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Contracting for Services in the U.S. Army: An Empirical Study of Current Management Practices

An analysis of the implications of different deficiencies of services acquisitions in the U.S. Army, as well as the effectiveness of current contract management processes and recommendations for improvement.

BY ARUNA APTE, UDAY M. APTE, AND RENE G. RENDON

This article presents the results of our empirical study of current management practices in services acquisition in the U.S. Army. In this study, we developed and used a web-based survey to collect primary data on the acquisition strategy, procurement methods, and contract types used at army installations. Specifically, we studied the current management practices in such areas as life cycle approach, project management, organization/management structure, and training provided to services acquisition personnel.

For the most part, we found that the service contracts awarded and administered conformed to our expectations. For example, most service contracts, except in the case of medical services, were competitively bid, fixed-priced awards with a minimal use of any type of contract incentives. However, the survey respondents also indicated that the number of authorized staff positions in the army for services acquisition was inadequate and that the existing billets were inadequately filled. Another surprising finding was that the project teams were often led by the contracting officer as opposed to a formally-designated project manager responsible for the overall success of the service project.

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Introduction

The service sector represents the largest and fastest-growing segment of the economies of the United States and other developed countries. For example, in the United States, services accounted for over 80 percent of employment in 2004.¹ The growth of services in the overall economy is also mirrored by the growth of services acquisition in private sector companies² and in the government.

For example, the procurement of services in the Department of Defense (DOD) has continued to increase in scope and dollars in the past decade. Even considering the high value of weapon systems and military equipment purchased in recent years, DOD has spent more on services than on supplies and systems.³ Specifically, DOD obligations on contracts have more than doubled between fiscal years 2001 and 2008 to over \$387 billion, with over \$200 billion spent just for services.⁴ The procured services presently cover a very broad set of service activities, including:

- Information technology and telecommunications services;
- Maintenance and repair of equipment;
- Professional, administrative, and management support; and
- Transportation, travel, and relocation services.

As DOD's services procurement continues to increase in scope and dollars, DOD must give greater attention to the management of services contracts. Unfortunately, the increase in service contracting has coincided with the reduction in the federal government workforce. The size of the federal workforce fell from 2.25 million in 1990 to 1.78 million in 2000.⁵ This mismatch between the increasing workload and the decreasing size of the workforce, and the unique nature and complexities associated with services acquisition, have possibly created an environment wherein following the best practices has not always been feasible. For example, between 2001 and 2009, the Government Accountability Office (GAO) issued 16 reports related to trends, challenges, and deficiencies in contracting for services. In addition, between 2002 and 2008, the DOD inspector general (DODIG) issued 142 reports on deficiencies noted in the DOD acquisition and contract administration process.

Both GAO and the DODIG have identified the following as some of the critical deficient areas in services contracts:

- **Market Research**—The government is required to conduct *market research* to determine the market's

capability for providing the required supply or service and the government's appropriate contracting strategy for the procurement.⁶ However, reports have shown that DOD has not conducted adequate market research during procurement planning of services contracts.⁷

- **Contract Type**—Selecting the appropriate *contract type* is essential for ensuring the appropriate sharing and allocation of risk between the government and the contractor. Fixed-price contracts allocate the majority of the cost risk to the contractor, while cost reimbursement contracts provide for most of the cost risk to be borne by the government. However, government reports have shown that inappropriate contract types were used in services contracts, resulting in more risk to the government.⁸
- **Project Management**—The use of *project management* tools and techniques, such as designated formal project managers, project teams, and project life cycles, have been considered a best practice in managing service contracts. However, GAO reports have shown that DOD lacks the proper management structure and processes for managing services contracts.⁹
- **Requirements Management**—Sufficient *requirements management* is essential for identification and development of needs for DOD in terms of required services. If requirements management is insufficient, the resulting service contracts will not adequately meet the customer's needs. Unfortunately, GAO and DODIG reports have identified poorly defined requirements and insufficient requirements management as problems in service contracts.¹⁰
- **Training and Experience**—Defense contract management requires specialized skills and competencies that come from extensive *training and experience*. A properly trained and competent acquisition workforce is considered the heart of successful defense acquisition management. However, with the downsizing of the DOD workforce, the lack of a qualified acquisition and contracting workforce to manage the increasing workload in DOD service contracts continues to plague DOD service contracting efforts.¹¹
- **Oversight of Contractor Performance**—The essence of DOD contract management is the proper administration of contracts and *oversight of contractor performance*. The lack of effective contract administration and contractor oversight increases the government's risk of not ensuring total value for the dollars spent on service contracts. Unfortunately, GAO and DODIG reports have consistently identified contract administration and contractor oversight as problem areas in the management of services contracts.¹²

Indeed, DOD contract management has been listed as a “high-risk” area by GAO since 1992.¹³ This “high-risk” status reflects DOD’s challenges in achieving its desired outcomes in terms of meeting service procurement cost, schedule, and performance objectives. DOD is at risk of paying higher prices for services than necessary. Recently, the DOD director of Defense Procurement and Acquisition Policy (DPAP) identified the inappropriate use of service contracts in DOD¹⁴ and is planning to take actions to improve contracting for services throughout DOD.¹⁵

Service production differs from manufacturing of products in several ways due to distinguishing characteristics of services. There is a growing body of literature on operations management in service firms. The key characteristics of services discussed in most textbooks¹⁶ include:

- The intangibility of service output,
- Co-production,
- Simultaneity of production and consumption and the associated inability to inventory services, and
- The complexity in the definition and measurement of services.

These characteristics also lead to differences in the marketing of services¹⁷ and several frameworks have been proposed in the marketing literature for services marketing.¹⁸

Given these differences in the production and marketing of services, as opposed to that of manufactured products, it is natural to ask if the acquisition of services is essentially the same as the acquisition of products, or do differences exist? And if differences do exist, what are they, in general and for specific services, and what do they imply for the management of services acquisition?

Given the growth in size and scope of services acquisition in today’s economy, these questions are undoubtedly important. A survey of academic literature indicated that only a handful of studies exist aimed at addressing some of these questions. For example, a recent study was conducted to examine purchasing professionals’ perceived differences between purchasing materials and purchasing services. The study found that purchasing professionals do perceive differences between the process of purchasing materials and the process of purchasing services.¹⁹ Moreover, the purchasing of services was perceived to be more complex as compared to that for materials. Another study examined the acquisition of consulting services in the public sector. The study used a case-based approach to develop an improved understanding

of the conditions under which municipal purchasing departments can be meaningfully involved in acquisition processes for consulting services.²⁰

Although these and other studies have started to address some of the questions identified above, for the most part these important questions remain unanswered. Furthermore, given the peculiarities of government procurement and the GAO and DODIG reports on the deficiencies in the DOD acquisition and contract administration processes, there exists a unique and significant opportunity for conducting research on the management of services acquisition within DOD.

We addressed the need for research in the area of services acquisition by undertaking a series of research projects. The first two research projects were exploratory in nature. In the first project, we tried to understand the major challenges and opportunities in the service supply chain in DOD²¹ by undertaking in-depth case studies on the acquisition of services in three different organizations:

- Presidio of Monterey, California;
- Travis Air Force Base; and
- The Naval Support Detachment Monterey.

Our second research project was targeted at studying program management infrastructure.²² In this research, too, we conducted two additional in-depth case studies of innovative project management approaches at the Air Education and Training Command and at Air Combat Command.

Subsequent research projects consisted of survey-based empirical studies of services acquisition in three individual U.S. military departments: Army, Navy, and Air Force. This article presents the results of the empirical study of current management practices in services acquisition in the army. In this research project, the researchers were assisted by their graduate students.²³

Research Objectives and Methodology

The overall objective of this research project is to develop a comprehensive understanding of how services acquisition is managed at a wide range of army bases throughout DOD. The specific objectives and the research questions we posed were driven by the findings of the GAO and DODIG reports, as well as the survey of academic literature described earlier. Consequently, this research is focused on answering the following research questions:

Figure 1. Service Categories

Classification Code	Service Category	FY09 Dollars (in Billions)
R	Professional, administrative, and management support	\$25.30
J	Maintenance and repair of equipment	\$3.97
D	Data processing and telecommunications	\$3.13
Q	Medical	\$0.98
Z	Maintenance and repair of real property	\$6.36
S	Utilities and housekeeping	\$4.01
V	Transportation	\$0.49
Total Dollars		\$44.24

- What types of services are typically contracted for at army installations and what is the annual expenditure for acquisition of these services?
- What type of acquisition strategies, procurement methods, and contracts are being used in services acquisition?
- How is the service acquisition process managed? Specifically, what management concepts—such as life cycle, program management, or project management approach—are used?
- Are staffing levels adequate and what training is given to contract and project/program management staff?

services—excluding construction—purchased within the army in fiscal year 2009.²⁵

The survey instrument includes core questions related to the methods and procedures used in the acquisition of services for these seven service categories. These core questions focus on the following areas:

- **Contract Characteristics**—The purpose of this category of questions is to gain insight into the dominant procurement method and contract type used in the acquisition of services at the installation level. The contract characteristics examined are:
 - Degree of competition (competitively bid or sole-source),
 - Contract type (fixed-price or cost-type), and
 - Type of contract incentive (incentive-fee, award-fee, or award-term).
- **Acquisition Management Methods**—The purpose of this broad category of questions is to gain insight into the types of management methods and approaches used in the acquisition of individual services at each phase of the contract management process. For each of the contract management phases, the survey asks whether the phase was conducted at a regional, installation, or some other organizational level. This core question category also focused on whether a project-team approach was typically used in the acquisition of the respective service category. The questions explore the position of the services acquisition project team leader, such as a program/project manager or contracting officer. The

Development and Review of Survey Instrument

The methodology used in this research consisted of a survey instrument specifically developed to answer the above-listed research questions. As mentioned previously, this was a web-based survey instrument and was developed using the “Survey Monkey” software. The developed survey questionnaire was first pilot-tested for its validity²⁴ and was fine-tuned prior to its use in the current study.

The survey questionnaire began with questions focusing on specific demographic data for each army department, major command, region, and the installation being surveyed. The survey then asked specific questions related to the approach, method, and procedures used in the acquisition of services for specific categories of services. The specific categories of services targeted in this research are listed in **FIGURE 1** above. These categories were selected because collectively they represent about 70 percent of total spending for all acquired

questions also explore information on the owner, generator, and approving authority of the requirement for a specific service being acquired.

- **Other Program Management Issues**—This last category of core questions uses a Likert-type scale to measure the level of agreement or disagreement amongst the respondents' statements. Typical Likert scale response options include "Strongly Agree," "Agree," "Neither Agree Nor Disagree," "Disagree," or "Strongly Disagree." This category of questions is focused on the following elements:
 - The use of a life cycle approach,
 - Length of assignments for services acquisition management personnel,
 - Use of market research techniques,
 - Level of staffing in services acquisition management, and
 - Level of training of services acquisition management personnel.
- Finally, the survey solicits feedback and any general comments the respondents may want to share regarding the topic of services acquisition.

Survey Data and Observations

The participants for this survey were selected based on the organization they worked for and their position within the organization. The goal was to gather data from every organization within the Army Contracting Command (ACC) that directly manages or oversees the contracting of services. The researchers sought to have senior contracting officers within the selected organizations complete the survey. The purpose was to ensure that the person completing the survey had a comprehensive view and understanding of how his or her organization managed service contracts.

The only exception to the criteria above was the exclusion of the Expeditionary Contracting Command. Given the uniqueness of contracting that takes place during contingency operations, the researchers believed that the data provided by the Expeditionary Contracting Command would not accurately reflect the contracting practices during peacetime operations. The researchers also did not want to create additional work for these personnel because of the environment and existing workload that the Expeditionary Contracting Command has already been experiencing.

A standardized, 81-question survey, titled "DOD Military Installation Services Acquisition Survey—Army," was

deployed to 81 contracting offices. The survey was distributed across eight major contracting centers throughout the army, including 40 army installations. We received a total of 61 responses to the survey, with a survey response rate of 75 percent. Out of the 61 respondents, 33 were from Mission and Installation Contracting Command (MICC), 12 were from Tank and Automotive Command (TACOM), 7 were from Research and Development Command (RDECOM), 5 were from National Capital Region (NCR), and 4 were from Communications and Electronics Command (CECOM). There were no respondents from Joint Munitions and Lethality (JM&L), Aviation and Missile Command (AMCOM), or Rock Island Arsenal.

Contract Characteristics

To understand contract characteristics and uncover salient trends, the survey requested that respondents provide annual data for a six-year period—from fiscal years 2003 to 2008. The data on contract characteristics prevalent in various service categories are shown in **FIGURE 2** on page 14.

The following are some observations about the contract characteristics of the seven different services. In the interest of brevity, we refer only to the data for fiscal year 2008.

- **Professional, Administrative, and Management Support Services:** Based on **FIGURE 2**, we see that a competitive approach is used 88 percent of the time while sole-source is only used 8 percent of the time. Additionally, fixed-price-type contracts are used 78 percent of the time while cost-type contracts are only used 14 percent of the time. Finally, contract incentives of some type were used only about 25 percent of the time, with award fee being the contract incentive used most often.
- **Maintenance and Repair of Equipment:** We note that a competitive approach is used 68 percent of the time while sole-source is used 19 percent of the time. Additionally, fixed-price-type contracts are used 69 percent of the time while cost-type contracts are used 16 percent of the time consistently. Contract incentives of any kind are rarely used in any capacity, only about 11 percent of the time.
- **Data Processing and Telecommunications:** We see that a competitive approach is used 74 percent of the time while sole-source is only used 7 percent of the time. Additionally, fixed-price-type contracts are used 71 percent of the time while cost-type contracts are only used 7 percent of the time. Contract incentives are rarely used (only 5 percent of the time).

Figure 2. Contract Characteristics

	Degree of Competition			Contract Type			Contract Incentive			
	Competitive	Sole Source	N/A	Fixed-Price	Cost	N/A	Incentive Fee	Award Fee	Award Term	N/A
Professional, Administrative, and Management Support										
FY03	70%	9%	20%	59%	19%	22%	0%	19%	2%	80%
FY04	73%	9%	17%	64%	16%	20%	2%	16%	2%	81%
FY05	75%	8%	17%	64%	16%	20%	3%	16%	2%	80%
FY06	83%	8%	9%	73%	16%	11%	5%	17%	3%	75%
FY07	88%	6%	6%	77%	16%	8%	3%	20%	3%	73%
FY08	88%	8%	5%	78%	14%	8%	3%	19%	3%	75%
Maintenance and Repair of Equipment										
FY03	65%	15%	21%	60%	16%	24%	0%	10%	2%	89%
FY04	63%	18%	19%	65%	13%	23%	0%	7%	2%	92%
FY05	63%	16%	21%	65%	13%	23%	0%	7%	2%	92%
FY06	68%	18%	15%	68%	15%	18%	2%	7%	2%	90%
FY07	68%	19%	13%	71%	15%	15%	2%	7%	2%	90%
FY08	68%	19%	13%	69%	16%	15%	2%	7%	2%	90%
Data Processing and Telecommunications										
FY03	64%	8%	28%	64%	5%	31%	0%	3%	2%	95%
FY04	64%	8%	28%	64%	5%	31%	0%	2%	2%	97%
FY05	66%	7%	28%	62%	7%	31%	0%	2%	2%	97%
FY06	67%	8%	25%	64%	8%	28%	0%	2%	3%	95%
FY07	71%	8%	21%	69%	7%	25%	0%	2%	3%	95%
FY08	74%	7%	20%	71%	7%	23%	0%	2%	3%	95%
Medical										
FY03	15%	2%	84%	15%	0%	85%	0%	0%	0%	100%
FY04	13%	2%	85%	13%	0%	87%	0%	0%	0%	100%
FY05	13%	2%	85%	13%	0%	87%	0%	0%	0%	100%
FY06	15%	2%	84%	15%	0%	85%	0%	0%	0%	100%
FY07	15%	0%	85%	16%	0%	84%	0%	0%	0%	100%
FY08	13%	0%	87%	15%	0%	85%	0%	0%	0%	100%
Maintenance and Repair of Real Property										
FY03	66%	3%	31%	61%	8%	31%	0%	5%	2%	93%
FY04	66%	5%	30%	62%	8%	30%	0%	5%	2%	93%
FY05	66%	5%	30%	62%	8%	30%	0%	5%	2%	93%
FY06	66%	5%	30%	62%	10%	28%	0%	5%	2%	93%
FY07	67%	7%	26%	66%	10%	25%	0%	5%	2%	93%
FY08	71%	7%	23%	66%	12%	23%	2%	7%	2%	90%
Utilities and Housekeeping										
FY03	44%	18%	38%	59%	2%	39%	0%	2%	2%	97%
FY04	44%	18%	38%	59%	2%	39%	0%	2%	2%	97%
FY05	44%	21%	34%	61%	2%	38%	0%	2%	2%	97%
FY06	44%	20%	36%	61%	2%	38%	0%	2%	2%	97%
FY07	51%	16%	33%	62%	2%	36%	0%	2%	2%	97%
FY08	49%	16%	34%	61%	2%	38%	0%	2%	2%	97%
Transportation and Travel										
FY03	41%	5%	54%	46%	0%	54%	0%	0%	2%	98%
FY04	43%	3%	54%	44%	0%	56%	0%	0%	0%	100%
FY05	43%	5%	52%	46%	0%	54%	0%	0%	0%	100%
FY06	44%	3%	52%	48%	0%	52%	0%	0%	0%	100%
FY07	46%	3%	51%	48%	0%	52%	0%	0%	0%	100%
FY08	46%	3%	51%	49%	0%	51%	0%	0%	0%	100%

Figure 3. Organization Level Used in Acquisitions Phases

Service/Acquisition Phase	Organization Level		
	Regional	Installation	N/A
Professional, Administrative, and Management Support			
Acquisition Planning	19%	75%	6%
Solicitation	22%	72%	6%
Source Selection	17%	69%	14%
Contract Administration	17%	78%	5%
Maintenance and Repair of Equipment			
Acquisition Planning	11%	79%	10%
Solicitation	13%	79%	8%
Source Selection	13%	74%	13%
Contract Administration	13%	77%	10%
Data Processing and Telecommunications			
Acquisition Planning	20%	62%	18%
Solicitation	21%	62%	16%
Source Selection	20%	59%	21%
Contract Administration	16%	67%	16%
Medical			
Acquisition Planning	0%	21%	79%
Solicitation	0%	21%	79%
Source Selection	0%	16%	84%
Contract Administration	0%	21%	79%
Maintenance and Repair of Real Property			
Acquisition Planning	3%	77%	20%
Solicitation	5%	75%	20%
Source Selection	5%	72%	23%
Contract Administration	3%	77%	20%
Utilities and Housekeeping			
Acquisition Planning	10%	61%	30%
Solicitation	7%	62%	31%
Source Selection	7%	56%	38%
Contract Administration	5%	67%	28%
Transportation and Travel			
Acquisition Planning	5%	48%	48%
Solicitation	5%	48%	48%
Source Selection	3%	44%	53%
Contract Administration	2%	51%	48%

- Medical:** We see that a competitive approach is used only 13 percent of the time while sole-source is not used at all. Additionally, fixed-price-type contracts are used 15 percent of the time while cost-type contracts are not used at all. Contract incentives are never used. The high percentage of not-applicable responses for this service category can possibly be linked to the fact that medical services are not procured through the army contracting centers but rather through procurement officers working for the U.S. Army Medical Department. This is a service category that requires separate, further research into how medical services are acquired.
- Maintenance and Repair of Real Property:** We see that a competitive approach is used 71 percent of the time while sole-source is only used 7 percent of the time. Additionally, fixed-price-type contracts are used 66 percent of the time while cost-type contracts are only used 12 percent of the time. Contract incentives of any kind are rarely used in any capacity, only about 11 percent of the time.

Figure 4. Use of Project Team Approach

Service Category	Degree of Competition	Organizations Using Project Team Approach					Organizations Not Using Project Team Approach				
		Sub Total	Who leads acquisition?		Who owns requirements?		Sub Total	Who leads acquisition?		Who owns requirements?	
			CO	Other (PM, QAE)	CO	Customer (PM, QAE)		CO	Other (PM, QAE)	CO	Customer (PM, QAE)
<i>Professional, Administrative, and Management Support</i>	63	45	34	11	14	31	18	14	4	6	12
<i>Maintenance and Repair of Equipment</i>	62	41	28	13	13	28	22	14	8	15	7
<i>Data Processing and Telecommunication</i>	62	41	27	14	12	29	21	12	9	3	18
<i>Medical</i>	61	14	8	6	3	11	47	7	40	3	44
<i>Maintenance and Repair of Real Property</i>	61	37	24	13	8	29	24	12	12	3	21
<i>Utilities and Housekeeping</i>	61	37	25	12	8	29	24	7	17	1	23
<i>Transportation and Travel</i>	61	30	19	11	8	22	31	8	23	1	30

- **Utilities and Housekeeping:** We note that a competitive approach is used 49 percent of the time while sole-source is only used 16 percent of the time. Additionally, fixed-price-type contracts are used 61 percent of the time while cost-type contracts are only used 2 percent of the time consistently. Contract incentives are rarely used (only 4 percent of the time).
- **Transportation and Travel:** Finally, FIGURE 2 suggests that a competitive approach is predominantly used—46 percent of the time—while sole-source is used only about 3 percent of the time. Additionally, fixed-price-type contracts are used 49 percent of the time while cost-type contracts were not used at all. Contract incentives were never used.

Acquisition Management Methods

The survey respondents were asked to state the organizational level at which the specific services were acquired—in other words, at what level were the procurement processes for the services conducted? The results are shown in FIGURE 3 on page 15. The various DOD components acquire services either at the major command level, regional level, or installation level. The responses indicate that, except for medical and transportation/travel services, the services acquisition is overwhelm-

ingly managed at the installation level during all acquisition phases. The medical and transportation/travel services were managed at the installation level in about 20 percent and 50 percent of cases respectively. We also note a high level of “N/A” responses for medical and transportation/travel service. Does that mean that these services are not being managed at the command level? As indicated earlier, a further study is needed to address this issue.

The survey results about the use of the project team approach show that this approach was used in a majority of the acquisitions for all services categories (in about 57 percent of the cases). Regardless of whether the respondents answered “yes” or “no” to the utilization of a project-team approach question, the respondents were asked who leads the acquisition of the services and who owns the requirements or approves changes to the requirements. As shown in FIGURE 4 above, the responses to these questions were relatively similar. In a majority of the cases, a contracting officer leads the acquisition process. This clearly indicates that program managers are usually not part of the acquisition process of procuring services at the installation level. Additionally, customers are usually responsible for owning and changing the requirements for services at the installation level.

Program Management Issues

In addition to the topics mentioned above, our research objective was also to investigate issues related to the personnel involved in and responsible for various aspects of services acquisition management. The issues include use of a life cycle approach as well as the length, level, and qualifications of personnel in service acquisition management. We also explored the extent of market research being used by decision-makers in awarding services contracts. **FIGURE 5** at right describes the responses from the survey regarding the scope and ability of personnel responsible for service contracts.

As shown in **FIGURE 5**, the contracting officer writes and awards contracts for services in virtually all (about 97 percent) of the cases. However, when asked who was responsible for surveillance at the installation, the results showed little consistency among the respondents with none of the choices (such as contracting officer, quality assurance evaluator (QAE), program/project manager, or customer) being selected more than 30 percent of the time. In addition, results for training show that about 57 percent of the respondents had received Defense Acquisition Workforce Improvement Act (DAWIA) certified training, while about 20 percent of staff members had Quality Assurance Phase I or II training. Regarding the length of service in their position, 87 percent of QAEs/contracting officer representatives (CORs) were in their current position for over a year, while the remaining 13 percent were more than six months but less than one year in their current position.

The survey asked Likert-scale-based questions related to the use of a life cycle approach for routine and non-routine services acquisition, the extent of the use of market research, billets for service acquisition management, and responsibilities of the QAE. The survey data is presented in **FIGURE 6** on page 18. Here, the answers are displayed in three categories: percent of respondents that 1) Disagreed, 2) were Neutral, or 3) Agreed. It should be noted that the categories of Disagreed and Agreed shown here also include, respectively, those who Disagreed or Agreed Strongly. **FIGURE 6** shows that for routine services, only 41 percent agreed that a life cycle approach was a dominant strategy while for non-routine services, and only 21 percent agreed that this was so. The opinion was almost evenly split about the CORs/QAEs being assigned for a short term at the installation. About 44 percent disagreed and 38 percent agreed with the statement. Finally, a significant majority of respondents indicated that the number of authorized staffing positions for services acquisition was inadequate and that, furthermore, the existing billets were inadequately filled. Equally important, it was observed that adequate oversight was not provided in monitoring contractor performance.

Figure 5. Scope and Ability of Personnel Responsible for Service Contracts

Who writes and awards contracts for services at your installation?

- Contracting officer: 96.7%
- General Services Administration (GSA): 0.0%
- Defense Contract Management Agency (DCMA): 0.0%
- Other: 3.3%

Who, at your installation, is responsible for contractor surveillance?

- Contracting officer: 13.1%
- Quality assurance evaluator (QAE): 21.3%
- Program manager: 3.3%
- DCMA: 3.3%
- Customer (unit which requested required service): 29.5%
- Other: 29.5%

Typically, what type of training do the majority of services acquisition contract and project/program management staff receive? (Percentages do not add to 100 since some staff members receive multiple types of training.)

- Basic/generic project management training: 23.0%
- Quality Assurance Phase I training: 13.1%
- Quality Assurance Phase II training: 6.6%
- Defense Acquisition Workforce Improvement Act (DAWIA) certified training: 57.4%
- Other: 32.8%

On average, how long do contracting officer representatives/QAEs serve in their position?

- Less than 6 months: 0.0%
- 6 to 12 months: 13.1%
- 12 to 24 months: 37.7%
- 24 to 36 months: 9.8%
- Over 36 months: 39.3%

Research Findings and Recommendations

This survey-based research provided a first look at the empirical data related to the acquisition of services within the army. It provided real-world data on the characteristics of services contracts (degree of competition, contract/incentive type); various management approaches used (organizational level and project-team approach); and other program management issues (use of project life cycle, length of acquisition personnel service, extent of market research, level of staffing, and training of staff). The

following is a summary of our research findings, followed by our recommendations.

Research Findings

As previously mentioned, we received 61 responses to our 81-question survey, giving us a 75 percent response rate. The empirical survey data provided some expected, as well as surprising, results and insight into services contracting within the U.S. Army. The findings will be discussed in terms of our research questions.

To answer the first research questions (“What types of services are typically contracted for at army installations?” and “What is the annual expenditure for these services?”), our research indicated that in fiscal year 2009, the army spent approximately \$44 billion on administrative, maintenance, data processing, utilities/housekeeping, medical, and transportation services. These specific service categories accounted for about 70 percent of all services procured by the army in fiscal year 2009.

To answer the next research question (“What type of acquisition strategies, procurement methods, and contracts are being used to acquire services?”), we analyzed responses

from the survey questions that pertained to the dominant contract characteristics and the dominant services acquisition management methods. As expected, the predominant procurement approach used in these services contracts was competitive, fixed-priced contracts, without any type of incentive or award fees. Since these types of services were traditionally commercial in nature (administrative, maintenance, data processing, utilities/housekeeping, and transportation services), it would follow that the competitive marketplace would be capable of proposing and competing for these contracts. Also, given the commercial and low-risk nature of these services, firm-fixed-price contracts would be the appropriate contractual instrument for these service projects.

To answer the third research question (“How are these service contracts managed?”), we analyzed the responses regarding services acquisition management methods, services acquisition leadership, and services acquisition staffing. The proximity between where the service contracts are managed and where the services are actually performed may have a strong impact on the success of the service contract. In this research, the services contracts are predominantly managed at the installation level using informal project teams. This is reflective of contract management best practices. What is surprising from the survey data is that the project teams are

Figure 6. Life Cycle Approach, Market Research, Billets, and Responsibility				
	Disagree	Neutral	Agree	N/A
Life Cycle Approach				
For routing services, this was the dominant strategy.	34%	18%	41%	7%
For non-routing services, this was the dominant strategy.	43%	25%	21%	11%
CORs/QAEs at the installation serve in short-term assignments (18 months or less)	44%	16%	38%	2%
Market Research				
Market research was conducted for the acquisition of services.	15%	2%	82%	2%
Service Acquisition Billets				
There are an adequate number of staff positions.	74%	10%	13%	3%
These positions are adequately filled.	66%	13%	16%	5%
These staff members are adequately trained.	38%	20%	39%	3%
These staff members are adequately qualified.	26%	23%	46%	5%
Responsibility of Staff Members				
Persons identifying requirement also write statement of work/statement of objective document.	8%	7%	84%	2%
QAEs receive prior formal/documented training.	20%	8%	67%	5%
QAEs submit written requests of performance and quality of work to contracting officer.	38%	10%	48%	5%
Proper level of oversight is afforded to monitor contractor performance.	57%	20%	23%	0%

led by the contracting officer as opposed to a formally designated project manager responsible for the overall service project success. We consider this finding surprising since the contracting officer is a functional specialist concerned with ensuring the government rules and regulations of the contract are in compliance by the contractor, while a project manager is concerned with the overall success of the project in terms of cost, schedule, and performance objectives. In addition, a project manager typically represents the service requirement owner, and is typically authorized to make changes to the requirement during contract performance.

Contracting officers do not have the authority to make changes to the service requirement, and traditionally do not have the expertise or technical knowledge to make such changes—for example, making changes to the requirements for aircraft maintenance service. Leading project teams involves managing the requirement and authorizing related technical changes to the requirement during contractor performance.

Concerning the final research question (“Are staffing levels adequate and what training is given to contract and project/program management staff?”), the responses indicate that services acquisition members are inadequately trained. Given that the survey results indicate that contracting officers are predominantly serving as project managers and in some instances also as contractor surveillance specialists, it is not surprising that the survey results indicate that there is an inadequate number of service contracting staff at the installations, an inadequate filling of services contracting billets, and inadequate contractor surveillance. Another surprising survey finding is that there is no conclusive response concerning responsibility for contractor surveillance. The survey results show a three-way split among QAEs, contracting officers, and the requirements owner. These results indicate another situation in which contracting officers may be performing activities outside their area of expertise; in this case performing contractor surveillance. Contractor surveillance involves technical knowledge and expertise in the service requirement area. A contracting officer, considered an expert in government contracting rules and regulations, should not be performing technical contractor surveillance on an aircraft maintenance service contract, for example.

The mixing of roles and responsibilities in managing service contracts, specifically having contracting officers perform project manager functions and at times quality assurance and contractor surveillance functions, reflects the lack of formal

project management processes in place at army installations. This can lead to a higher risk of the army not obtaining full value for the dollars spent on services.

Recommendations

To improve the management of services acquisition, the first recommendation is to increase the effectiveness and availability of training to ensure a qualified acquisition workforce. Based on the results from the research, respondents indicated that only 39 percent agreed that the acquisition workforce was adequately trained. In addition, only 45 percent of respondents agreed that acquisition staff members were adequately qualified. Respondents also provided numerous negative comments regarding the poor quality and the lack of training. The recommended training should focus on all phases of the contract management process and related *Federal Acquisition Regulation* policy. Additionally, training on areas related to working in cross-functional teams and using project life cycles should be provided to all acquisition workforce members in the ACC. Finally, and more importantly, if ACC contracting officers will continue to act as *de facto* project managers by leading the acquisition teams, then they should receive training on project management concepts, project control techniques, and project leadership.

Another recommendation to improve the overall management of services acquisition is to increase the size of the acquisition workforce, reversing the downsizing trend that began in the 1990s. The results of this research show that the number of CORs/QAEs needs to be increased. Respondents agreed that proper oversight was occurring only 23 percent of the time. Increasing the size of the workforce will allow for better oversight and help ensure contractor performance is properly monitored.

The third recommendation is to maintain the positive trend of increasing the number of competitively-bid, fixed-price contracts as depicted in **FIGURE 2** on page 14. These types of contracts promote competition, which ensures the government gets the right services at the best value. Fixed-price contracts shift the risk of cost overruns away from the government and onto the contractor. This also serves to incentivize the contractor to complete tasks within budget.

Given the total amount of money spent and the scope of services acquisition in DOD, the opportunity for conducting research in this important area is paramount. In the spirit of identifying some specific projects for future research, one area that stands out is contracting for medical services. During the

course of this research, we discovered that medical services are procured by a medical procurement officer and not a member of the ACC. Further research should include who procures these services, how they are procured, and how this compares to the service categories procured by the army.

Finally, as discussed earlier, the researchers in the fields of operations management and marketing have studied and identified several key characteristics of services that lead to differences in the production and marketing of services as opposed to manufactured products. We believe that the same key characteristics must also be taken into account in designing and managing the processes involved in acquiring services. For example:

- *Intangibility* of service outcomes makes it difficult to clearly describe and quantify services, and therefore to contract for services. Intangibility of outputs also makes it difficult to define and measure quality.
- *Co-production* requiring the presence and participation of customers in the creation of many services is an important characteristic of services. Hence, the contracts for software development should ideally specify not only what the service provider should do, but also what inputs the customer should provide. Otherwise, a satisfactory service outcome may not be realized.
- *Diversity* of services also makes it difficult and undesirable to use the same contract vehicles or procedures for different services.
- Finally, services are *complex* and may involve multistage processes. This makes it important yet challenging to write contracts that are flexible enough to cover all relevant scenarios and eventualities.

Given these considerations, we believe that there exists significant opportunity to conduct research into the impact of these characteristics on the acquisition of various services and the associated implications for the management of service acquisition processes. *JCM*

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