute to a well-designed contract:⁶⁶

The Informativeness Principle

If we assume that complete information in a contract situation is impossible, then the question becomes 'how much is enough?' The *informativeness principle* establishes that a contract writer should know enough about the vendor's performance to evaluate its bid and monitor its performance, and that any measure of that demonstrates the effectiveness and efficiency of the contractor should be part of the contract and influence the compensation to the contractor. Put another way, "the incentive contract should be

based on all variables that provide information about the [contractor's] actions."⁶⁷

Informativeness is a lower standard than transparency, as the government cannot reasonably demand full information from the contractor. Instead, the aim is for the visibility of relevant information. If the government pays \$150K for a full-time contracted civilian to perform an important function, the contract should include all relevant metrics that help gauge whether \$150K for one full-timer is most cost-effective for the government. The metrics may show that \$75K for a part-timer is sufficient, or that the job requirements call for more than one hire. What this principle protects against is two-fold: (1) contractors being paid for full-time work who are only working at partial efficiency and obscuring their lessened effort during the rest of the time, and (2) contractors being put in a position to do more than what the contract

⁶⁶ Milgrom and Roberts, *Economics*.

⁶⁷ Patrick Bolton and Mathias Dewatripont, *Contract Theory* (MIT Press, 2004), 169.

specifies due to under-resourcing by the government.

Informativeness also gauges the pursuit of a contract action in the first place.⁶⁸ Clearly, if the costs paid to a contractor exceed the benefit compared to using internal assets, the contract should not be pursued. The informativeness principle suggests likewise if the compensation cannot be tied to a performance metric or other means that allow the government to observe the contractor, then contracting is probably not the best option. The moral hazard conditions arising from the inability to track relevant information about the contractor will inevitably cause the government to assume unnecessary risk.

The Incentive-Intensity Principle

However, there is a natural danger to tying compensation too closely to performance metrics. If performance metrics drive compensation, but the metrics do not accurately reflect true performance or higher performance levels do not equate to better service, then contract performance may actually suffer. In essence, one should optimize rather than maximize incentives. The *incentive-intensity principle* suggests that four factors contribute to the optimal levels of incentives for a contractor:

1. How much incremental compensation is given for marginal increases in performance
2. How clearly measurable is the increased performance
3. How much risk that the contractor can accept; and
4. How well does the contractor respond to the additional incentives⁶⁹

Consider the context of a military medical and dental treatment facility, such as an on-base clinic, where a number of physicians (e.g., general practitioners, pediatricians, dentists and dental hygienists) are contracted so that military doctors can focus more time on their operational missions and support to active duty personnel.

Treatment facilities are concerned about quality of care, throughput (e.g., reduced waiting times for appointments), patient satisfaction, and accurate documentation. If the population of the base increases (e.g., new unit transferred in or activated), but the treatment facility cannot expand, then there may be reasons to increase performance among the contracted workforce.

Let us assume that this increase cannot be absorbed in the existing contract without increasing incentives (e.g., granting overtime). Clearly, there is a limit to the incentives that will work as the more the quantity of patients increase, the risk to the physician increases such as fatigue leading to greater chance of error. Throughput is easily measurable, but quality of care and accuracy of documentation are less so. Also, some physicians may not be motivated by the increase in pay to take on more patients, particularly if they are already severely backlogged or if the time commitments impinge on other professional responsibilities. Alternatively, the increase in compensation may encourage corner-cutting on the part of some physicians, decreasing quality of care in ways not readily observable by the patients or the clinic.

These factors become important to the treatment facility commander when deciding how to employ contracted labor to address a sudden increase in demand. The essential question is: *What is the right amount of pay and other compensation to encourage the best performance without putting risk on workers?* Certainly, the offering of more pay should encourage workers to perform better, but there are tradeoffs. Offer too much or structure the incentives incorrectly, and the contractor might develop what Prendergast called *dysfunctional behavior responses*, habits or matters of performance that deviate from overall mission accomplishment. She offered the example of a baseball player whose contract includes an incentive clause based on number of home runs hit. This might encourage the player to try to hit home runs and risk striking out more often, even in situations where only a base hit or walk is needed, thus putting the team at risk.⁷⁰

⁶⁸ Milgrom and Roberts, *Economics*.

⁶⁹ Milgrom and Roberts, *Economics*, 221.

⁷⁰ Canice Prendergast, "The Provision of Incentives in Firms," *Journal of Economic Literature* XXXVII (March 1999): 7-63, 8.

The importance of tying increased incentives to increased measurable performance cannot be overemphasized. Absent proper measures, the contractor may accept the added incentives but not necessarily take proper steps to increase performance. The author's personal experience included a signal contract overseas to provide a theater headquarters access to the global information grid. The contractor was incentivized for fulfilling technical orders, such as creating a new 'pipe' or increasing bandwidth on demand. However, the contractor was fully able to meet the demand with existing assets, there was no risk induced to the firm's workers, nor did the workers receive increased compensation in kind. In essence, the increased compensation was pure profit for the contractor.

The Monitoring Intensity Principle

At a basic level, the higher the incentives to the contractor, the more scrutiny often needed from the government. *Monitoring* refers to activities specifically related to uncovering information about contract performance. Like incentive intensities, monitoring intensity should be optimized for the contract, as higher monitoring can lead to reduced performance by draining organizational energy. For contracts where variance in performance is low and incentives are less intense, less scrutiny should be needed.

The *monitoring-intensity principle* suggests that the optimal level of monitoring is driven by the amounts of incentives and acceptable levels of variance in performance.⁷¹ "It pays to measure more carefully [and therefore lower variance in performance] when incentives are intense."⁷² Monitoring intensity and incentive intensity are therefore related and should be considered together when designing a contract.⁷³

Government (including defense) contracting often invokes expectations of more comprehensive monitoring, regardless of the added costs to the government or its relationship with incentives or informativeness. This is not

unwarranted, as the government is expected to properly and efficiently use its resources given by the citizenry, and as numerous reports from the Government Accountability Office shows, ineffective or poor monitoring can often be blamed for contract underperformance and inefficiencies.

The Equal Compensation Principle

Invariably, contractors must balance effort across multiple tasks related to the provision of goods or services.⁷⁴ If a contract requires two activities (*a* and *b*) but does not express that *a* is more important to the customer, yet *b* provides greater incentive (or requires lesser effort) to the contractor, there will be a mismatch in expectations and thus an improper assessment of performance. One study offered the example of teachers being rewarded by test scores of their students who thus teach to the test rather than meet the school's preferred performance measures in other subjects.⁷⁵ Another example is how salespersons might be incentivized by direct sales more readily than customer satisfaction. Direct sales might provide immediate benefits while customer satisfactions show benefits over a longer-period.⁷⁶

The *equal compensation principle* applies between a contractor and its employees and is based on the idea that employees will perform multiple tasks – each incentivized independently. It says that when employees must divide its attention between two activities, neither of which are wholly monitored by the employer, then the rate of return to the employee for each activity must be equal, or the one with the lower rate of return will suffer or atrophy.⁷⁷

Contracting theorists like Prendergast believe that subjective performance evaluation criteria are better suited toward ensuring equal compensation, as objective measures will tend to encourage contractors to "game" the performance evaluations to their advantage.⁷⁸ That is not to say that objective measures should be utterly avoided but minimized when tasks are

⁷¹ Milgrom and Roberts, *Economics*, 226.

⁷² Milgrom and Roberts, *Economics*, 226.

⁷³ Milgrom and Roberts, *Economics*, 226.

⁷⁴ Bengt Hölmstrom and Paul Milgrom, "Multitask Principal-Agent Analyses: Incentive Contracts, Asset Ownership, and Job

Design, *Journal of Law, Economics, and Organization* 7 (January 1991): 24-52 called this "multi-tasking."

⁷⁵ Prendergast, "The Provision of Incentives," 21.

⁷⁶ Milgrom and Roberts, *Economics*, 228.

⁷⁷ Milgrom and Roberts, *Economics*, 228.

⁷⁸ Prendergast, "The Provision of Incentives," 21.

complex. On the other hand, subjective evaluation have their own pitfalls, such as monitors distorting their assessment reports.⁷⁹

Example - the National Security Personnel System (NSPS)

An argument can be made that the ill-fated National Security Personnel System (NSPS), which the Department of Defense employed from 2006-2009, failed to meet all four principles.

NSPS was a "pay-for-performance" system in which civilian employees were placed in three broad pay bands rather than a rank structure with step increases for time served under the former General Schedule (GS) system. Civilians accepting a position were to negotiate a starting salary within a pay band, and based on performance would be given annual raises and bonuses. The raises were determined by unit 'pay pools' which compared performance among civilian employees within a pay band, with the pay pools encouraged to award larger raises to better performers. It also was supposed to make it easier to document underperformers who might need to depart federal service (a critique of the GS system was the difficulty in eliminating poor performers). From a contract design perspective, the following were among the problems in the program's initial phases that, despite some corrective actions, caused the system to lose credibility and ultimately be cancelled:

The *informativeness principle* was not well applied. Supervisors varied greatly in their abilities to write useful job descriptions and performance metrics that could be fairly judged across the civilian workforce. Some supervisors voiced concerns that their own writing skills were detrimental to their employees (GAO, 2008, p. 37). Transparency of the pay pool process and adjudication of decisions were also lacking (p. 38). It was also difficult to aggregate individual appraisals toward assessing collective mission performance due to instability of individual performance objectives during the course of an appraisal period (p. 67).

The *incentive intensity principle* was also violated, as effectively the system was designed

mainly to address monetary incentives but not other forms of incentives important to workers. GAO (2008) showed that employees placed great value on reputation and recognition of service, and felt NSPS took that away. Moreover, monetary incentives were inconsistently managed. Ratings and bonuses were unevenly managed, with employees potentially receiving different ratings and pay raises depending on location. Supervisors were also making seemingly arbitrary decisions about increases between annual pay raises and lump sum bonuses that ultimately impacted retirement benefits (Ginsberg, 2008, p. 18). Finally, workers right and protection were another incentive not adequately considered, as the systematic exclusion of federal employee unions inhibited the ability to collectively bargain, adding to fears of unfairness in the treatment of employees (Ibid., p. 17).

Monitoring intensity increased greatly as GAO (2008) found. Employees and supervisors complained about increased time spent using the automated performance appraisal systems to the point of hindering their abilities to do their jobs. Supervisors and managers had to postpone major mission-related activities to accommodate the time-intensive pay pool process (p. 36). Despite this intensity of effort, NSPS employees were initially being awarded pay raises and bonuses lower than that of the GS schedule during times when the two systems were operating simultaneously (Ginsberg, 2008, p.21).

Equal compensation was clearly not followed. In addition to the above concerns about the impacts of inconsistencies of supervisor inputs to performance appraisals, the requirement for objective metrics to allow for comparison across civilian workers caused significant gaming of the system. Furthermore, GAO (2008) found that despite NSPS' professed intent to establish "meaningful distinctions" among superior and due-course performers, unit guidance and communications to employees suggested that due-course ratings were highly normal and pay pools were discouraged from issuing high or low rankings to avoid employee backlash (p. 37).

⁷⁹ Prendergast, "The Provision of Incentives," 22.

Reflection Questions:

1. Given a solicitation for a specified good or service, what information should the government request of potential bidders and what information requests might be inappropriate?
2. Identify an on-going contract for services. How is performance measured? To what extent could (or should) the contractor be incentivized to improve performance, and what would the incentives be? What risks would the government *and the contractor* assume and how would you mitigate them?
3. Consider an on-going contract – to what extent does the government exercise oversight? Is the level of oversight reasonable or appropriate? Is the responsible government agency or proponent adequately resourced to perform sufficient monitoring?
4. Identify an on-going contract in which the contractor performs multiple discrete tasks. To what extent does the contract reflect the proper prioritization of the tasks so that the contractor’s efforts deliver on those priorities? Are there perverse incentives that encourage the contractor to focus more on the low-priority tasks? What can be done to correct such instances?

IV. TYPES OF GOVERNMENT CONTRACTS

This section provides a summary of Federal Acquisition Regulation, Part 16, that describes the allowable types of contracts let by government agencies. This is only a brief summary, readers are encouraged to access the full regulation online at www.acquisition.gov/far

The Federal Acquisition Regulation provides a number of *contract types* that vary according to two factors: “the degree and timing of the responsibility assumed by the contractor for the costs of performance” and “the amount and nature of the profit incentive offered to the contractor for achieving or exceeding specified standards or goals.”⁸⁰ The various contract types are defined in Part 16. The below summarizes the major categories from the November 2014 release. This is provided solely for explanatory purposes – it is recommended that readers refer directly to the regulation for the most current definitions and applications.

Fixed-Price Contracts

Fixed-price contracts “provide for a firm price or, in appropriate cases, an adjustable price.”⁸¹ In other words, the government will pay the contractor a set amount for the goods and services provided, and this is type is typically reserved for commercial goods and services. For example, if the government procures computers through a contract action, the fixed-price contract might establish a fixed cost based on a quantity and per-unit cost. The government uses fixed-price contracts for services when the cost can be pre-determined based on “reasonably definite functional or detailed specifications.” For example, a fixed-priced contract would work well if contracting for a set number of facilitators

⁸⁰ Federal Acquisition Regulation, para 16.101.

⁸¹ Federal Acquisition Regulation, paragraph 16.201.

to run a conference or training event but would not work when contracting for maintenance activities because the levels of effort would vary too much.

There are several specified types. *Firm-fixed-price* contracts are not adjustable under any circumstances, including the actual contractor's cost. This incentivizes the contractor to control costs and perform efficiently. Contracts of short duration or that function as a single purchase can use these. *Fixed-price with economic price adjustment* contracts allow adjustments to the price based on market-driven fluctuations in the costs of the end items or actual costs of labor and material. Adjustments are not discretionary, rather they are defined as clauses in the contract. Such clauses specify the relevant conditions and formulas used to calculate adjusted costs. *Fixed-price contracts with prospective price redetermination* is for long-term delivery of commercial goods whereby a firm fixed price can be established for an initial period (at least 12 months), after which the firm fixed price is reset according to market conditions.

Some fixed-priced contracts are designed for research and development activities, but only of short-duration and limited cost (\$150,000). *Fixed-price contracts with retroactive price redetermination* operates similarly to the prospective redetermination contract above, but is used when the initial firm-fixed-price cannot be established, often the case in R&D. The initial price is a ceiling, and the redetermination is not a blank check, rather the renegotiation of the price will consider the contractor's demonstrated efforts to control costs. Finally, *firm-fixed-price level-of-effort term contracts* cover a 'level of effort' (e.g., man-hours) put toward an R&D effort when the precise work requirements are difficult to define.

Another type, *fixed-price incentive contract*, is covered under incentive contracts in a later subsection.

Cost-Reimbursement Contracts

Cost-reimbursement contracts "provide for payment of allowable incurred costs, ... [and] establish an estimate of total cost for the purpose

of obligating funds and establishing a ceiling that the contractor may not exceed"⁸² without approval. These are used when the requirements cannot be adequately defined to use a fixed-price contract, or when it is not possible to clearly define what the contractor must do. Contract clauses elaborate on which costs are considered allowable for reimbursement. These contracts cannot be used for procuring commercial items.

There are four main types which differ in what costs the contractor will absorb and what additional fees the government is willing to pay. *Cost contracts* are the simplest, whereby the government reimburses all allowed costs. *Cost-sharing contracts* are those where the government reimburses only a portion of the costs according to the contract terms (e.g., percentage, certain types of costs). Thus, the contractor "absorbs a portion of the costs, in the expectation of substantial compensating benefits."⁸³ In *cost-plus-fixed-fee* contracts, the government reimburses costs and pays a fixed fee for the contractor to produce an end product (e.g., a report). Contract clauses would specify when the government pays to fee (e.g., at the end or in increments so long as the contractor progresses toward the final product.

Cost-plus-incentive-fee and *cost-plus-award-fee* contracts are discussed in the next section.

Incentive Contracts

Incentive contracts are used when fixed-pricing is infeasible, but the fees and reimbursed costs can be tied to the contractor's performance. The specified benefits are to "motivate contractor efforts that might not otherwise be emphasized [and] discourage contractor inefficiency and waste."⁸⁴ Contract clauses encode the incentive formulas and performance targets, such that the government pays incentives when the contractor exceeds the targets, or reduces them when targets are unmet. There are numerous types of incentives available and the FAR details them in paragraph 16.401. This paper only summarizes the major categories.

Fixed-price incentive contracts are fixed-price, but with the ability to adjust the price (up to a

⁸² Federal Acquisition Regulation, para. 16.301.

⁸³ Federal Acquisition Regulation, para. 16.303.

⁸⁴ Federal Acquisition Regulation, para. 16.401.

ceiling) based on contractor performance. Such contracts may set the targets for completion of performance (*firm target*) based on time, cost, or other metrics, and the government pays the incentives at the end according to the negotiated formulas. Or the contract may include *successive targets* to be met during performance. The FAR requires that the contractor be able to provide the necessary data to show performance warranting the incentives. A variation is the *fixed-price contract with award fee* where performance incentives are impractical and the government wishes to use an award fee to motivate the contractor.

Cost-reimbursable incentive contracts likewise add incentives to cost-reimbursable contracts, whereby targets and adjustment formulas can likely motivate improved performance. *Cost-plus-award-fee* contracts are also analogous, whereby the (fixed in total) award fee may be paid in part at the beginning of the contract, and subsequently earned during performance in installments.

Indefinite-Delivery Contracts

Indefinite-delivery contracts are used when “the exact times and/or exact quantities of future deliveries [of goods or services] are not known at the time of contract award.”⁸⁵ These might include government stocks such as spare parts whose demand is irregular, or service contracts whereby the contractor provides services on demand. The FAR, paragraph 16.505, defines an *order* which is the basis for contractor delivery and must be within the scope of the contract to be valid.

There are three types. *Definite-quantity contracts* establish the delivery of a pre-determined quantity of supplies or services over a fixed period but the delivery location and time set once an order is made. *Requirements contracts* are used when a contractor is needed to fulfill recurring orders for goods and services for specified functions. Examples include repair contracts, advisory and assistance services, and supply operations. *Indefinite-quantity contracts* are similar to the above except that the actual

quantities are unknown, and instead the contract establishes minimum and maximum levels.

Other Types

The FAR also includes three other types of contracts that are not fixed-price. *Time-and-materials contracts* are suitable when it is not possible in advance to determine the precise levels of performance required, but the costs to the government can be expressed in hourly rates for labor and actual cost of materials, but subject to a ceiling. *Labor-hour contracts* are similar but for labor only (i.e., no materials).

The third type, *letter contracts*, are an instrument available to the government when performance is needed immediately, before the full final contract can be negotiated. The result is a binding commitment by the contractor to perform and to complete negotiations with the government.

Reflection Questions:

1. Identify a requirement for contracting a good or service. What would be advantages or disadvantages of any of the contract types listed in this section (fixed-price, cost-reimbursement, incentive, or indefinite-delivery)? Which might you recommend?

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⁸⁵ Federal Acquisition Regulation, 16.501-2.