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CREATING SYNERGY FOR INFORMED CHANGE

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Noncompetitive Contracting: Lessons from Contracting Personnel

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Abstract

In this paper, we survey a small group of Air Force contracting personnel to understand their views on contracting in sole-source environments. Our findings suggest Air Force contracting personnel in this setting know that sellers in noncompetitive relationships have more leverage and power than the buyer. Indeed, 90% of respondents feel they operate at a negotiating disadvantage in sole-source contracts. Arming them with certified cost and pricing data does not improve leverage, according to a majority of them. Rather, they identify two constraints in their qualitative responses. First, the sole-source environment itself contributes to the problem. Second, many respondents feel they operate at an informational disadvantage compared to their private counterparts. This suggests specific training on their contracts would be more valuable than any general training on business acumen.

Introduction

Noncompetitive spending in the Department of Defense (DoD) is large. Per the DoD competition scorecard for third quarter Fiscal Year (FY) 2018, noncompeted dollars accounted for 63% of total dollars by the Air Force and 65% by the Navy (OUSD[A&S], 2018). A majority of Navy and Air Force dollars are, thus, obligated in noncompetitive settings where few large firms dominate. Understanding the views of government contracting personnel on working in such noncompetitive markets is critical to DoD acquisition programs. Our paper offers insights by surveying a small number of military and civilian Air Force contracting personnel at the F-22 program office. The majority of the F-22 program office contract actions are awarded in sole-source environments.

Section 843 of the 2018 National Defense Authorization Act (NDAA) tasked the under secretary of defense for acquisition and sustainment to assess whether there are any “gaps in knowledge of industry operations, industry motivation and business acumen in the acquisition workforce” and how such gaps, if any, can be closed with training and development (NDAA, 2017). To that end, Congress asked the under secretary to submit a



report on the knowledge of “industry operations, industry motivation and business acumen” necessary for each acquisition position and how non-DAU sources (industry and other universities) can be used to improve training. In response, RAND prepared a report drawing on interviews of subject matter experts in the DoD and industry, and published sources (Werber et al., 2019). However, the report was unable to speak to the views of acquisition personnel because they did not have the time to survey them.

Our project takes a first step in addressing this gap. We survey Air Force contracting personnel at the F-22 program office on their experience with sole-source contracting, which accounts for a large share of the Air Force budget. We hope our small survey, among others, will help identify gaps in training, if any, that may help acquisition personnel better negotiate contracts and determine “a fair and reasonable” price in these sole-source settings (Federal Acquisition Regulation [FAR], 2018).

By explicitly targeting business acumen, industry operation, and motivation, Congress wants trained acquisition personnel to understand the business of firms. In particular, how do firms price, cut costs, negotiate with buyers and suppliers, and respond to market conditions. A solid foundation in these concepts is likely to help DoD acquisition personnel secure more favorable terms when they buy goods and services. However, these concepts are not uniformly defined in the DoD, as noted in the RAND Report (Werber et al., 2019). Moreover, contracting for common support services, such as waste disposal, is different than contracting for a major weapons system. A general understanding of firm behavior may be useful to both, but acquisition personnel for a major weapons system need to understand the background and motivations of the big defense firms operating in their field. Identifying gaps in knowledge thus requires differentiating between general business learning versus more specific learning tailored to the experience and career path of acquisition personnel.

Our results support this point. In our survey, the majority of Air Force contracting officers know that sellers in noncompetitive—that is, sole-source—relationships have more leverage and power than the buyer. Indeed, 90% of respondents feel they operate at a negotiating disadvantage in sole-source contracts. Giving them certified cost and pricing data does not help, according to the majority of them. Rather, they identify two constraints in their qualitative responses. First, the sole-source environment itself contributes to the problem. Second, many respondents feel they operate at an informational disadvantage compared to their industry counterparts.

Respondents in our study are familiar with the basic constraints of buying in noncompetitive markets. They mention an inability to negotiate prices and the associated power asymmetry between them and the sole-source contractor. Additionally, many respondents point to specific information gaps. One respondent mentions that defense-focused firms have more nuanced goals, such as maximizing revenues that are perhaps not as clearly related to models of profit maximization. Other respondents say they do not have information on subcontract terms. And still others say their industry counterparts work on these programs for decades and are familiar with the ins and outs of the contract in ways that government acquisition personnel are not. These responses suggest more specialized training on the contracts itself and the firm involved is more valuable.

We also find differences between individuals with seven or fewer years of contracting experience compared to those with more experience. Less experienced individuals are unfamiliar with issues of nonconformance and consideration in sole-source contracts. Consideration in contracts is the idea that both parties benefit from entering into a contract.



Given these issues, these differences are perhaps unsurprising, because resolving nonconformance involves many steps and can take time.

Our survey focuses on a small population of 57 government contracting personnel at the F-22 program office. That, combined with our low response rate of 28%, makes us cautious in drawing strong conclusions. That said, our findings are perhaps unsurprising and we offer a few tentative recommendations for training acquisition personnel in noncompetitive procurements. Clearly, an individual contracting officer cannot change the market in which they operate. But we can give them more information on the contract itself—a short readable summary of the contract highlighting any incentives, due dates and changes, a brief history of the negotiations leading to the final contract, and the main players involved. Such details are often included in the “after action report” of seasoned contracting personnel, but we should make them a standard practice. Moreover, we should give more technical and economic information on the particular contract, which would strengthen the commanding officer’s negotiating position. On a related note, we may also want to develop in-depth profiles of the principal firms operating in these markets. Finally, we recommend a larger survey of government contracting personnel across multiple commands to better understand and inform the training of acquisition personnel.

Background

We review the RAND report here that motivates our survey (Werber et al., 2019). RAND researchers undertook their study in response to Section 843 of the 2018 National Defense Authorization Act. On behalf of DoD, their report assesses the current state of training in “industry operations, industry motivation and business acumen” in the acquisition workforce, documents gaps in that training, and offers recommendations, in particular on the role of non-DAU sources. Their assessment relies on interviews of subject-matter experts in the DoD and industry, published competencies for acquisition personnel, and related literature.

Their findings first highlight that there are no consistent definitions of the terms “industry operations, industry motivation and business acumen” in the competency models associated with different acquisition career fields. Moreover, the competency models themselves are not uniform across career fields. Although the RAND researchers constructed a working definition of these terms, it was difficult to identify which career fields in particular needed knowledge of these terms. The report finds that most acquisition career fields need to know these terms and related issues with career fields in contracting requiring more knowledge than science and technology management for example.

Although the acquisition workforce uses both internal sources (e.g., Defense Acquisition University [DAU] and Naval Postgraduate School [NPS]) and external sources (e.g., commercial training companies and civilian colleges and universities) for training and education, the report was unable to identify precise gaps. This is perhaps due to the study relying on interviews with small and medium-size enterprises as opposed to surveys of acquisition personnel. Finally, the report finds very little evaluation of the effectiveness of training and development programs. Apart from student responses to courses and some higher-level focus groups, there are no systematic evaluations of whether acquisition personnel make changes in their jobs based on their training and whether those changes translate into improved outcomes.

To address gaps in Section 843 areas of “industry operations, industry motivation and business acumen,” the report first recommends that the DoD decide what level of knowledge of these areas is required for each career field. Then it recommends the DoD measure the required knowledge of these terms among acquisition personnel. This would



enable the DoD to precisely identify gaps, if any, in this knowledge. It also recommends better tracking of training by personnel throughout their career. This would allow for stronger assessments of training and development programs in the acquisition workforce. Our survey addresses an important gap in this study by surveying Air Force contracting personnel on their knowledge of contracting in noncompetitive environments. Our findings suggest that most Air Force contracting personnel have a basic understanding of industry operations in their field. However, our findings also indicate that the surveyed personnel need more specific knowledge on contracts, subcontract terms, and contract history.

Survey Methodology

To understand the views of Air Force personnel on sole-source contracting, we surveyed 57 individuals in the F-22 System Program Office at Wright-Patterson Air Force Base, OH, and Hill Air Force Base, UT. Of these 57, five are Air Force officers and 52 are Air Force civilians. After receiving the necessary approval from the Air Force Survey Organization, an administrator e-mailed a link to the online survey, using the NPS-approved Lime Survey web-based survey system. The survey was open from December 6, 2019, to December 31, 2019. It was a voluntary and anonymous survey. We did not ask or collect any personally identifiable information. Moreover, we added the following statement in the beginning: “Your participation in this survey is strictly voluntary. If you choose to participate you can change your mind at any time and withdraw from the survey. You will not be penalized in any way or lose any benefits to which you would otherwise be entitled if you choose not to participate in this survey or to withdraw.” This was to ensure respondents felt comfortable sharing their feedback without fear of retaliation.

Our survey consisted of two parts. Part 1 asked seven demographic and background questions, while Part 2 asked respondents about their experience in noncompetitive contracting, whether they feel they are at a disadvantage in such settings, and to identify factors if they do feel they are operating at a disadvantage. We also asked their experience with nonconformance and consideration in noncompetitive contracts. The complete survey is available upon request.

Despite multiple e-mail reminders, our response rate was only 28% (16 individuals) dropping to 23% (13 individuals) with complete responses. December is a busy time with year-end deadlines and holidays. This perhaps reduced the number of respondents. Given the small number of respondents, we view the survey results as more qualitative evidence and hope future surveys with larger populations can provide more insight into the issues raised by the F-22 Air Force personnel.

Results

We first describe the background characteristics of the respondents. Unfortunately, five of the 16 responses were incomplete. We summarize the responses below for everyone that responded to a question. Of our 16 responses, three identified as Air Force officers and 10 as Air Force civilians. Another three chose not to respond. This translates into a higher response rate of 60% among the Air Force officers compared to 19% among Air Force civilians. Our survey population included five Air Force officers, three of whom responded, while 10 out of 52 civilians responded. In terms of gender, men accounted for 69% of responses compared to 31% women.

Among the military responses, two are of ranks O-1 to O-3, while one is of rank O-4 to O-6. Among civilians, a majority of the responses (60%) are at GS-13 and GS-14 grade, compared to GS-12. Figures 1 and 2 summarize the professional background of the respondents. Almost 80% have more than four years of contracting experience with the



federal government and 50% have more than eight years of experience. This suggests our survey responses reflect the views of both entry-level and advanced acquisition personnel. Most respondents (85%) also have a Defense Acquisition Workforce Improvement Act (DAWIA) certification of Level 2 and 3.



Figure 1. Years of Contracting Experience

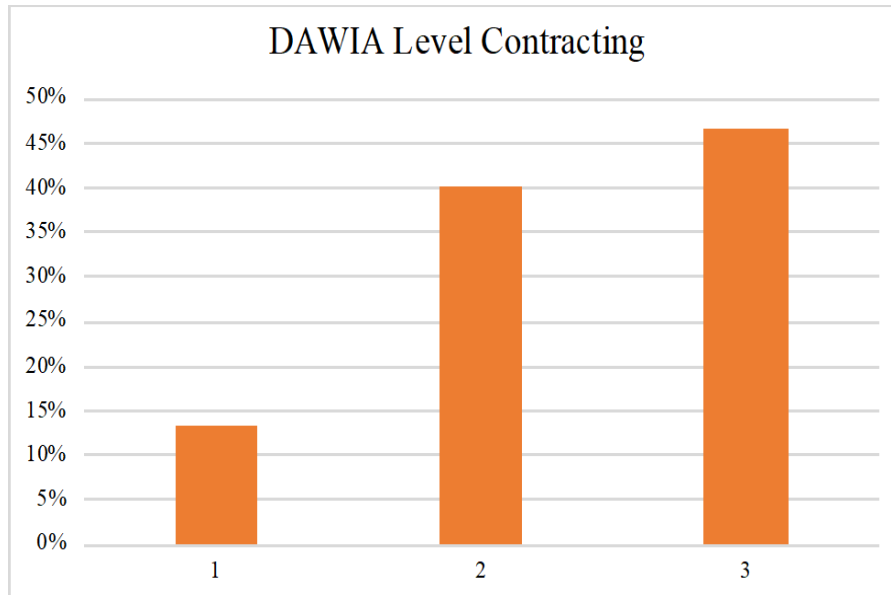


Figure 2. DAWIA Level Contracting

As shown in Figure 3, our respondents have experience in multiple contracting areas, with the majority in weapons systems acquisition followed by operational contracting.



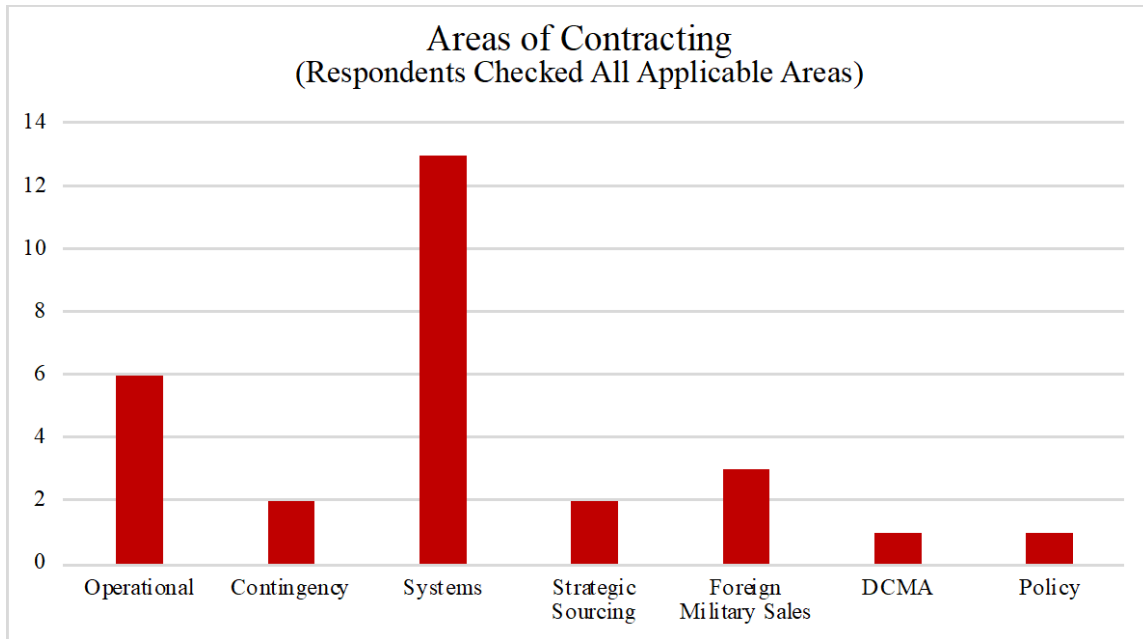


Figure 3. Areas of Contracting

We turn next to our experience questions on noncompetitive acquisitions. Given our focus on the F-22 program office, it is unsurprising that 67% of our respondents have been involved (current or past) in noncompetitive relationships with incumbent contractors. These would be sole-source contracts. Of these 11 individuals (67%) responding “Yes,” all but one (90%) feel they are at a negotiating disadvantage with the contractor in this setting. Arming them with certified cost and pricing data does not change their views. Of the group that feels they are at a negotiating disadvantage, 90% continue to feel at a disadvantage even with certified cost and pricing information.

Such a lopsided response naturally leads to the question of why contracting personnel feel at a disadvantage in noncompetitive settings. Their qualitative responses fit into two categories. First, they feel disadvantaged because private contractors leverage the sole-source environment. Some responses mention the negotiation/power asymmetry in particular of not being “able to walk away and either not purchase the item at all or to purchase it elsewhere.” Others mention the inability to negotiate lower prices because the sellers leverage their sole-source position.

This explanation is perhaps unsurprising. We know from economic theories of firm behavior the difference between markets with lots of sellers (i.e., competitive markets) and one seller (i.e., monopoly). Prices are lower in competitive markets because buyers can choose from different sellers. Moreover, buyers can switch from one seller to another if they are unsatisfied with the product or price. This leads to lower prices for goods traded in competitive markets. But the military does not often operate in competitive markets. They buy custom products designed and built to their specific needs. Private firms also order custom products in many industries where dual sourcing is a common response to diversify risk across multiple suppliers and reduce cost. Indeed, Klotz and Chatterjee (1995) show using a theoretical model that dual sourcing can reduce costs in a setting where firms face learning and entry costs, common to most DoD acquisitions. An empirical study confirms the advantages of dual sourcing. Using a unique though small data set of 14 tactile missile contracts between 1975 and 1995, Lyon (2006) shows that dual sourcing was undertaken to improve quality, not reduce cost per se, but still lead to lower procurement costs.



Other qualitative responses fall under the second category of government contracting personnel operating under an informational disadvantage compared to their industry counterparts. For example, a respondent mentioned that the “Program Office is not trained or knowledgeable [sic] on their requirements.” Another respondent mentioned they, that is, government contracting personnel, do not have a “very deep understanding” of “true cost” or the government’s “negotiated price.” In yet another variant, a respondent described the difficulty in obtaining certified cost or pricing data from subcontractors. Many respondents mentioned that the Truth in Negotiations Act (TINA) certification does not include data on the terms between contractors and their subcontractors. While sole-source contracts make these information barriers worse, it seems the Air Force should demand more data from their contractors and then disseminate it widely within the DoD acquisition community.

Fifty percent of respondents that used incentive contracts, such as Cost-Plus Award Fee (CPAF) or Cost-Plus Incentive Fee (CPIF), felt such contracts better incentivized necessary performance among contractors. But the other 50% of respondents disagreed, describing some problems with incentive-style contracts. One respondent mentioned that contractors are not motivated by fees; rather, their business model works around “cash flow” and “quarterly earnings.” Another respondent noted contractors seem to pursue a revenue maximization strategy over profit maximization. Most incentive contracts assume firms seek to maximize profits by cutting costs. These responses suggest that these firms have goals that the government does not consider in the negotiation process.

Our final experience questions centered on nonconforming supplies. Fifty percent of respondents had experience with contractor nonconformance. Though 50% nonconformance is high, it is difficult to interpret without more information on nonconformance in other DoD contracts and industry contracts. Of those that experienced nonconformance, 88% said consideration was sought based on their highest dollar value contracts. Figure 4 describes the type of consideration sought, with change in schedule being the most common, followed by a decrease in price and more additional supplies.

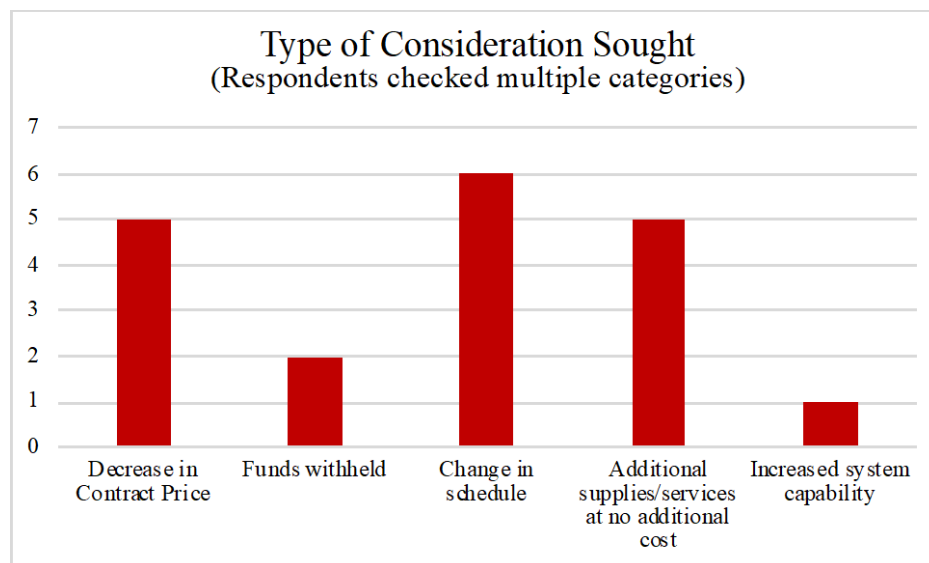


Figure 4. Type of Consideration Sought

When consideration was sought for nonconformance, 57% of respondents said it was recovered. This seems low, but again it is hard to interpret the data without more



information on the specific contract and dispute. In cases where consideration was recovered, 75% of respondents felt the consideration was fair. But in cases where consideration was not sought, the respondents again noted power asymmetry problems of sole-source contracts.

Comparing the survey responses across different groups can offer more insight into these overall findings, but we are cautious in analyzing responses by group because of the small number of respondents in some groups. That said, we can use experience to bin individuals into two almost equal-sized groups. This exercise offers qualitative evidence on differences between those with more or less contracting experience.

Among respondents reporting their years of contracting experience, we binned six individuals (46%) as those with less experience ranging from 1 to 7 years. We binned the other seven individuals (54%) as those with more experience ranging from 8 to 25 years. Both groups have similar exposure to noncompetitive acquisitions. For example, all but one respondent in each group responded yes to the question on whether they had any experience with sole-source contracting. While both groups had similar backgrounds in sole-source contracting, respondents with more experience felt they were at a negotiating disadvantage in larger numbers compared to those respondents with less experience. Four of those with less experience responded they were at a disadvantage compared to six of seven of those with more experience. Interestingly, respondents with more experience saw less value in certified cost and pricing data compared to those with less experience. However, both groups mentioned power asymmetry and informational barriers as obstacles to effective negotiating in sole-source environments.

In response to nonconformance, respondents with more experience are more likely to run into nonconformance issues (six out of seven) compared to those respondents with less experience (two out of six). However, more contracting experience also translates into seeing consideration being sought for nonconformance (five out of six individuals) and consideration being recovered (four out of six individuals). None of the respondents with less experience recalled consideration being recovered for their highest dollar value contract. Now these responses may just be a function of time. Nonconformance complaints and considerations can take time to resolve. While some resolve in days, others drag on for multiple years.

Conclusion and Recommendations

We surveyed a small population of Air Force contracting personnel at the F-22 System Program Office at Wright-Patterson Air Force Base, OH, and Hill Air Force Base, UT. Our response rate was 28%, or 16 respondents, with higher responses among military personnel compared to civilians. Given our small population at one program office and low response rate, we are cautious in extrapolating to the larger government contracting population. That said, our findings likely confirm the perspective of many contracting professionals working in government acquisition. With the caveats in mind, we want to offer tentative recommendations based on our survey.

We recommend the Air Force undertake a large survey in scope and population. In scope, the survey should include (1) basic business and economic questions on noncompetitive markets and (2) specific questions on the contracts associated with each program office. Based on our survey responses, most contracting personnel are perhaps familiar with basic business concepts but do not have the requisite specialty knowledge. If that is the case, a larger survey could help identify those gaps and then give the necessary information. Moreover, the survey should target multiple program offices, or at least those involved in the five largest dollar programs.



Apart from surveys, we also recommend a detailed study on dual sourcing. This is not a new recommendation. Rather, dual sourcing has been extensively discussed in the operations academic literature and among DoD decision-makers. We suggest research that takes one product, such as missiles in the Lyons (2006) article, and follows its design and manufacturing history for the DoD to assess the potential for dual sourcing. Such exercises may exist, and we are perhaps unaware of them. If they do exist, we should consider disseminating them widely so decision-makers are aware if there are precedents for dual sourcing in their specific domain and how to incorporate them.

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