Calhoun

Institutional Archive of the Naval Postgraduate School

Calhoun: The NPS Institutional Archive

Theses and Dissertations

Thesis Collection

2014-12

Procurement fraud: a knowledge-level analysis of contracting personnel

Castillo, Joe C.

Monterey, California: Naval Postgraduate School

http://hdl.handle.net/10945/44533

NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

MBA PROFESSIONAL REPORT

PROCUREMENT FRAUD: A KNOWLEDGE-LEVEL ANALYSIS OF CONTRACTING PERSONNEL

December 2014

By: Joe C. Castillo,
       Erin M. Flanigan

Advisors: Juanita M. Rendon
             Rene G. Rendon

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE		*Form Approved OMB No. 0704-0188*
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.		
1. AGENCY USE ONLY *(Leave blank)*	**2. REPORT DATE** December 2014	**3. REPORT TYPE AND DATES COVERED** MBA Professional Report
4. TITLE AND SUBTITLE PROCUREMENT FRAUD: A KNOWLEDGE-LEVEL ANALYSIS OF CONTRACTING PERSONNEL		**5. FUNDING NUMBERS**
6. AUTHOR(S) Joe C. Castillo and Erin Flanigan		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000		**8. PERFORMING ORGANIZATION REPORT NUMBER**
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A		**10. SPONSORING/MONITORING AGENCY REPORT NUMBER**
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB protocol number ____NPS.2014.0060-IR-EM2-A____.		
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited		**12b. DISTRIBUTION CODE** A

13. ABSTRACT (maximum 200 words)

Contracting is an ever-important function that enables the federal government to acquire everything from small commodities to the most complex weapons systems. With recent fiscal constraints, the potential for fraud is a growing concern, and the ability to detect fraud, waste, and abuse is considered to be an essential skill. Additionally, in order to ensure auditability, an organization must emphasize the presence of competent personnel, capable processes, and effective internal controls.

The purpose of this research is to assess the knowledge-level of Air Force contracting professionals as it pertains to the ability to identify procurement fraud within the six phases of contracting and the five internal control components. The research deployed a procurement fraud survey with procurement fraud knowledge questions and organizational perception questions within the Air Force Nuclear Weapons Center. The results of the survey identified a varying level of knowledge about procurement fraud among survey participants. The research also presented recommendations and areas for further research based on the results of the survey.

14. SUBJECT TERMS procurement fraud, contracting, auditability, internal controls, contract management process			**15. NUMBER OF PAGES** 103
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	**18. SECURITY CLASSIFICATION OF THIS PAGE** Unclassified	**19. SECURITY CLASSIFICATION OF ABSTRACT** Unclassified	**20. LIMITATION OF ABSTRACT** UU

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. 239-18

THIS PAGE INTENTIONALLY LEFT BLANK

**PROCUREMENT FRAUD: A KNOWLEDGE-LEVEL ANALYSIS OF
CONTRACTING PERSONNEL**

Joe C. Castillo, Captain, United States Air Force
Erin Flanigan, First Lieutenant, United States Air Force

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

**NAVAL POSTGRADUATE SCHOOL
December 2014**

Authors: Joe C. Castillo

Erin Flanigan

Approved by: Juanita M. Rendon

Rene G. Rendon

William R. Gates, Dean
Graduate School of Business and Public Policy

THIS PAGE INTENTIONALLY LEFT BLANK

PROCUREMENT FRAUD: A KNOWLEDGE-LEVEL ANALYSIS OF CONTRACTING PERSONNEL

ABSTRACT

Contracting is an ever-important function that enables the federal government to acquire everything from small commodities to the most complex weapons systems. With recent fiscal constraints, the potential for fraud is a growing concern, and the ability to detect fraud, waste, and abuse is considered to be an essential skill. Additionally, in order to ensure auditability, an organization must emphasize the presence of competent personnel, capable processes, and effective internal controls.

The purpose of this research is to assess the knowledge-level of Air Force contracting professionals as it pertains to the ability to identify procurement fraud within the six phases of contracting and the five internal control components. The research deployed a procurement fraud survey with procurement fraud knowledge questions and organizational perception questions within the Air Force Nuclear Weapons Center. The results of the survey identified a varying level of knowledge about procurement fraud among survey participants. The research also presented recommendations and areas for further research based on the results of the survey.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF FIGURES

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF TABLES

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF ACRONYMS AND ABBREVIATIONS

ACFE	Association of Certified Fraud Examiners
AFB	Air Force base
AFLCMC	Air Force Life Cycle Management Center
AFMC	Air Force Materiel Command
AFNWC	Air Force Nuclear Weapons Center
AFSC	Air Force Sustainment Center
AFTC	Air Force Test Center
AIS	accounting information systems
BPA	blanket purchase agreement
CICA	Competition in Contracting Act
CLM	continuous learning module
CONUS	Continental United States
CO	Contracting Officer
COR	Contracting Officer's Representative
COSO	Committee of Sponsoring Organizations
CRS	Congressional Research Service
DAU	Defense Acquisition University
DAWDF	Defense Acquisition Workforce Development Fund
DAWIA	Defense Acquisition Workforce Improvement Act
DFARS	Defense Federal Acquisition Regulation Supplement
DOD	Department of Defense
DODIG	Department of Defense Inspector General
DOJ	Department of Justice
DPAP	Defense Procurement and Acquisition Policy
EVM	earned value management
FAR	Federal Acquisition Regulation
FARA	Federal Acquisition Reform Act
FASA	Federal Acquisition Streamlining Act
FDO	Field Directorate Office

FedBizOps	Federal Business Opportunities
GAO	General Accountability Office
GAO	Government Accountability Office
GPC	government purchase card
GPE	government point of entry
GSA	General Services Administration
GSAOIG	General Services Administration Office of the Inspector General
IDIQ	indefinite delivery indefinite quantity
ICBM	intercontinental ballistic missile
IFB	invitation for bid
LPTA	lowest price technically acceptable
MAJCOM	major command
NCIS	Naval Criminal Investigative Service
O&M	operations and maintenance
OGE	Office of Government Ethics
OUSD	Office of the Under Secretary of Defense
PCO	Procuring Contract Officer
PEO	Program Executive Office
RFP	request for proposal
RFQ	request for quote
SAP	Simplified Acquisition Procedures
SOO	Statement of Objectives
SOW	Statement of Work
SSA	Source Selection Authority
SSAC	Source Selection Advisory Council
SSEB	Source Selection Evaluation Board
SST	Source Selection Team
T4C	termination for convenience
T4D	termination for default
USAID	U.S. Agency for International Development
WAWF	Wide Area Workflow

ACKNOWLEDGMENTS

THIS PAGE INTENTIONALLY LEFT BLANK

I.   INTRODUCTION

This research report addresses the subject of contracting personnel's procurement fraud knowledge within an Air Force organization. It spans six chapters that discuss the literature reviewed throughout the research process, the organization to which the survey tool was deployed, the methodology used, findings, analysis and recommendations identified, and finally, a summary, conclusion, and areas for further research provided.

The purpose of this chapter is to provide an introduction to this research study. It begins by providing a background on procurement fraud throughout the Department of Defense (DOD) and continues with the purpose of this research. Next, the chapter will introduce the research questions proposed in this report along with the benefits and limitations of this study. This will be followed by a short description of the methodology used in the research study. Finally, the chapter will describe the organization of this report.

A.   BACKGROUND

The role of the contracting professional within the DOD has significantly increased throughout the last decade in all facets of acquisition due to increased spending both domestically and in the contingency environment (Government Accounting Office [GAO], 2013). Within the last decade, the DOD has spent an increasing dollar amount on procurements in order to support Operations Noble Eagle and Iraqi Freedom in multiple continents. Although these operations are beginning to decrease, the need for well-trained contract professionals is more important than ever due to the fact that there are more contractors than military personnel remaining in Iraq and Afghanistan (GAO, 2012). Over the last two years, the threats of sequestration and the defense budget cuts have made it difficult to provide a large, well-trained force due to civilian hiring freezes and significant cuts to military contracting professionals. Tied into the worries of sequestration were the 2013 furloughs that resulted from a government shutdown. According to the Director of the Office of Management and Budget, these furloughs directly impacted the contracting workforce, not only by giving them a larger workload

after the shutdown, but also by making government employment a less viable prospect for long-term employment (2013). As the GAO notes (2013),

> Over the next 5 years, DOD expects to invest more than $300 billion (fiscal year 2013 dollars) on the development and procurement of major defense acquisition programs. With the prospect of slowly growing or flat defense budgets for years to come, DOD must get better returns on its weapon system investments and find ways to deliver capability to the warfighter for less than it has in the past. (p. 149)

While there are many opportunities for fraud within the contracting process, there is also the potential for fraud when an organization does not have effective internal controls and capable processes in place. Rendon and Rendon (in press) state that once a procurement process is in place, it is essential to establish effective internal controls in order to reduce the potential for fraud within an organization. It is because of these potentials for fraud that this research is necessary.

B.   PURPOSE OF RESEARCH

The purpose of this research is to assess Air Force contracting officials' level of procurement fraud knowledge as it relates to the contract management process, the five components of the internal control framework, and procurement fraud schemes. In addition, this research will provide insight into the contracting professional's perceptions of the vulnerabilities for fraud within their organization. Finally, this research will focus on the training provided to Air Force contracting professionals in the area of procurement fraud.

C.   RESEARCH QUESTIONS

The research questions for this research project include the following:

1.   What is the contracting workforce's knowledge level of procurement fraud as related to the contract management process, the internal control components, and the procurement fraud scheme categories?

2.   What is the contracting workforce's perception of procurement fraud vulnerability as related to the contract management process, the internal control components, and the procurement fraud scheme categories?

3. What is the procurement fraud coverage within the Defense Acquisition University (DAU) required/recommended courses for contracting professionals?

D. BENEFITS AND LIMITATIONS

This research study will provide insight into the contracting professional's perspective on government contracting fraud. The results of this research study may lead to improvements in preventing or detecting fraud across the DOD agencies. Oftentimes, employees within an organization feel as though their suggestions or problems are quashed at lower levels of the hierarchical chain of command. Additionally, this research seeks to identify those instances where fraud is more likely to be committed, as well as those areas vulnerable to fraud. Finally, this study will identify gaps within the current DAU curriculum as it pertains to fraud education.

One limitation of this study is the survey distribution method. The survey was deployed to potential participants with an e-mail notification. In his research, Paxson (1995) found that in this day of advanced technology and limited resources, participants may be inundated with too many e-mails and not give the survey the time and thought it requires. The subjects may lack interest and take the survey too quickly and with a lack of honest opinions, leading to skewed data. Paxson (1995) also concluded that a low response rate can skew data in that a small number of responders is not likely to adequately represent the population as a whole. Also, if done in a group or squadron setting, individuals may not believe that their surveys will remain anonymous. Though the assessment tool is deployed in a way that removes undue influence, results may be hindered by a perception that those in higher positions are the main drivers of the survey. Finally, this research is limited due to the fact the survey was deployed to only one U.S. Air Force (USAF) organization. Had the survey been deployed throughout all of the USAF, the DOD, or the entire government organization, there would likely be a larger sample population from which to gather results.

E. METHODOLOGY

The research methodology is based on a review of current literature, deployment of a previously developed assessment tool, and analysis of the survey results. The

literature review contains multiple government reports that describe the constant evolution of the federal contracting process, most notably DOD, as well as the framework of the internal component controls and common fraud indicators associated with the contracting process. This review also utilized literature from private contracting organizations in the civilian sector to portray a larger picture of the potential for fraud and different perspectives from non-governmental organizations.

In addition to the literature review, this research utilized a previously created assessment tool that posed questions to assess procurement fraud knowledge, perceptions of contracting personnel, and demographic information. The survey was made available to all Air Force Nuclear Weapon Center (AFNWC) procurement contracting offices via Lime Survey, a web-based software, where all contracting officers and specialists were given four weeks to complete and submit the assessment. Once the four-week window closed, survey responses were analyzed in order to determine whether there were significant knowledge deficiencies within the contract management process, the internal controls, and the procurement fraud schemes. Finally, the researchers reviewed course information from the Defense Acquisition University to determine whether its course catalog contained coverage of fraud training within their course overview. Based on research results, recommendations for improvement will be made in the areas of contract management process, internal controls, and procurement fraud schemes.

F. ORGANIZATION OF REPORT

The report consists of six chapters, including this introduction. Chapter II contains a literature review on the contract management process, the internal control framework, and the different types of procurement fraud schemes. Chapter III describes the organization surveyed. Chapter IV reviews the methodology used in the deployment of the survey. Chapter V provides the detailed findings and analysis of the results of the survey. Chapter VI consists of a summary, conclusion, and areas for further research.

G. SUMMARY

This chapter introduced the importance of the contracting career field in a fiscally constrained environment by providing a background. Next, it introduced the purpose of

this research study, which was to assess the level of Air Force contracting officials' procurement fraud knowledge. Additionally, the three research questions were presented along with the benefits and limitations of this study. Finally, the research methodology for this study was reviewed, and the organization of the report was explained. The next chapter will provide a literature review that covers the contract management process, the internal control framework, and the six most common procurement fraud schemes.

THIS PAGE INTENTIONALLY LEFT BLANK

II. LITERATURE REVIEW

A. INTRODUCTION

This chapter provides a literature review on the contract management process, the five components of the internal control framework, and the six most common procurement fraud schemes perpetrated in contracting, specifically within DOD contracting. In addition, a summary of the impact of fraud and problems within the DOD will be examined along with the department's response to fraud issues and the possible future consequences caused by contracting deficiencies.

B. CONTRACT MANAGEMENT PROCESS

For those organizations not directly involved, the contracting process is considered a simple one. Once the government awards the contract and the contractor begins performance, the process is complete. To the informed buyer, however, the contracting process follows a set lifecycle. It begins with planning for a procurement and follows a logical pattern that does not conclude until the contract has been completed and finally closed out. Figure 1 outlines the six phases of the contract management process. The distinct objectives and importance of each of these phases will be described in further detail next.
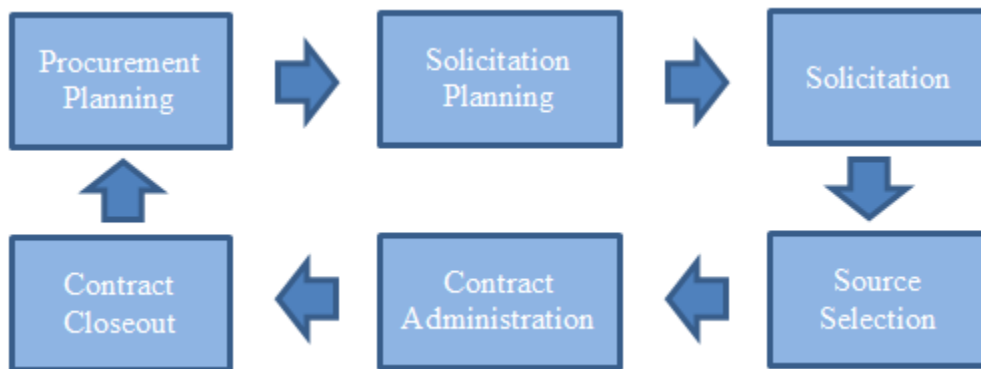
Figure 1.   Contract Management Process (from Rendon, 2008, p. 164)

1. Procurement Planning

As seen in Figure 1, the first phase in a well-executed procurement process is procurement planning. According to Garrett, procurement planning is

> the process of identifying which business needs can be best met by procuring products or services outside the organization. This process involves determining whether to procure, how to procure, what to procure, how much to procure, and when to procure. (Garrett, 2007, p. 81)

As stated by Rendon and Snider (2008), procurement planning is accomplished through defining the requirement, conducting thorough market research, preparing the necessary requirements documents, creating a realistic budget, discussing contract type, and conducting risk analysis. In order to accomplish these steps, a careful plan, along with collaboration between the contracting office and the internal government requirements generator, hereafter referred to as customer or end user, are crucial in ensuring that the customer has the best possible product or service. In a time of government spending cuts, a properly planned and collaborated procurement can help reduce the costs associated with changes to the requirement (Walker, Bakker, Schotanus, & Harland, 2013).

a. Defining the Requirement

Similar to personal purchasing, the first step in planning is defining what is needed. In order to define the requirement, the customers must decide exactly what their needs are in order to make a purchase. The customers ask various questions in order to determine the right path and ensure that the right instrument is utilized to procure the requirement. According to Handfield, Johnson, Sturszl, and Tracey (2014), these questions include: Does the customer require a product or a service? Has the product/service been purchased before? If so, is the required product/service available commercially? If it is a service, what is the length of time required for services? What is the complexity of the requirement?

In order to ensure that the requirement is properly defined, it is imperative that all stakeholders agree upon the answers to these questions and others within the procurement process. The stakeholders include the customer and/or technical experts within the originating activity and the contracting officer. In larger acquisitions, personnel within an

integrated product team (IPT) are considered the stakeholders and include not only the previously mentioned team members but also legal office personnel, finance personnel, and upper level management.

b.   Conducting Market Research

After the requirement has been properly defined, the customer must perform thorough market research in order to collect necessary data to assist in answering the previously mentioned questions. For instance, conducting market research can determine whether or not the requirement is commercially available. Also, the customer can decide whether competition is available or if only one source can provide the requirement by looking up previous requirements. Competition is an important aspect of government contracting; therefore, it is crucial that the acquisition team do their due diligence in order to ensure maximum competition when practicable. Answering these questions provides the acquisition team with a foundation from which they can determine what strategy, contract vehicle, and exceptions may apply to the procurement. Not only is market research considered the intelligent thing to do, it is also mandated. The Federal Acquisition Regulation (FAR) part 10 directs the extent of market research necessary for each type of acquisition.

c.   Requirements Documents

Depending on the complexity of the requirement, there may be many documents necessary within the procurement planning phase. Just as with any other phase of the contracting process, the FAR dictates which documents are mandated by law and which documents are used as needed. Rendon and Snider (2008) state that there is an order of precedence found within FAR Part 11 that details the main documents required within the procurement process. These documents include the funding document, the performance oriented documents, such as the Performance Work Statement (PWS), Statement of Work (SOW), or the Statement of Objectives, and any "Detailed, design-oriented documents" (FAR 11.101). In addition, the FAR specifies within part 11 that special documentation is needed to justify any special circumstances, the use of a brand name or equal product, or the use of service contracts and items peculiar to one manufacturer.

9

2. Solicitation Planning

The completion of the procurement planning phase then feeds into the solicitation planning process. The acquisition team uses the market research and documents generated within the first phase to identify specific needs to proceed with the solicitation. According to Rendon and Snider (2008), these needs include determining the most suitable procurement method, identifying what type of contract to award, determining and developing the correct type of solicitation document, establishing evaluation criteria, determining terms and conditions, and finalizing the solicitation. All of these steps within the process are then utilized to select the successful offeror.

a. Determining Procurement Method

The process to determine which method to use to procure an item or service can seem difficult because it is all dependent on variables such as cost, complexity, and risk. The FAR assists the buyer in reducing the available options by defining which methods to use for both cost and complexity. For any acquisition below the micro-purchase threshold (currently $3,000), the preferred method for procurement is the Government Purchase Card, which gives the purchasing power directly to the customer in order to free up the contracting specialist for more complex buys. The next cost threshold is the Simplified Acquisition Threshold (SAT) (currently $150,000) with detailed procedures outlined within FAR 13 (Simplified Acquisition Procedures). Finally, for those acquisitions that are priced above the SAT, the team must further determine where the complexity of the acquisition is located on the best value continuum described in FAR 15. The continuum ranges from procedures to select the more simplistic lowest price technically acceptable (LPTA) offer, to the more difficult and time-consuming full tradeoff procedures utilized for acquisitions, which present a large degree of complexity and probability of risk.

In addition to cost, risk, and complexity, the government must also use a variety of market research tools to decide whether they will award a contract based on a sole source (non-competitive) or multiple source (competitive) environment. Unlike the commercial business sector, adherence to public policy requires that the government

make all possible efforts to utilize full and open competition in accordance with the Competition in Contracting Act (CICA), which was created in 1984. Perlman (2007) states that full and open competition safeguards against both intentional fraud as well as uninformed buyers to ensure that the government receives the best bargain possible. However, as stated by Reed, Luna, and Pike (2005), due to these restrictions imposed on public procurement, the best quality item may not necessarily be purchased at the lowest possible price. Rather, some contracts may be set-aside in order to help meet socio-economic goals that are not applicable to private firms. Likewise, Rendon and Snider (2008) point out that unlike private firms, the government is also responsible for adhering to public policy, "some of which might actually work against 'the bottom line'" (p. 19).

b.   Contract Type and Structure

Once the type of procurement method has been determined, it is up to the contracting team to determine which type of contract it will employ, and what structure the contract will take. FAR 16 (2014) divides the types of contracts into two main categories that represent two very different perspectives. On one end of the spectrum, the fixed price contract presents the lowest risk to the government and places the majority of the risk on the contractor. According to FAR 16.202-2 (2014), the fixed price contract is especially useful "for acquiring special items or for acquiring other supplies or services on the basis of reasonably definite functional or detailed specifications when the contracting officer can establish fair and reasonable prices at the outset" (FAR, 2014). On the other end of the spectrum, a cost-reimbursement contract is recommended when the requirement has never been performed before, the actual costs are unknown, or a fixed-price contract cannot fulfill the needs of the procurement. This type of contract places much more risk onto the government, and unlike the fixed-price contract, it does not require a final product but instead requires the contractor's "best effort" (Garrett, 2007). Figure 2 shows the contract types that can be utilized as well as the risk involved with each type of contract.

| Fixed-price | T&M or L/H* | Cost-reimbursement |

FFP   FP/EPA   FPI   CR   CPIF CPAF   CPFF   CPPC

Low ←————————— Buyer's risk —————————→ High

High ←————————— Seller's risk —————————→ Low
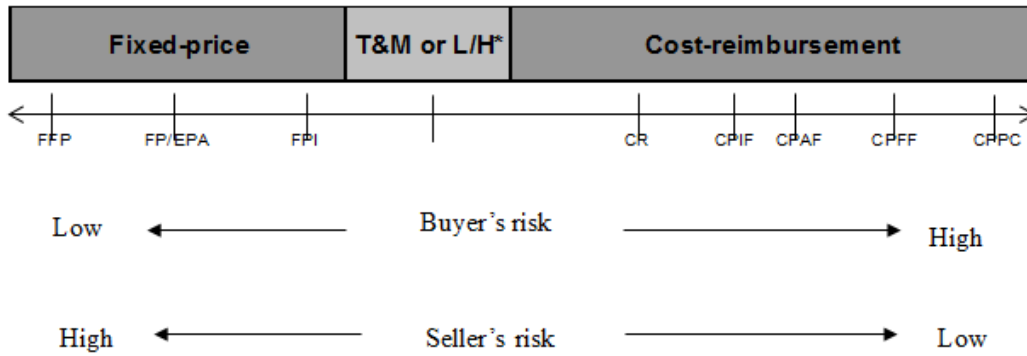
* Time & Material and Labor Hour contracts typically involve higher levels of risk for buyers

Figure 2.   Types of Contracts (after Garrett, 2007, p. 127)

c.   *Establishing Evaluation Criteria*

Oftentimes, establishing proposal evaluation criteria is a very important step within the procurement process that is undervalued. When this happens, the evaluation criteria that are developed by the procurement team do not produce the desired output from contractors who bid on the requirement (also referred to as offerors). The Defense Acquisition University (DAU) glossary defines evaluation criteria as "standards by which accomplishments of required technical and operational effectiveness and/or sustainability characteristics or resolution of operational issues may be assessed" (DAU, 2013). It is crucial to correctly identify the necessary evaluation criteria that need to be assessed in order to ensure that the resulting proposals will be graded in accordance with the specifications that the government desired. Along with utilizing the correct verbiage for evaluation, it is essential to ensure that the criteria are limited to only those necessary to produce the desired result and not restrictively descriptive in order to reduce the strain on the evaluation team. Finally, correct identification of the necessary criteria allows the team to better decide whether they will proceed with a LPTA contract award or a form of tradeoff process along the best value continuum.

3.   Solicitation

After completion of the solicitation planning phase, the solicitation is finalized and posted for viewing by industry. The government can solicit in various ways including

but not limited to request for proposal (RFP), request for quote (RFQ), or invitation for bid (IFB). Depending on the expected amount of the solicitation, it can be posted orally, physically, or electronically. While many solicitations are posted, it is essential that the government buyer post a quality solicitation in order to ensure a successful procurement process. Garrett emphasizes this point when he states, "Better solicitations from the buyer generally result in having better bids, quotes, proposals, or tenders submitted by the seller in a more timely manner. Poorly communicated solicitations often result in delays, confusion, fewer bids or proposals, and lower-quality responses" (2007, p. 24).

a.   *Pre-proposal Conference*

Pre-proposal conferences are a powerful tool that can be useful when the government requirement is more technically complex or hard to define. Garrett (2007) states that the pre-proposal conference provides a level playing field for all potential bidders and allows them to meet with the government procurement team to work through any questions that they may have. The questions posed by industry in regards to the solicitation many times point out possible flaws in the requirement and help to provide the best possible product or service. Once all interested parties have a common understanding of the requirements and all questions are addressed, the government acquisition team then formally addresses the questions through an amendment to the solicitation to allow those unable to attend the conference the opportunity to view the proceedings.

b.   *Advertising Requirements*

Depending on the dollar amount of the solicitation, there are multiple possibilities for advertising a requirement. The most effective way to reach potential offerors in today's technologically advanced age is by posting electronically via websites such as the Federal Business Opportunities (FedBizOps) and the General Services Administration (GSA), both of which are Government Points of Entry (GPE) completely controlled by the government. According to the Defense Acquisition University (DAU), the importance

of posting to the GPE is to ensure that competition is maximized by providing a single, trusted source for contractors to view potential work opportunities (DAU Acquipedia Synopses, 2014).

4. Source Selection

The source selection phase serves as the determination process in which the government acquisition team thoroughly evaluates all submitted proposals. It culminates with the award of a contract to the successful offeror. In 2011, in response to service-specific procedures, the Office of the Under Secretary of Defense (OUSD) released guidance to consolidate specific procedures and enable a joint effort in source selections in an attempt to streamline and better define procedures in acquisition. The Director of Defense Procurement and Acquisition Policy (DPAP) during that time, stated in a memo that "overall, the DOD Source Selection Procedures are designed to provide for uniform Source Selection guidance within the Department and simplify the Source Selection Process" (OUSD, 2011, p. 1).

a. Source Selection Organization

As discussed previously, a government acquisition team is responsible for reviewing and evaluating all proposals that are submitted for each requirement by interested contractors. This team is also defined within the DOD Source Selection Procedures and consists of the Procuring Contracting Officer (PCO), the Source Selection Authority (SSA), the Source Selection Evaluation Board (SSEB), and other agency personnel such as legal personnel, finance personnel, and the organization's small business specialist. In addition, when the acquisition exceeds $100M, the Source Selection Team (SST) is also required to include a Source Selection Advisory Council (SSAC), which provides additional support to the SSA (OUSD, 2011).

The SSA is ultimately responsible for appointing SSEB chairs, ensuring that the source selection process is conducted in the proper manner, maintaining a proper schedule, and selecting the offer that "offers the best value to the government in accordance with established evaluation criteria in Section M" (OUSD, 2011, p. 4). The PCO manages all aspects of the administrative and contractual portions of the acquisition.

The PCO is responsible for assisting the SSA in his or her duties and in many instances can also double as the SSA. The SSEB is composed of a team chair and multiple members from various technical backgrounds. It is often split into multiple functional teams, which include the Technical Team, Past Performance Team, and Cost and Pricing Team. The role of this board is to assess the proposals against the evaluation criteria created in the solicitation phase. Finally, the SSAC, which is composed of a chair and team members, "provides a written comparative analysis and recommendations to the SSA" as well as maintaining oversight of the SSEB (OUSD, 2011).

b. *Evaluating Proposals*

The proposal evaluation portion of the source selection process can be very time consuming and very strenuous on members of the SSEB. During this process, it is critical that the team assess the correct criteria in their selection of the most qualified offeror. Comparable to other government acquisitions, cost or price is a mandatory factor in every source selection. Other criteria that accompany cost include, but are not limited to, "past performance, use of small business, financial strength, reputation, use of break through technologies, etc." (Garrett & Parrott, 2007, p. 147).

It is essential to ensure that the criteria are fairly assessed in the source selection process. Any missteps can open the door to a protest and in turn delay time-sensitive procurements. To aid the SSEB in utilizing the correct procedures, the DOD created standardized source selection procedures, which outline the different methodologies that can be utilized for the technical, risk, and past performance aspects of the evaluation process (OUSD, 2011). These methodologies include a combined technical and risk rating or a separate technical and risk rating process, both of which utilize a color-rating scheme. In addition to the technical evaluation, the team may also perform adjectival assessments of past performance and small business participation (OUSD, 2011).

Once all evaluations have been completed, the SSEB provides their recommendation to the SSA. While the team decision should be heavily considered by the SSA, the final decision as to the apparent successful offeror rests solely with the SSA.

If the SSA chooses to go against the recommendations of the SSEB and SSAC (when applicable), he or she is justified in doing so but must document the decision to ensure a solid case for his or her finding.

c. *Clarifications, Communications, Discussions, and Revisions*

In accordance with FAR Part 15, the source selection process includes three levels of exchanges with offerors throughout certain phases of the procurement. When the government expects to award a contract without discussions, they utilize clarifications. This type of exchange is very limited in nature and allows the offeror to modify only minor administrative aspects of their proposal or clarify verbiage. Communications allow the government to interact with those offerors who are identified as potential candidates for the competitive range. This type of exchange gives the contractors the opportunity to address ambiguities and past performance information, but it does not allow the contractors to alter any portion of their proposal and ultimately helps the team to establish the competitive range (FAR 15.306, 2014). Upon establishment of the competitive range, the government can then enter into discussions with each of the remaining offerors to provide the best possible value for the acquisition. These types of discussions can include negotiating a better price and addressing deficiencies and weaknesses (FAR 15.306(d), 2014). Once all forms of exchange have taken place, the remaining offerors are then allowed to provide the government with proposal revisions that address all issues discussed in the aforementioned exchanges and which can take place either before or after establishment of the competitive range (FAR 15.307, 2014).

5. Contract Administration

Even before the source selection process has concluded, it is wise to look ahead to the contract administration phase of the acquisition. In *World Class Contracting,* Garrett (2007) states, "The principal objective of contract administration is the same for both parties— to ensure the fulfillment of the contractual obligations by all the parties to the contract" (p. 162). To accomplish this objective, contract administration is accomplished through monitoring the contractor's performance, performing any necessary

modifications to keep the project moving smoothly, and processing invoices and payments once items/services have been rendered.

a.   *Monitoring and Measuring Performance*

Possibly the most under-appreciated portion of contract administration is the monitoring of contractor performance. This process ranges from small interactions that involve simply accepting contract items to large service contracts in which the contracting officer must appoint a Contracting Officer's Representative (COR) to consistently monitor the contractor's performance. Frequently, issues can occur during the period of performance due to lack of training, disinterest, or lack of time on the part of the COR. As an example of this, a GAO report found that in many instances throughout 2011, large numbers of personnel held positions equivalent to that of a COR but required no formal COR training. These findings showed that while there was frequently a trained COR assigned to a specific contract, the physical monitoring was being conducted by personnel with little to no experience or training needed to correctly evaluate the performance of the contractor (GAO, 2012).

b.   *Contract Modifications*

After the team has awarded the contract, there are still methods that can be used to remedy problems within the contract, from administrative changes to additions or deletions in terms or items within the scope of the contract (Chang, 2013). The FAR covers in depth these two methods within FAR Part 43 and defines them as bilateral and unilateral modifications. A bilateral modification is one that requires agreement and signature of both the contractor and the contracting officer and typically involves changes such as negotiated equitable adjustments, definitization of letter contracts, and modification of terms. Conversely, a unilateral modification is one that is simple in nature and can be signed by only the contracting officer. These can include administrative changes, change orders, and termination notices when needed.

c. *Payment and Invoices*

Throughout the course of the contract, the government must pay for services or delivered items. While this step seems rather simple, it is nonetheless an important portion of contract administration, and the contracting officer must be familiar with the procedures involved in acceptance. Both invoicing and acceptance occur through submission of either a physical DD250, *Material Inspection and Receiving Report*, or electronically via Wide Area Workflow (WAWF). To process timely payment, the contractor must know how to correctly submit the invoices, and the responsible government official must validate the submission to ensure payment. Yet again, the COR is a principal participant in this process as he or she is normally the government official designated to accept delivery of supplies or services and ensure that there are no issues with the delivered products.

6. **Contract Closeout**

Contract closeout is the sixth and final phase within the contracting process and is often the most overlooked and undervalued. In *Contract Administration*, this phase is described as one where the contracting office verifies "that all administrative matters are concluded on a contract that is otherwise physically complete" (Garrett, 2009, p. 21). This step in the process is largely performed through the closeout process but can be prematurely terminated for a variety of reasons ranging from lack of progress by the contractor to a cancellation due to lack of funding from the government.

a. *Terminations*

It would be naïve to believe that all contracts come to a successful completion and that there are never any issues that preclude an early end to a government contract. Terminations provide the contracting officer with two very valuable tools in discharging the contract prematurely—termination for convenience (T4C) and termination for default (T4D). In the simplest terms, T4C allows the government to opt out of a contract at its convenience with no additional compensation due to the contractor and no penalty incurred (beyond costs and profit already accrued). T4D, on the other hand, is normally executed when the contractor continually performs below standards and is thereby

terminated (Garrett, 2009). In accordance with FAR Part 49, this type of termination can incur various penalties by the contractor, including but not limited to, unfavorable information within past performance records, monetary withholdings, liquidated damages, and increased bond premiums in the case of construction contracts (FAR 49.4).

b.   *Closeout*

As noted in FAR 4.804, closeout is essentially the process of ensuring that the contract is "physically complete," all important issues have been addressed, and all unsettled costs and audits have been resolved (FAR, 2014). Depending on the terms of the contract, it is during this phase that any remaining money may be de-obligated by the government and returned. As previously mentioned, closeout is one of the most overlooked steps within the contracting process, yet it is also one that has gained much attention within the past decade. With growing concerns over sequestration and lack of funding within the DOD, closeout has been a hot-button topic within the last few years. Due to a huge backlog of physically completed contracts and money that has either expired or is getting ready to expire, there are millions of dollars that could possibly be recouped by accomplishing the closeout process in a more expedient manner (GAO, 2012). With such a detailed process, it is essential for the contract professional to ensure that they have a mature procurement process (Rendon & Rendon, 2014). It is merely one piece of the puzzle, however, and must go in tandem with strong internal controls, which is discussed next.

C.   INTERNAL CONTROL FRAMEWORK

Just as the six phases of contracting are important to the acquisition process, internal control within the government is important to the sustainment of the organization as a whole. According to the Committee of Sponsoring Organizations of the Treadway Commission (COSO), internal control is defined as "a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance" (COSO, 2013, p. 3). The objective of this framework is to focus on three broad categories: Operations, Reporting, and Compliance. The internal control

framework provides management at all levels with the tools necessary to ensure a reasonable assurance of security and risk mitigation within the organization. The internal control framework was developed by the COSO in 1992 and was updated in 2013 in order to modernize their strategies. Additionally, these changes helped cement the concepts discussed within the framework by introducing them as 17 distinct principles distributed across the five components that are shown in Figure 3. To ensure that the government was keeping pace with industry regarding internal controls, the GAO also released its own updated version of the framework in 2014 entitled *Standards for Internal Control in the Federal Government,* which outlines the way that the framework is utilized within the government (GAO, 2014). The following sections will discuss the five components of the COSO internal control integrated framework, including the 17 principles, as can be seen in Figure 3.

Figure 3.   Internal Control Components (from COSO, 2013; GAO, 2014)

1.   Control Environment

Any strong organization must begin with a strong foundation. As the first component of internal control, the control environment fulfills exactly this role. Ramos (2004) states that the control environment is the foundation for all other components and sets the tone for the organization, and therefore, must not be neglected. The upper-tier

management and board of directors utilize the control environment at a strategic level to set the tone for the organization and emphasize the first five principles stressed in the updated framework. These principles consist of: "1. Determining commitment to integrity and ethical values, 2. Exercising oversight responsibility, 3. Establishing structure, responsibility and authority, 4. Demonstrating commitment to competence, and 5. Enforcing accountability" (GAO, 2014, p. 9). These five principles work in tandem with the organization's original vision by showing that the upper-tier officials have a vested interest in creating a control environment that works optimally. This show of solidarity enforces the concept of a strong foundation upon which to build.

2.   Risk Assessment

Risk is considered to be an everyday part of life. It is a part of life, however, that people and organizations attempt to mitigate to provide the best possible product to their customers and stakeholders. Risks can either be internal to the organization or produced by some external force that affects the entity directly or indirectly. According to Cain (2009), many of these risks can be reduced through better employment of traditional type audits that allow management to make more informed decisions. In order to determine the appropriate amount of risk the organization is willing to accept, management can utilize the following four principles: "6. Define objectives and risk tolerances, 7. Identify, analyze, and respond to risk, 8. Assess fraud risk, 9. Identify, analyze, and respond to significant changes in the internal control system" (GAO, 2014, p. 9). By incorporating these principles, management can better recognize their significant risks and either control, mitigate, or avoid them altogether.

3.   Control Activities

Control activities are management-level decisions and actions that are established "through policies and procedures to achieve objectives and respond to risk in the internal control system, which includes the entity's information system" (GAO, 2014, p. 44). Similar to senior executives who implement controls at the environment level, the control activities allow the mid-to-upper-level management to have a stake in the internal controls process. According to Gramling, Hermanson, Hermanson, and Ye (2010), one

way to enhance control activities is through segregation of duties. By dividing activities amongst several people in an organization, segregation of duties reduces the risk of personal gain or fraudulent activity by any one individual. The three principles associated with control activities are: "10. Design control activities, 11. Design activities for the information system, and 12. Implement control activities" (GAO, 2014, p. 9).

4.   Information and Communication

Communicating is a staple of any successful organization, and it is imperative that employees relay information promptly and correctly. The principles associated with this internal control component assist the employee in employing a sound strategy when it comes to information and communication and instruct them to: "13. Use quality information, 14. Communicate internally, and 15. Communicate externally" (GAO, 2014, p. 9). In today's technologically advanced environment, it is imperative that every individual knows which mechanism to utilize when communicating and passing information back and forth. Examples of this include the use of e-mail versus verbal communication in some instances where the information can be misinterpreted or if the person simply wants a written record that their intent was communicated to the other individual. In addition to communication in the traditional sense, Alie Eid (2008) states that it is extremely important that accounting information systems (AIS) are utilized in a manner that allows for strategic use and is commensurate with the needs of the organization. Ali Eid (2008) also states that AISs are crucial for communicating data both internally and externally in the form of reporting data, financial statements, and trend analysis.

5.   Monitoring Activities

Hedley and Ben-Chorin (2011) state that effective monitoring activities are a very important tool that can provide an organization with self-appraisal in real time rather than having to wait for audit results that occur after the fact. Similar to any other program implemented within a company, it is imperative to have a monitoring activity to ensure that the previously discussed controls are being implemented as intended and to ensure a feedback loop is established. The feedback loop allows management to determine

whether the controls are functioning correctly or if they need to be tweaked to provide a quality system of controls. Therefore, it is not surprising that the final two principles are: "16. Performing monitoring activities, and 17. Remediating deficiencies" (GAO, 2014, p. 9). These principles allow management to establish a baseline, monitor internal controls, evaluate results, report and evaluate issues and perform corrective actions. Each of these principles within the five components of internal control contribute considerably to reduced risk of procurement fraud. When these principles are not effectively implemented, however, there is always potential for fraud and the schemes associated with fraudulent activity.

D.   PROCUREMENT FRAUD SCHEME CATEGORIES

This research study focused on the six most common categories in procurement fraud: collusion; conflict of interest; bid rigging; billing, cost and pricing schemes; fraudulent purchases; and fraudulent representation. The Department of Justice (DOJ) reported that, in FY2012, the government recouped a record high $4.9 billion (B) in cases that involved fraud against the government under the False Claims Act (DOJ, 2014). In addition, between 2009 and 2012, the DOJ recovered $13.3B, also a record high (DOJ, 2014). In a time when federal funding has significantly decreased and there are more contractors bidding for fewer contracts, the opportunity for fraud has no doubt increased due to the financial strains felt by the large pool of contractors (Lander, Kimball, & Martyn, 2008). Additionally, sequestration can negatively affect the government in terms of funding oversight of programs, such as is the case with the Medicare program. Spar found that though mandatory programs such as Medicare and Medicaid were exempt from cuts, "some of the administrative functions, including fraud and abuse and quality oversight activities, that do not qualify as "Medicare benefits" are subject to reductions higher than 2% (5.0% and 5.1% for discretionary and mandatory funding respectively in FY2013)" (Spar, 2013, p. 15).

1.   Collusion

In broad terms, collusion is defined by *Merriam-Webster* as "a secret agreement or cooperation especially for an illegal purpose" (*Merriam-Webster*, 2014). In the world

of government contracting, collusion can occur in various ways. However, for the purpose of this section, this research study focuses on collusion between the government official and a contractor. Within its *Fraud Indicator Handbook*, Air Force Materiel Command identifies 39 different variations of collusion with the contractor, including the "frequent use of a contractor despite quality, cost or performance problems" and "apparent buyer favoritism for a particular contractor" (2008, pp. 45–46). With all of the large-dollar contracts being sought, it is reasonable to expect that there are government officials who see the potential for personal profit and assist prospective contractors in winning contract awards in return for bribes, special favors, or kickbacks. One recent example of this is the 2013 arrest of three Navy personnel for accepting bribes from a contractor in return for directing business to them. The accusations included millions of dollars of overcharging and leaking classified shipping routes in exchange for lavish gifts for the members. What makes this incident an even larger concern is that those arrested were higher-level Navy officers with additional flag-level officers being implicated in the scandal (Ferran, 2013).

2.   Conflict of Interest

While collusion seems to be the type of fraud that gains most notoriety throughout the media, conflict of interest is another type of fraud that can also be very damaging to the government. According to Husser, Gautier, Andre, and Lespinet-Najib (2014), conflicts of interest can force a buyer to "choose between personal interests and the interests of the company he represents" (p. 328). In the case of procurement fraud, conflicts of interest have the potential to arise during the source selection process when a member of the source selection team may have interests, financial or other, in one of the offerors. This conflict, whether actual or potential, may hinder the government official's judgment during the evaluation and selection process if the conflict is not resolved before the process has begun (U.S. Office of Government Ethics [OGE], 2013). In accordance with statute 18 U.S.C. § 208, "employees are prohibited from participating personally or substantially, in an official capacity, in any 'particular matter' that would have a direct and predictable effect on the employee's own financial interests" or those of significantly close ties (U.S. OGE Current Government Employees, 2013). Within the source selection

process, all members must sign conflict of interest statements to certify whether or not they hold an interest with competing organizations. If they do hold an interest in a competing organization, they must recuse themselves to prevent the appearance of favoritism.

3.   Bid Rigging

When two or more contractors collude to bypass competition, it is known as bid rigging. This type of fraud can be seen through bid suppression, complementary bidding, bid rotation, and subcontracting. In bid suppression, all contractors agree that only one contractor will bid to receive the discounted contract award. Similar to this is complementary bidding, where all competitors but the designated one overbid or present unacceptable terms. This gives the appearance of competition but instead significantly increases the price for the government (Haberbush, 2000). Bid rotation allows contractors to pick and choose which contracts are awarded to which vendor by disclosing what their bid will be. Finally, subcontracting can pose a threat in that the low contractor will withdraw if the other will hire them as a subcontractor (DOJ, 2013).

4.   Billing, Cost, and Pricing Schemes

According to the General Services Administration Office of the Inspector General (GSAOIG), yet another scheme that has been noted within contract processes is that of mischarging for costs, which includes charging for products not used or services not rendered (GSAOIG, 2012). This type of fraud is usually perpetrated once the contractor has been awarded the contract and misrepresents their costs through various methods. These methods can include inflated rates for labor, intentionally charging indirect labor as direct labor, and price gouging. While charging indirect labor as direct does not seem to be an egregious infraction, it can become a significant issue if the contractor utilizes this labor across other contracts. A recent example of this type of abuse was brought to light in 2013 when two employees of an international moving company filed a lawsuit against their employer for overstating weights involved with the movement of military household goods (Hawes, 2014). According to the documents filed, there are 437 instances of fraud indicators on a contract, which has equaled $723 million (M) over four

years (Hawes, 2014). These types of schemes seem to be the most difficult to detect due to the fact that the government has very little insight on the inner workings of another organization's financial books; and therefore, must rely on internal employees to blow the whistle.

5. Fraudulent Purchases

Fraudulent purchases are those in which a buyer acquires materials without having a specific government requirement but rather for personal use. These purchases seemingly became a major issue with the introduction and increased use of the government purchase card (GPC) throughout the early 2000s. Multiple GAO reports between 2002 and 2003 specified that every service component was vulnerable to fraudulent purchases due to weak internal controls (GAO, 2002).

Procurement fraud still remains an issue within the commercial sector as well as the federal government, and is seen by many to be a growing concern (Nesti, 2014). For example, the Environmental Protection Agency (2014) found that it lacked proper internal controls, which resulted in improper or otherwise prohibited purchases in over 50 percent of sampled transactions during an audit spanning January through November 2013. Some of the missing controls included purchase card oversight and proper employee training (EPA, 2014).

6. Fraudulent Representation

The final type of scheme identified within this research is fraudulent representation, which consists of substituting goods and services for cheaper or substandard merchandise that does not conform to contract specifications. This process is also known as product substitution. One of the most infamous of these cases included a subcontractor who was providing electronic tubes to the prime that were below specification but bore the markings of the originally specified product. The contractor then used the tubes within the radio kits that were delivered to the government. While the prime contractor claimed that they did not know of this infraction, both organizations were held liable after company employees for the subcontractor filed a lawsuit under the false claims act (United States v. Bornstein, 1976).

Many times, these product substitutions cause much more than financial damage. Within the government, utilizing substandard products can also put lives at risk when the procurement involves products that could jeopardize the safety of those working on them. Much like billing schemes, fraudulent representation is difficult for the government to identify due to the fact that substitutions are made on internal components, or the contractor deceives the government through false representation of the product, as shown in the Bornstein case.

All of the types of fraud schemes previously mentioned can be seen within the fraud matrix in Figure 4. The matrix shows that a possibility for fraud exists at any time throughout the contracting process and that all components of the internal control framework are vulnerable to fraudulent activity. However, with proper procurement training processes and effective internal controls, the potential for loss involving fraudulent activity can be greatly reduced. According to Rendon and Rendon (in press), in order to thwart these schemes and minimize vulnerabilities within the organization, effective internal controls, capable processes, and a competent contracting workforce must be implemented, measured and constantly improved.
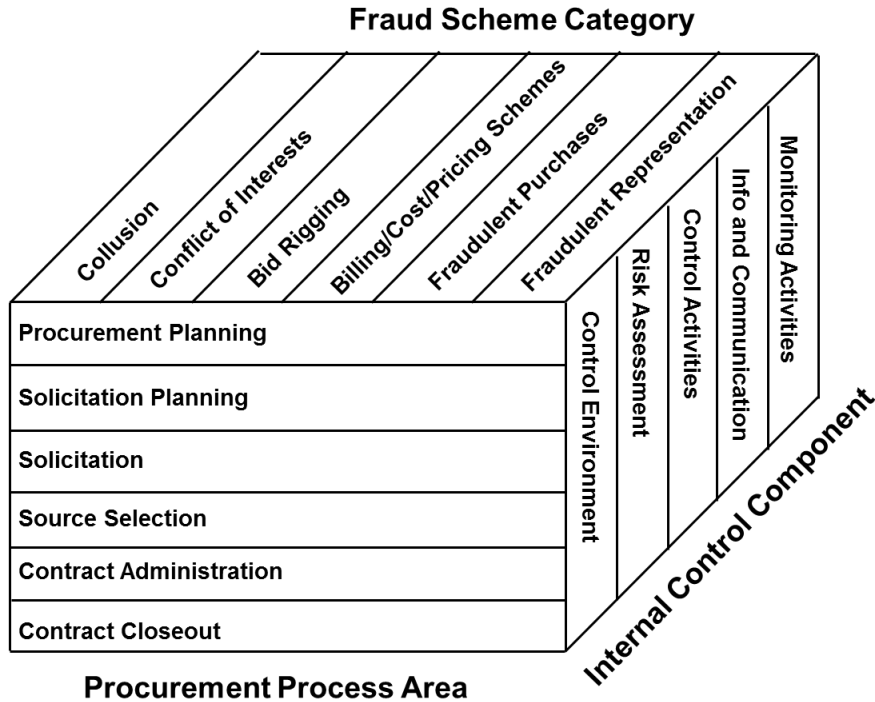
Figure 4.   Procurement Fraud Matrix (from Rendon & Rendon, in press)

While procurement fraud can be seen throughout every aspect of contracting, it is important to note that Department of Defense contracting is a high-visibility target for fraudsters due to the large budget and high number of contract actions performed by the DOD. The next section will discuss DOD contracting.

E.   DEPARTMENT OF DEFENSE CONTRACTING

According to the GAO, the DOD contracted for approximately $361B worth of goods and services in FY2012 alone (2013). These contracts ranged anywhere from simple buys such as office supplies to high-complexity acquisitions to include large-dollar weapons systems. With such a large mission and an increasing need for properly trained contracting personnel, it comes as no surprise that the area of DOD contract management has been included on the GAO's biennial High Risk Series since 1992 (GAO, 2013). According to Apte, Apte, and Rendon (2010), "this high-risk status reflects DOD's challenges in achieving its desired outcomes in terms of meeting service procurement cost, schedule, and performance objectives" (p. 11). These issues, along

with a lack of strategic approach, leaves the government at risk of not getting the services and products when needed, or a possibility of paying too much (GAO, 2013). Additionally, in its *FY2014 Audit Plan*, the DOD Inspector General (DODIG) reported the deficiencies that continue to plague contract management, including "obtaining adequate competition in contracts, adequately defining contract requirements, overseeing contract performance, obtaining fair and reasonable prices, and maintaining contract documentation for contract payments" (DODIG, 2013, p. ii). According to this same report, these deficiencies, along with the 13 internal control weaknesses found in concurrent years, ultimately degrade the DOD's ability to identify fraud, waste, and abuse (DODIG, 2013). Contracting responsibilities have grown exponentially throughout the past decade due to support of contingency operations spanning multiple continents, increasing workloads, and decreasing personnel. Due to this, the DOD is constantly at risk of being exploited by those who are looking to defraud the government for a multitude of reasons.

1. Impact of Fraud on the DOD

Procurement fraud significantly impacts the DOD due to the fact that our government budgets are shrinking, and government personnel are asked to do more with less due to sequestration. Between FY2012 and FY2013, the total dollars spent on DOD contracting decreased by $53M and transactions decreased from 1.4M to 1.3M in that same time span (Office of Management and Budget [OMB], 2013). The DOD, along with every other government agency, relies heavily on contractor support in order to accomplish its mission, and the U.S. government is spending less due to budget cuts. This fact alone makes it essential to safeguard government resources and ensure that the government partners with trusted contractors who look to have a mutually beneficial relationship with the government. The auditability triangle (Figure 5) presents three important factors that must be addressed in order to create an auditable organization. According to Rendon and Rendon (in press), auditability includes competent personnel who are educated, trained and experienced, on both the contractor and government side of the contract management process. Additionally, the acquisition organizations must have capable processes set in place that do not remain stagnant but rather continue to

improve and ensure that the correct processes are being measured. Finally, auditability also entails having effective internal controls where the organization ensures that the controls remain dynamic, the controls are constantly monitored and enforced, and that issues are reported in a timely manner. (Rendon & Rendon, in press).
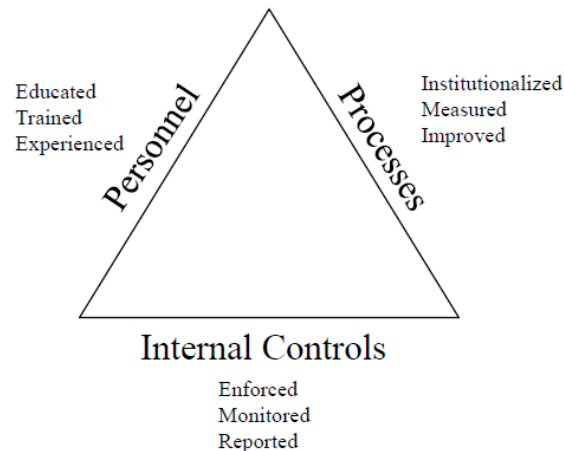
Figure 5.   Auditability Triangle (from Rendon & Rendon, in press)

2.   Procurement Fraud Problems within the DOD

The DOD has seen its share of problems within the last decade, including inadequate training, lack of personnel, increased spending, and increased workload. DOJ reports (2013) state that the government recovered $427M for goods and services purchased by the DOD in FY2012 alone. The recoupment came via settlements from civil false claims act cases. While a majority of the fraudulent activities took place in a non-contingency environment, the report attributed $73M of the recovered funds to contracts performed in operations within Iraq and Afghanistan and involved well-known large contractors (DOJ, 2013). The lack of capable processes and effective internal controls has likely contributed to this large number by making it easier for fraudsters to target government contracts using procurement fraud schemes.

While external threats seem to account for most procurement fraud within the government, there have been instances where internal government officials have taken advantage of their positions in order to defraud the government. According to a DOJ

report (2014), one case in 2013 involved two high-level Navy officers, a well-connected Naval Criminal Investigative Service (NCIS) agent, and a petty officer. These men allegedly conspired with the owner of an overseas defense contractor by driving business directly to his company in exchange for gifts and favors. The report asserts that the conspirators not only caused monetary risk to the government but, in the case of Petty Officer Layug, also divulged classified information as to the routes and schedules of the vessels that they commanded.

In another case of insider threat, a retired USAF officer was indicted in 2013 for his involvement in contract fraud amounting to approximately $5.4M (USAO, 2013). According to the United States Attorney's Office (2013), a retired military officer and current contractor employee for the government provided insider knowledge and sensitive proprietary information to his associates in order for them to obtain lucrative government contracts. Due to these high-visibility scenarios within the last two to three years, the DOD has taken note and outlined specific steps to address the issues that are facing the federal government. The following section will discuss the DOD's response to fraud issues.

F.   DEPARTMENT OF DEFENSE RESPONSE TO FRAUD ISSUES

In response to GAO's high-risk report published in 2013, DOD has attempted to correct many of the issues addressed within the report. GAO (2013) noted that one of the largest steps that DOD has taken included increasing the acquisition workforce by approximately 17,500 over a two-year span between FY2009 and FY2011. With the implementation of the Defense Acquisition Workforce Development Fund (DAWDF), DOD created yet another tool to facilitate "the capacity in both personnel and skills needed to perform its acquisition mission, provide appropriate oversight of contractor performance, and ensure that the Department receives best value for expenditure of public resources" (DAWDF, 2012, p. 931). Through the use of this fund, the acquisition workforce will not only grow, but also be better trained to identify potential indicators of fraud, waste, and abuse. According to a 2011 report by the GAO, however, many key roles in services acquisition are not performed by members of the acquisition workforce

(GAO, 2011). Additionally, the DOD has not expanded the definition of acquisition workforce to include installation-level services stakeholders such as requirements generators and Contracting Officer's Representatives (CORs). Finally, though DOD has increased the number of personnel within the acquisition workforce and has increased training, there has been no response from DOD which is focused on ensuring capable processes or promoting effective internal controls. The following section will address the consequences of contracting deficiencies.

G.   CONSEQUENCES OF CONTRACTING DEFICIENCIES

In today's time of fiscal uncertainty and shrinking budgets, the importance of a competent contracting workforce cannot be overstated. The contracting deficiencies that can potentially lead to fraud hold not only monetary implications, but can also threaten security and place undue risk to the government in certain circumstances due to ineffective internal controls or less than capable contracting processes. Throughout the U.S. government, the Justice Department was able to recover almost $5B via False Claims Act settlements and judgments attributed to fraud (DOJ, 2012). This number is merely what was recovered from guilty organizations sued under the Act and most likely is only a percentage of what has actually been stolen from the government due to deficiencies and mismanagement of government practices and processes. Deficiencies within the procurement process not only invite the potential for fraud, but in many cases result in wasted resources due to cost overruns, lack of competition, lack of process capability, and improper incentives provided to contractors. The following section will discusss the fraud coverage in courses offered by the Defense Acquisition University (DAU).

H.   FRAUD COVERAGE WITHIN DEFENSE ACQUISITION UNIVERSITY

As described in the previous sections, fraud has become an increasing issue within the federal government and more specifically within the DOD. Cohen and Eimicke (2008) state that as outsourcing increases within government organizations, so too does the possibility for corruption. This possibility for fraud is further intensified by "clash of cultures" identified by the authors, in which the goal of the public servant is to

"serve the public interest" while the contractor's primary goal is profitability. The fact that the DOD acquisition workforce is composed of public servants, paired with the issues facing the department, leads to the question of: What is the procurement fraud coverage within the Defense Acquisition University (DAU) courses for acquisition professionals?

While DOD contracting professionals are required to take certain courses to receive their Level I, Level II and Level III certifications, none of the required core courses for contracting professionals include a mandatory fraud training or awareness class. This research performed a focused search for "fraud" as a key word within the course descriptions of all available course offerings within DAU. While there were some instances of "fraud" found within the catalog, there were only two instances in which the course was devoted to fraud. The only formal class offered by DAU that specifically covers procurement fraud is an auditing class: AUD 1283—Fraud Awareness. According to the course description, this course provides the student with "an overview of the auditor's responsibility for the consideration of fraud in DCAA's audits and to heighten auditor awareness of the possibility of fraudulent activities" (DAU iCatalog, 2014). Along with this, the objective of AUD 1283 is to "describe fraud, including the fraud triangle and the fraud laws relevant to government contracting" (DAU iCatalog, 2014). The course is not targeted towards contracting professionals, however, but rather is intended for DCAA auditors. It is a required course for auditing professionals. It is an online self-study course that takes approximately 6.5 hours.

Along with AUD 1283, a continuous learning module (CLM) provides students with a two-hour refresher course. CLM 049—Procurement Fraud Indicators, is a computer-based, self-study course that is targeted at all acquisition workforce members. The course description states that CLM 049 is intended to "provide an awareness of procurement fraud indicators" (DAU iCatalog, 2014). Unlike the AUD course, this CLM was developed under the direction of Congress specifically to target all acquisition workforce personnel in response to findings of a department-wide review concerning fraud, waste, and abuse. While the CLM provides the contracting workforce with additional training, it is not a course required by the DAU curriculum.

I. SUMMARY

This literature review laid a foundation for better understanding of the contract management process, the five components of the internal control framework, and the six most common procurement fraud schemes perpetrated in contracting, specifically, within DOD procurement. In addition, a summary of the impact of fraud and problems within the DOD was discussed. The department's response to fraud issues and the possible future consequences caused by contracting deficiencies was addressed. Finally, the chapter discussed the level of fraud training coverage provided through DAU. This overall framework serves as a foundation for the research presented within later chapters and provides a background of the research. The issues addressed are pertinent within any organization and can be implemented throughout almost any type of organization. The next chapter will introduce the Air Force Nuclear Weapons Center (AFNWC) as well as its mission as a subordinate unit within the Air Force Materiel Command (AFMC).

III. AIR FORCE NUCLEAR WEAPONS CENTER CONTRACTING DIVISION

A. INTRODUCTION

This chapter provides an in-depth look at the organization that will be the case study for this research. According to its mission statement, the mission of the Air Force Nuclear Weapons Center Contracting Division (AFNWC/PZ) is to "execute business solutions for the nuclear enterprise, installation, and mission partners and develop, implement, and manage compliant contracts responsive to customer needs and providing best value to the Air Force" (Widmann, 2014). As is the case with many other contracting organizations, AFNWC/PZ is responsible to many organizations that range from the internal government customer to the taxpayers. The span of their contracts ranges from every-day small dollar commodity and service buys in support of base operations to complex multi-billion-dollar missile procurement. As such a diverse organization responsible for many types of acquisitions, the AFNWC is a subordinate unit within the Air Force Materiel Command (AFMC). This chapter will describe the organization of AFMC, as well as the contracting directorate makeup within the Center. Additionally, it will discuss the personnel and operations within the contracting directorate.

B. AIR FORCE MATERIEL COMMAND ORGANIZATION

Similar to every other component within the DOD, the 2011 Budget Control Act forced the AFMC to eliminate civilian positions in order to decrease Operations and Maintenance (O&M) spending. In an effort to streamline and better re-align Air Force priorities, AFMC recently incorporated a mass restructuring effort where they downsized a 12-center organization and consolidated into a five-center construct model. According to a RAND study conducted in 2012, this new structure allowed AFMC to reduce its span of control and consolidate redundant functions such as organizing, training, and equipping by placing them under one commander (RAND, 2012).

In the process of combining centers, 10 centers were eliminated, and three new centers were introduced (the Air Force Life Cycle Management Center (AFLCMC), the

Air Force Sustainment Center (AFSC), and the Air Force Test Center (AFTC)) (Figure 6). As a result of the restructuring effort, the RAND report (2012) found that the reorganization would eliminate more than 1,000 unnecessary positions and save more than $100M annually. All the while, the AFNWC remained intact, though its internal organizational structure also faced changes due to a need for decreased manning.
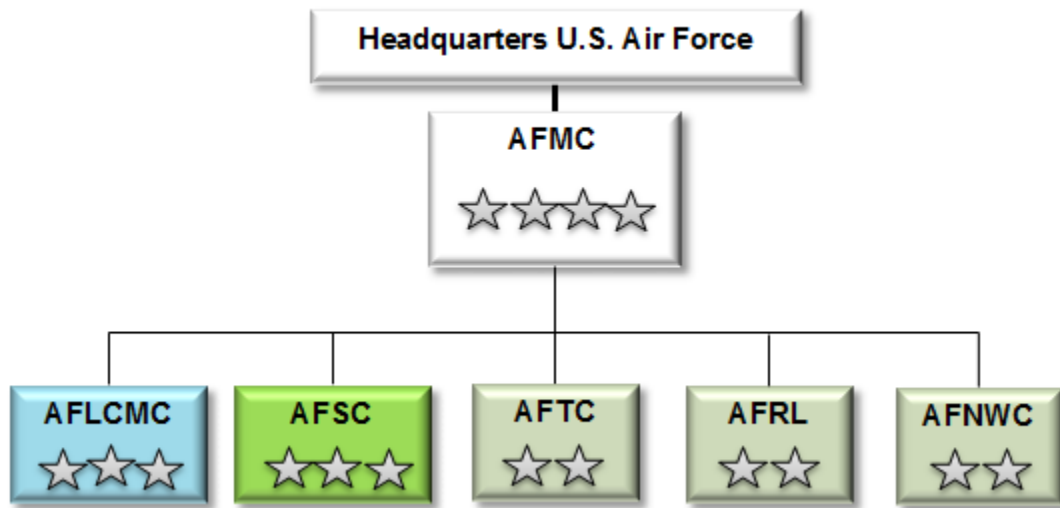
Figure 6.   AFMC 5 Center Structure (from RAND, 2012)

C.   AFNWC CONTRACTING DIRECTORATE ORGANIZATION

While the mass reorganization at the major command (MAJCOM) level did not affect the AFNWC in name, it did affect the way that it was organized. Similar to their parent unit, the Air Force forced AFNWC to minimize inefficiencies and merge redundant processes in order to accommodate the mandatory personnel cuts faced by the DOD. The AFNWC Contracting Directorate (AFNWC/PZ) formed from the merger of the 377 Contracting Squadron (377CONS) and Ogden Air Logistics Center Contracting (OO-ALC/PK). This merger allowed AFNWC to incorporate installation-level contracting (377CONS) and intercontinental ballistic missile (ICBM) weapons contracting (OO-ALC/PK) under the same span of control and reduce the number of personnel assigned (AFNWC/PZ, 2014).

The Contracting Division within AFWNC is headquartered at Kirtland Air Force Base (KAFB), New Mexico and is broken down into a staff and three subordinate divisions, each with its own specific functions and customers (Figure 7). AFNWC/PK staff is responsible for oversight, resource management, and contracting execution and is based at KAFB. It is assigned the PK designation rather than PZ due to manpower requirements. AFNWC/PZC directly supports the staff through clearance and review functions for the two operational divisions (PZI & PZB). AFNWC/PZI is responsible for installation contracting and comprises areas such as support and services, construction support, and enterprise/specialized contracting. Finally, AFNWC/PZB focuses directly on support of the ICBM mission. This division is geographically separated from its parent unit, located at Hill AFB, Utah, in order to better serve its direct customer.
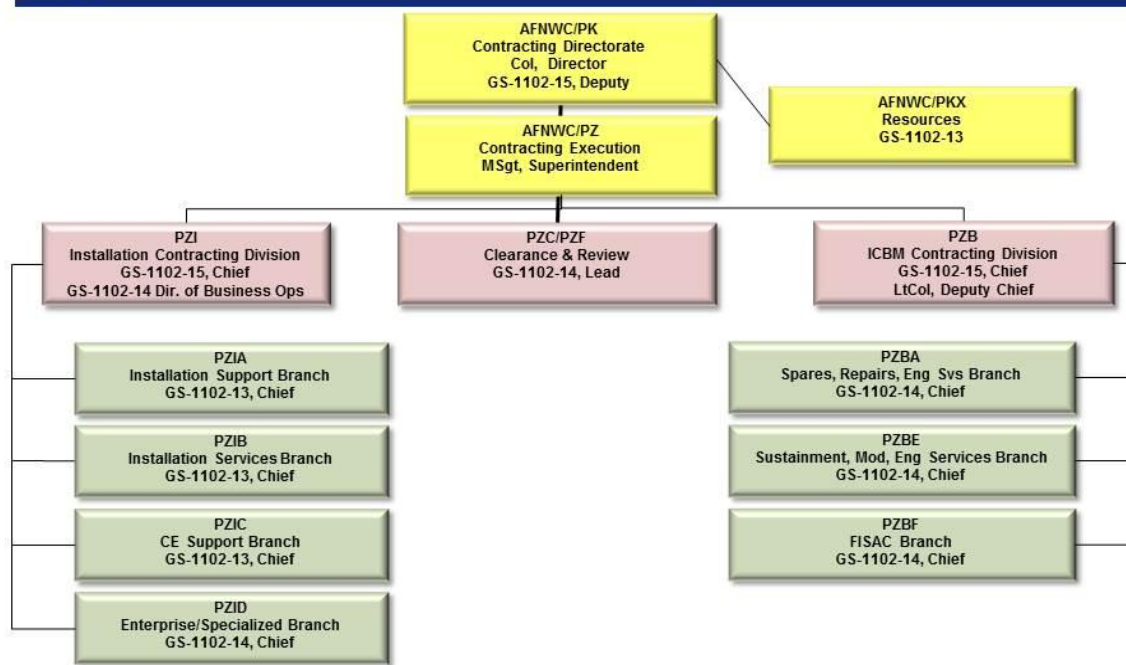
Figure 7.   AFNWC/PZ Organization Chart (from AFNWC/PZ, 2014)

D.   AFNWC/PZ PERSONNEL

The Director of AFNWC/PZ is a colonel within the 64P career field (Contracting Air Force Specialty Code) with a workforce mix of civilian and military. The Contracting Directorate (PZ) consists of 84 civilian personnel authorizations within the 1102 career field (Civilian Contracting Classification Standard) and approximately 20 military personnel within the 64P and 6C contracting career fields (AFNWC/PZ, 2014). The majority of these professionals are assigned as contract specialists, while a small minority with more time and experience within the career field are bestowed a warrant, authorizing them to award contracts. The contracting specialist is normally a less experienced employee who is responsible for the day-to-day administrative actions associated with the contract with no authority to enter into a binding contract. After gaining experience and approval from superiors, the contracting specialist can then receive a warrant that, in accordance with the FAR, grants them "the authority to enter into, administer, and/or terminate contracts and make related determinations and findings" (FAR, 2014).

E.   AFNWC/PZ OPERATIONS

The span of control for contracting support provided by the AFNWC/PZ covers a large spectrum due to the fact that the organization is focused more on providing support to each specific nuclear customer rather than on a single aspect of contracting. PZI contains multiple branches within the directorate that are dedicated to purely operational contracting support, which includes minor construction as well as all services and supplies necessary to enable the installation to function on a day-to-day basis. According to the Director of Contracting for AFNWC (2014), in FY2013 this division was responsible for over 1,000 contract actions valued at approximately $50M. On the other side of the spectrum, PZB consists of all functions necessary to support the ICBM mission to include engineering services, sustainment, and future acquisitions. In contrast to the operational division, the ICBM division performed far fewer contract actions in FY2013 (600) yet obligated far more dollars (approximately $400M). Although these two divisions perform significantly different contracting missions, both organizations fall

underneath the umbrella of the AFNWC Contracting Division, and therefore, are subject to the same federal, DOD, and Air Force contracting regulations.

F.   SUMMARY

This chapter provided a broad look at the AFNWC's parent organization, AFMC, to provide reference to its responsibilities to the Air Force. Also, it outlined the makeup of the AFNWC organization. Finally, this chapter presented the operations conducted by AFNWC/PZ as well as its organizational structure breakdown and personnel. The next chapter will discuss the methodology used in this research study. It will discuss the survey assessment tool that was completed by the contracting personnel assigned to AFNWC/PZ.

IV. METHODOLOGY

A. INTRODUCTION

This chapter will discuss the methodology used in this research study. First, the development of the survey assessment tool will be discussed. Then, the deployment of the assessment tool will be addressed. Finally, this chapter will detail how the results collected from the survey will be analyzed based on multiple factors. These factors include the knowledge level of procurement fraud related to the contract management process, the internal control components, and the procurement fraud scheme categories. Additionally, the survey will analyze the contracting officials' perceptions of procurement fraud vulnerabilities.

B. DEVELOPMENT OF ASSESSMENT TOOL

The purpose of the survey instrument used in this study is to measure contracting personnel's knowledge level of procurement fraud. The survey will be taken by personnel with a variety of experience within AFWNW/PZ. It has several multiple-choice questions that assess a participant's specific level of procurement fraud knowledge. The survey questions were developed in a previous thesis (Chang, 2013) and deployed to a different group of participants for this research study. According to Chang (2013),

> The aim was to base these questions on a general knowledge of fraud schemes and not on any information listed in regulations. The questions were developed for each phase of the contract management process and further identified according to their associated internal control component and procurement fraud scheme. The survey also included Likert scale questions dealing with organizational environment and fraud (p. 31).

1. Sources Used to Develop Questions

As previously mentioned, the questions were developed in a previous study (Chang, 2013) and were utilized by this current research study. According to Chang (2013), the main source used to develop the survey was the U.S. Agency for International Development (USAID), Office of the Inspector General, Office of Investigation's *Fraud Indicators Handbook*. The "handbook lists various indicators of procurement fraud that

will help government employees in recognizing procurement fraud. The handbook breaks down indicators based on schemes, contracting phase, and personnel conducting the fraud" (Chang, 2013, p. 31). The DOD's Office of Inspector General's report *Contingency Contracting*: *A Framework for Reform*, 2012 update (Department of Defense Inspector General [DODIG], 2012) was also used to develop the survey questions. Chang (2013) states that the two reports are similar because they both contain "lists of fraud indicators as organized by various phases in the contracting process, but it also provides concrete examples of fraud occurrences" (p. 32). Chang (2013) also utilized some of the organizational Likert scale questions from the Internal Control Survey developed by the New York State Internal Control Association (NYSICA, 2006) and also used the Association of Certified Fraud Examiners (ACFE) contract and procurement fraud data (ACFE, 2013).

2.   Development of Demographic Questions

Using the previously developed survey instrument, the demographic questions were designed to collect information about those participating in the survey. The survey includes a range of questions that asks whether they are civilian or military, what their experience is within the contracting field, whether they currently hold a Contracting Officer warrant, and what their Defense Acquisition Workforce Improvement Act (DAWIA) certification level is (Chang, 2013).

3.   Development of Knowledge Questions

According to Chang (2013), the survey was developed to measure the level of procurement fraud knowledge among the participants "according to each of the six contract phases, five internal control components, and six procurement fraud schemes (p. 32). The questions assessed the participants' pre-existing knowledge of contracting. The survey provided participants with examples of fraud situations and asked them to identify the scenario in fraud terms. "The questions were developed from the various fraud indicators listed in government reports and other resources. All of the 27 knowledge questions were multiple-choice format, with four possible answers (Chang, 2013, p. 32).

4. Development of Organizational Perception Questions

In addition to demographics and general knowledge questions, the previously developed survey asked participants 12 questions about their organization. These questions used the Likert scale to assess what participants thought about their organization's susceptibility to fraudulent activity (Chang, 2013). Additionally, the organizational questions assessed each participant's attitude towards the occurrence of fraud in their organization.

5. Deployment of Assessment Tool

The previously developed survey, using the LimeSurvey web-based tool, was deployed directly to the contracting personnel at AFNWC/PZ via an e-mail message from the researchers. The participants were given four weeks to complete the survey and were told that the survey would take approximately 30–45 minutes to complete. Each survey was taken at the participant's desk during work hours. The survey targeted contracting workforce members employed within AFNWC/PZ. The personnel included 13 military members within the 64P Air Force Specialty Code and 19 civilian members within the 1102 career field (64P and 1102 are designators for Contracting career field). The total number of possible participants was 99. The participants were primarily comprised of contract specialists and several warranted contracting officers, all with different levels of contracting ability. The researchers sent a follow-up e-mail two weeks after the start of the survey to remind participants to complete the survey if they had not done so already, as well as a final email at the end of the four weeks to allow the participants a chance to complete the survey.

C. ANALYSIS OF SURVEY RESULTS (DATA ANALYSIS)

The data collected from the survey was reviewed using descriptive statistics. The research team analyzed survey results for patterns and potential correlations among the demographics. The survey results were analyzed by contract management phases, internal control components, and procurement fraud schemes. All of these were assessed to see which phase, component, or fraud scheme had the highest susceptibility to fraud within the organization (Chang, 2013, p. 33). The research team paid particular attention to the

questions that were most missed among the participants. The missed questions were also compared to the participant's demographics (e.g., employment status, DAWIA certification level, and years of experience). Finally, lack of fraud coverage within the DAU curriculum was referenced in correlation with missed questions.

D.   SUMMARY

This chapter discussed the methodology used in this research study, including the use of the previously developed survey assessment tool, the deployment of the assessment tool to the AFNWC Contracting Directorate, and how the results collected from the survey will be analyzed. The following chapter will present the analysis of the survey results, findings, and recommendations based on the research findings.

V. FINDINGS, ANALYSIS, AND RECOMMENDATIONS

A. INTRODUCTION

This chapter presents the results from the survey responses. The results include demographic data, knowledge question data, and organizational perception data. The results are broken down by contract management phases, internal control components, and procurement fraud schemes. The organizational perception questions data is also analyzed. Based on the analysis, recommendations are presented for improving contracting knowledge for personnel based on the survey findings on procurement fraud.

B. ANALYSIS OF DEMOGRAPHIC QUESTIONS

The survey included questions that allowed the respondents to input demographic information. This information would allow researchers to identify a possible correlation between knowledge level and demographic identifiers such as employment category, experience level (in years), DAWIA certification level, and whether the participants held a Contracting Officer's Warrant.

1. Survey Response

The survey was opened to participants on 22 July 2014 and remained open and available until 20 September 2014. Of the 99 potential participants, there were 32 survey participants that completed the survey within this time period, resulting in a 32 percent response rate for the organization. There were eight participants that opened the survey but did not complete it; therefore, their responses were not included in the analysis. The survey was released during the fiscal end of year, one of the busiest times of year for contracting personnel. The fiscal end of year workload may have contributed to the low survey response rate within the organization.

2. Responses by Employment Category

The survey participants were asked if they were in the military or a civilian. Of those who completed the survey, the majority of the survey participants, 19, were civilians, and there were 13 military survey participants (Figure 8).
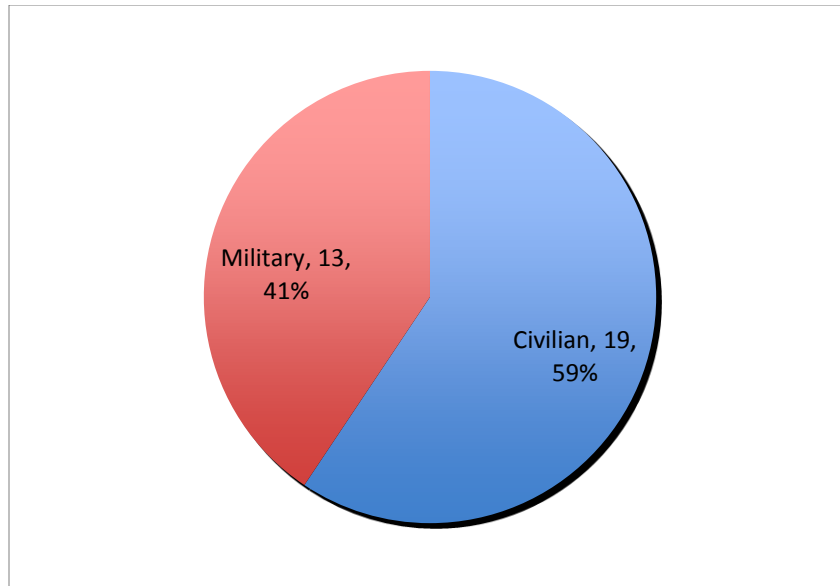
Figure 8.   Number of Participants by Employment Category

3.   Responses by Experience

The survey participants were asked about their contracting experience. They were given five choices: 0 to 2 years of experience, 3 to 5 years of experience, 6 to 10 years of experience, 11 to 20 years of experience, and over 20 years of experience. There were survey participants from each experience level. There were four participants in the 0–2 years of experience category, which represents the smallest percentage of the total participants (12 percent). There were nine participants in the 3-5 year category, which represents the largest percentage of the total participants (28 percent). There were 6 participants in the 6-10 year category (19 percent), and 6 participants in the 10-20 year category (19 percent). Furthermore, there were 7 participants in the more than 20 years category (22 percent). Figure 9 shows the number of survey participants in each category.
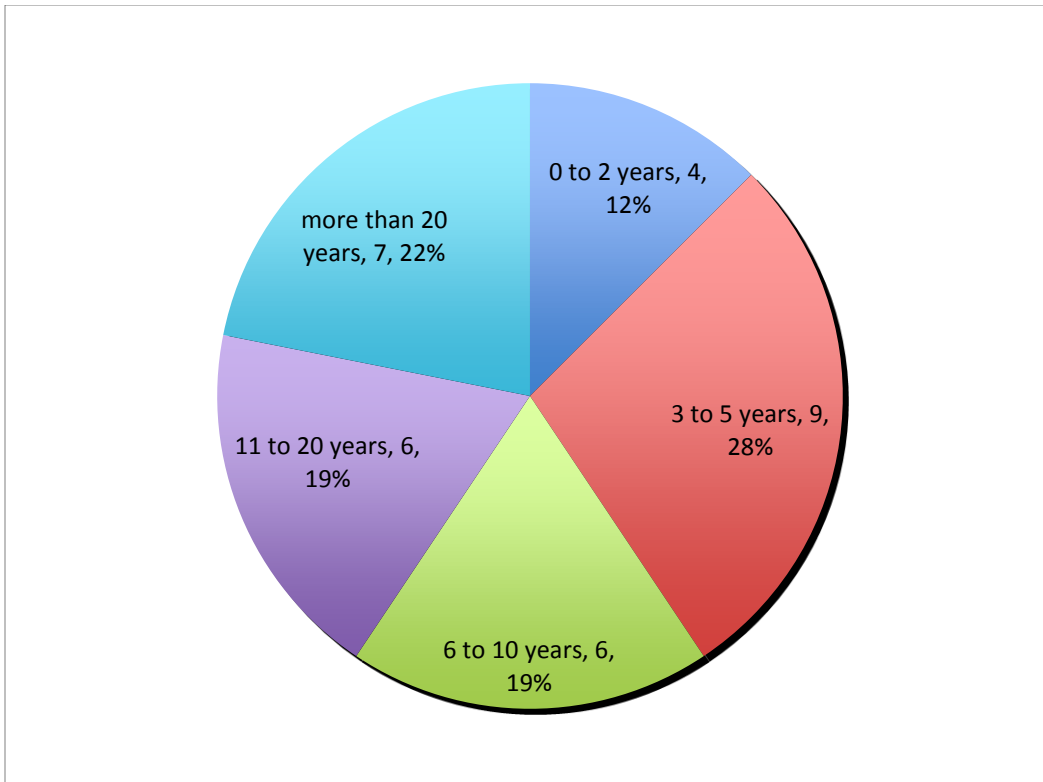
Figure 9.   Number of Participants by Experience Group

4.   Responses by DAWIA Certification Level

The survey participants were asked to provide their DAWIA certification level. The choices were: N/A (implying no certification), Level I, Level II, and Level III. There were 15 participants that hold a level II certification which represented the majority of the total percentage of participants (47 percent). There were three participants that hold a level I certification, which represents the smallest percentage of total participants (nine percent). Additionally, there were 14 participants that hold a level III certification, which represents 44 percent of the total participants. Figure 10 shows the number of participants by DAWIA certification level.

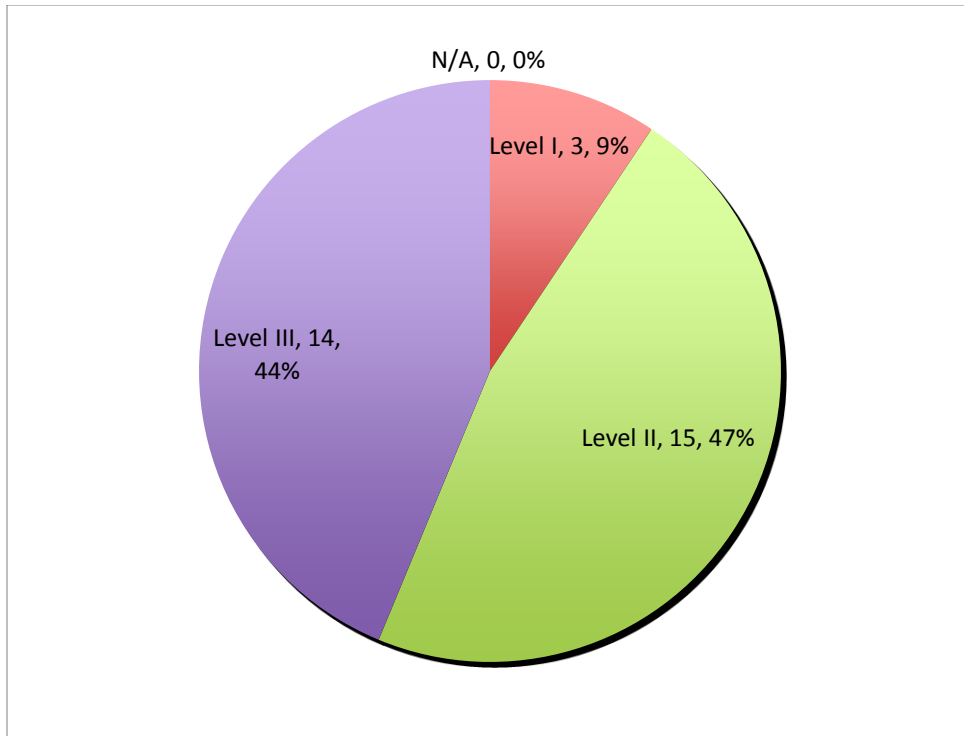Figure 10.   Number of Participants by DAWIA Certification Level

5.   Responses by Warrant Status

The survey participants were also asked if they were warranted PCOs. There were 23 participants (72 percent) that held a contracting warrant as contracting officers and nine (approximately 28 percent) who did not hold a contracting warrant. Figure 11 shows a visual depiction of these results.
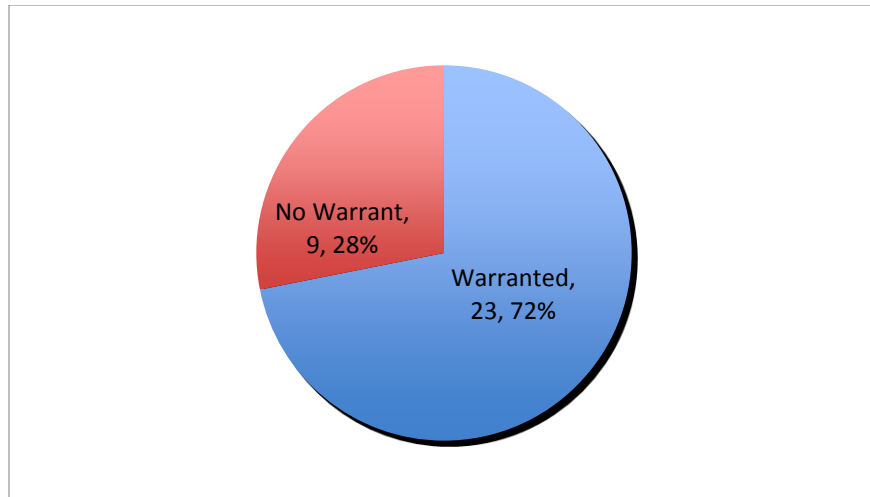
Figure 11.   Number of Participants by Warrant Status

C.   ANALYSIS OF KNOWLEDGE QUESTIONS

There were 27 knowledge questions that were categorized as contracting phase questions, internal control components questions, and procurement fraud scheme questions. Table 1 shows the breakdown of the questions by category. The average score, when calculated across all experience levels of the 32 participants, was 66.1 percent correct out of the 27 total knowledge questions.

Contracting Phase	Number of Questions	Internal Control Component	Number of Questions	Procurement Fraud Scheme Category	Number of Questions
Procurement Planning	5	Control Environment	4	Collusion	3
Solicitation Planning	5	Risk Assessment	6	Conflict of Interest	6
Solicitation	5	Control Activities	6	Bid Rigging	6
Source Selection	5	Information and Communications	4	Billing/Cost/ Pricing Schemes	5
Contract Administration	5	Monitoring	7	Fraudulent Representation	3
Contract Closeout	2			Fraudulent Purchases	4
Total	27	Total	27	Total	27

Table 1.   Number of Knowledge Questions by Categories

1. Analysis by Demographic Classification

This research placed the survey participants into various categories, which allowed the researchers to further analyze differences in respondents throughout the knowledge questions. The categories included employment category, experience level, DAWIA certification level, and whether they held a Contracting Officer's Warrant.

a. Civilian or Military Status

The survey participants were asked if they were in the military or a civilian. 32 participants completed this section of the survey. The majority, 19, were civilians, and there were 13 military participants. Of the military participants who completed the survey, the average score was 69.2 percent. Of the civilian participants who completed the survey, the average score was 64.9 percent. Figure 12 displays the percentage of correct answers for all of the knowledge questions for survey participants in the military and civilian categories.
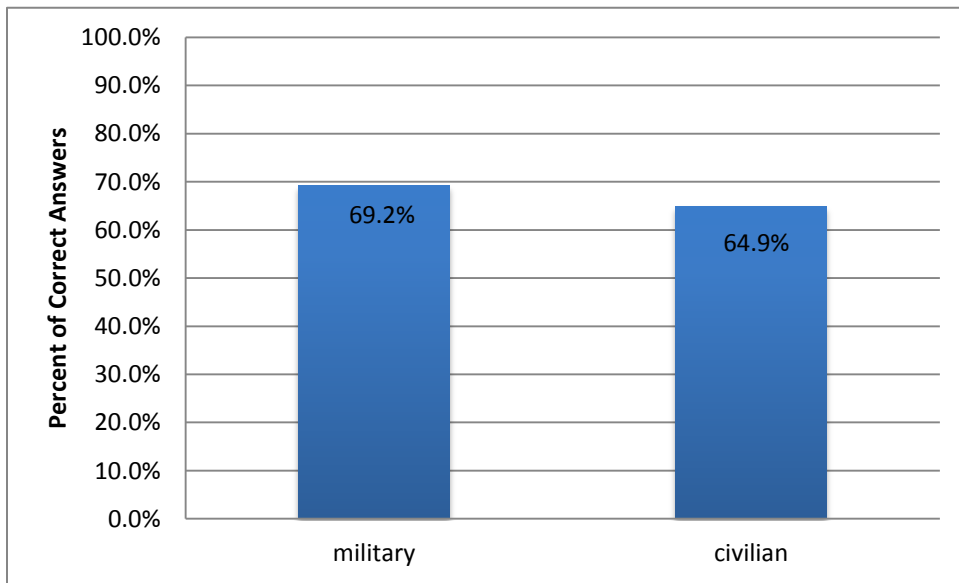

Figure 12.   Average Score by Military Status

b.   *Experience*

Figure 13 shows the average knowledge question scores by experience, or how many years the participant has been in the contracting career field. The scores ranged from 56.8 percent for participants with 11 to 20 years of experience to 76.7 percent for the participants with over 20 years of experience. The participants with the most experience in contracting received the highest scores on average.
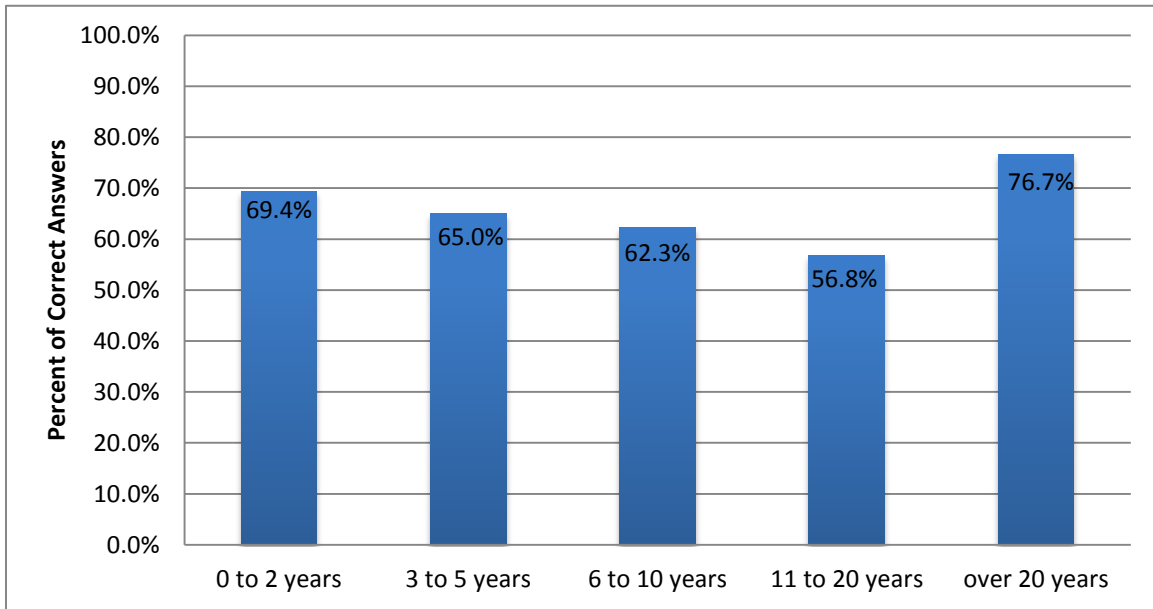
Figure 13.   Average Score by Experience Level

c.   *DAWIA Certification Level*

The average scores of the knowledge questions grouped by DAWIA certification level have a positive correlation in that the knowledge question scores increased when the survey participants had a higher DAWIA certification level. The average scores ranged from 54.6 percent for Level I participants to 69.0 percent for Level III participants. Figure 14 shows the average knowledge question scores based on DAWIA certification level.
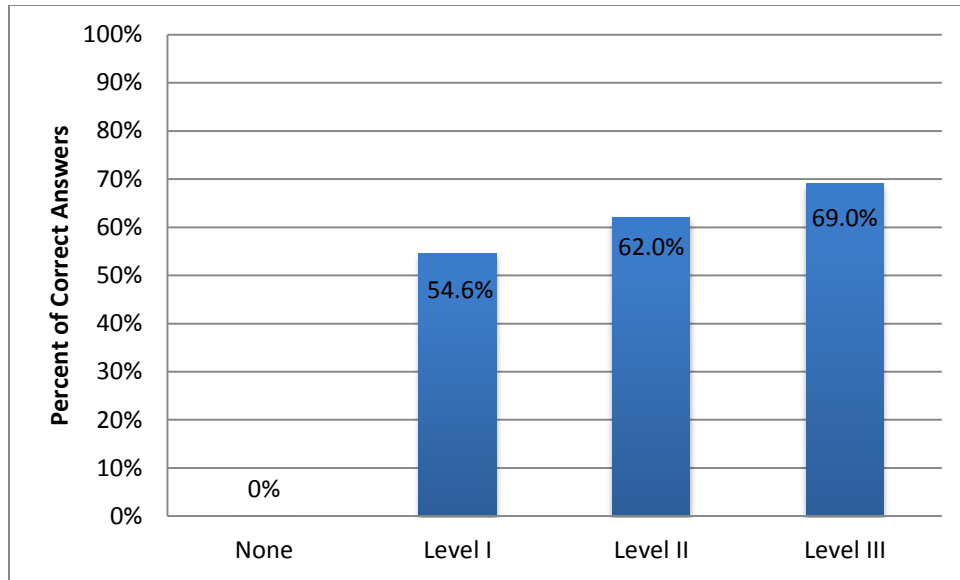
Figure 14.   Average Score by DAWIA Certification Level

d.   *Warrant Status*

The survey participants with a Contracting Officer warrant received an average score of 64.4 percent on the knowledge questions. The survey participants with no warrant scored an average of 70.4 percent on the knowledge questions. Figure 15 shows the average scores for warranted and non-warranted survey participants on the knowledge questions.
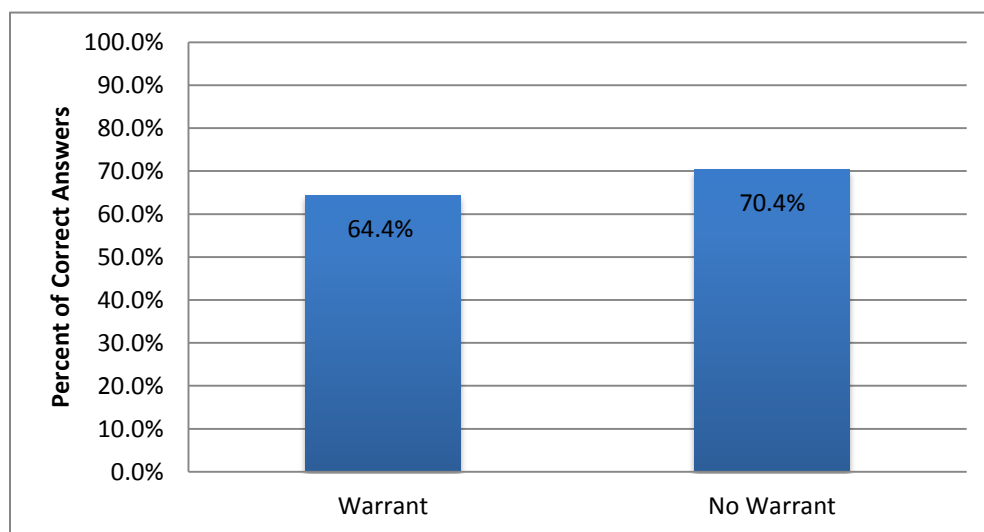
Figure 15.   Average Score by Warranted Status

2. Analysis by Contracting Phases

The average score of correct answers for all of the contracting phase knowledge questions was 64.4 percent. The highest average scores of the contracting phase knowledge questions was in procurement planning, which had an average score of 83.1 percent. The lowest average scores of the contracting phase knowledge questions was in contract closeout, which had an average score of 48.4 percent. Figure 16 shows the average percentage of correct answers for the contracting phase questions.
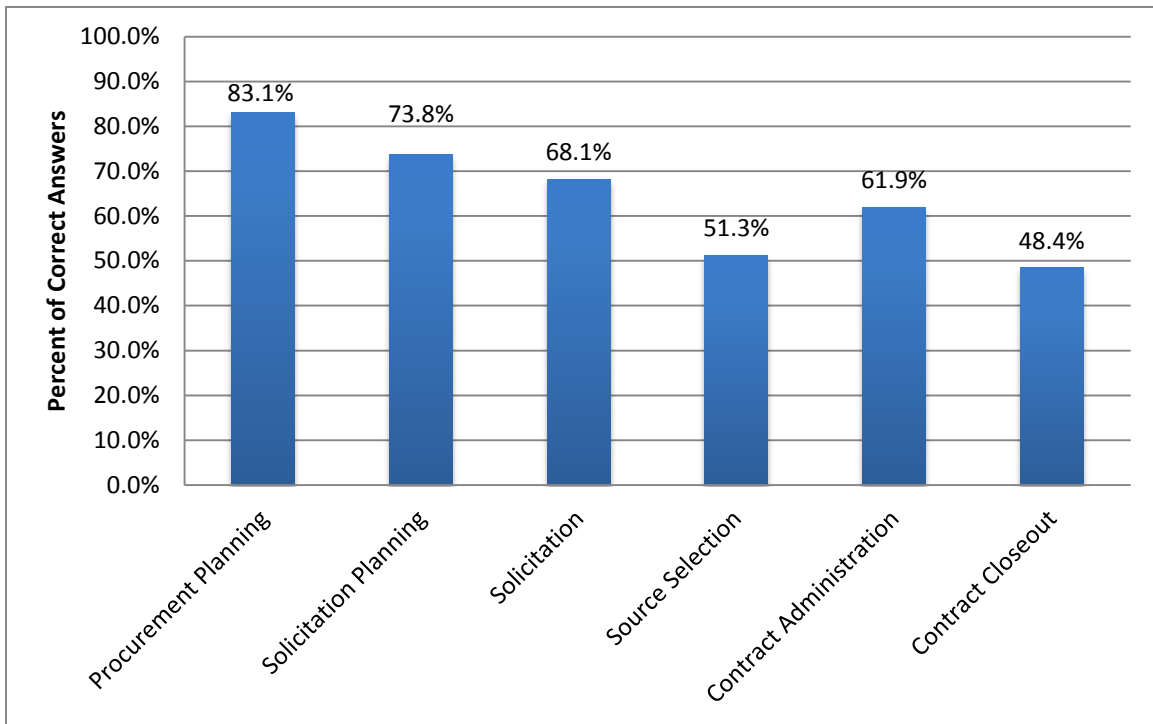
Figure 16.   Average Score by Contracting Phase

3. Analysis by Internal Control Components

The average score of correct answers for all of the internal control component knowledge questions was 63.0 percent. The highest average score of the internal control components knowledge questions was in control environment, which had an average score of 70.3 percent. The lowest average score of the internal control components knowledge questions was in monitoring activities, which had an average score of 47.3

percent. Figure 17 shows the average score of internal control components knowledge questions by internal control components.
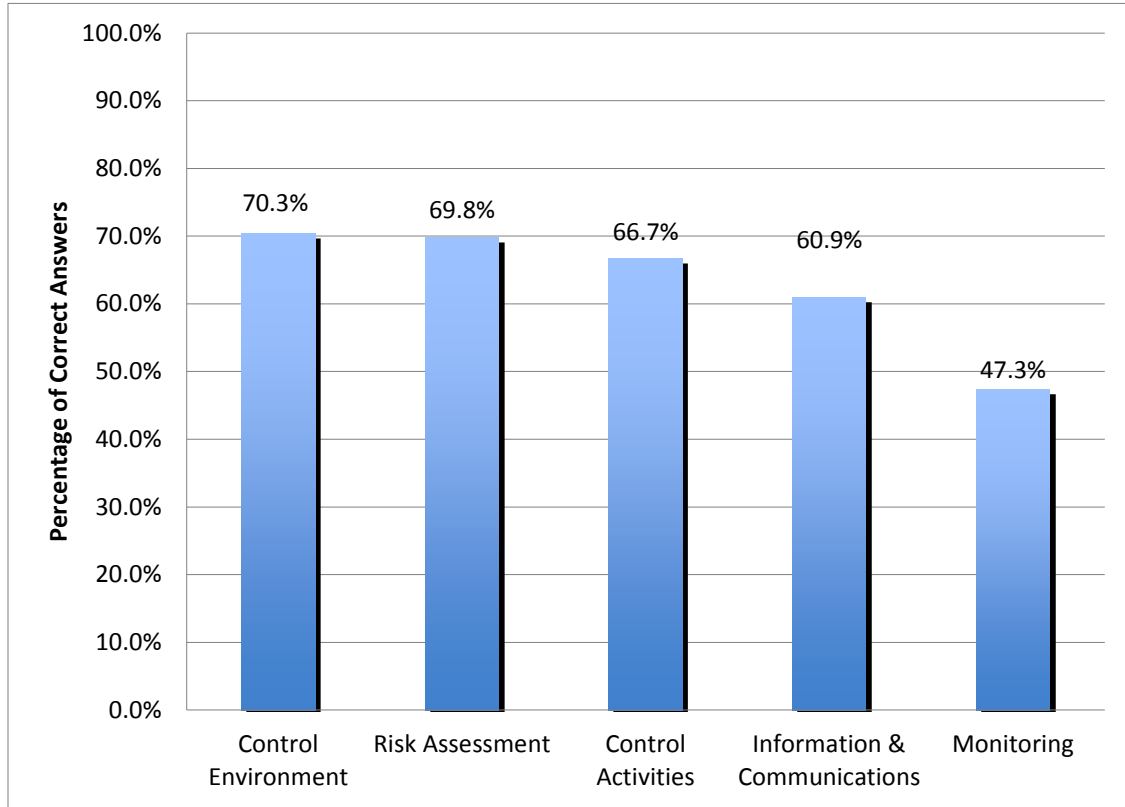
Figure 17.   Average Score by Internal Control Component

4.   Analysis by Procurement Fraud Schemes

The average score for the procurement fraud schemes knowledge questions was 61.0 percent. The highest average score of the procurement fraud schemes knowledge questions was in collusion, which had an average score of 76 percent. The lowest average score of the procurement fraud schemes know questions was in fraudulent representation, which had an average score of 46.1 percent. Figure 18 displays the six procurement fraud schemes and the participants' average score for each section.
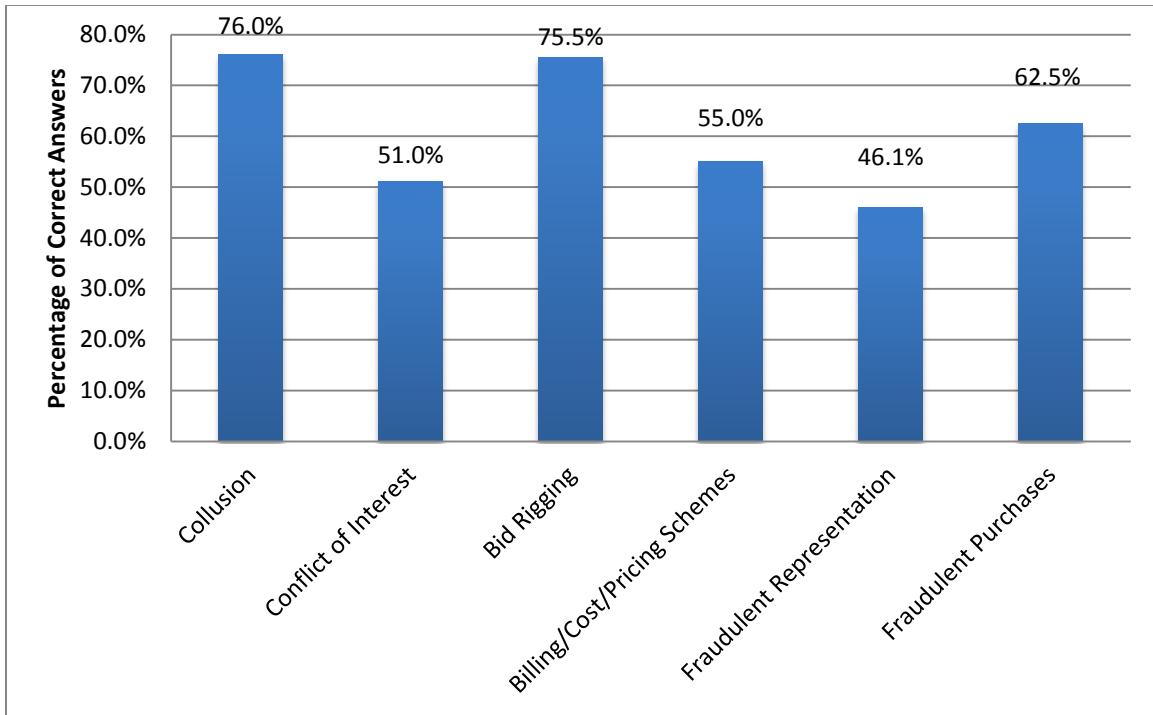
Figure 18.   Average Score by Procurement Fraud Scheme Category

5.   Analysis of Specific Questions

The knowledge questions were analyzed to identify the least and most missed knowledge questions. They were also reviewed by contracting phases, internal control components, and procurement fraud scheme and assessed according to category.

a.   *Most and Least Missed Knowledge Questions*

The most frequently missed knowledge question out of all of the 27 questions on the survey was question 16. Only 34 percent of participants answered correctly, while 66 percent answered incorrectly.

16.   Items that could potentially be for personal use or have resale value should most carefully be scrutinized when they

A.   Are typically frequently requested by end users
B.   <u>Are included in contracts that are beyond the stated requirements</u>
C.   Generally make up more than the usual percentage of total requests
D.   Are commonly only requested by one particular end user
E.   I don't know

The correct answer for question 16 is B. The purpose of this knowledge question was to test participants' knowledge of detecting fraudulent activity by requirements generators.

The knowledge question that survey participants missed the least was question 2. All 32 participants answered the question correctly; therefore, 100 percent of all participants answered this question correctly.

2.   Tailoring statements of work and specifications to suit a particular offeror

A.   Is an acceptable practice that shortens procurement lead times
B.   Helps level the playing field for disadvantaged competitors
C.   <u>Is not acceptable because it prevents fair competition</u>
D.   Is not acceptable because the government should not lower standards to industry levels
E.   I don't know

The correct answer for question 2 was C. The purpose of this knowledge question was to test participants' knowledge of unacceptable behavior pertaining to tailoring statements of work.

b.   *Contracting Phase Analysis*

The knowledge questions that were most missed from the contracting phase questions were the contract closeout questions. The average score on all of the contract closeout questions was 48.4 percent (Figure 16). The most missed question from the contract closeout portion was question 27.

27.   When closing out a contract, which one of the following items will MOST LIKELY be an indicator of over-charging during the performance of the contract?

A.   <u>Discovery that the contractor didn't disclose their discounts and credits</u>
B.   Discovery of left over materials after the completion of performance
C.   Disclosure by the contractor of their greater than estimated profit in a fixed-priced contract
D.   The greater than expected amount of government furnished material that was returned
E.   I don't know

The correct answer for question 27 is A. The most likely indicator of over-charging would be if a contractor withheld information about potential discounts or credits.

The contracting phase knowledge question that was least missed was the procurement planning phase. The average score in the procurement planning phase was the highest in the contracting phases at 83.1 percent (Figure 16). The least missed question was question 2. None of the participants missed this question.

2.   Tailoring statements of work and specification to suit a particular offeror
A.   Is an acceptable practice that shortens procurement lead times
B.   Helps level the playing field for disadvantaged competitors
C.   <u>Is not acceptable because it prevents fair competition</u>
D.   Is not acceptable because the government should not lower standards to industry levels
E.   I don't know

As previously mentioned, the correct answer for question 2 was C. The purpose of this knowledge question was to test participant's knowledge of unacceptable behavior pertaining to tailoring statements of work.

c.   *Internal Control Analysis*

The internal control component that was missed the most was Monitoring Activities. The average score for all of the survey participants on monitoring activities was 47.3 percent. The most missed question within the internal control component section was question 20.

20.   Which one of the following is permitted during discussions with offerors in the competitive range?
A.   <u>Allowing the offeror to change their proposal</u>
B.   Relaying technical details on a competitor's proposal
C.   Not disclosing all the deficiencies in the contractor's proposal
D.   All of the above
E.   I don't know

The correct answer for question 20 is A. According to Source Selection procedures, it is permitted to allow an offeror to change their proposal. The other answer

options for this question are not permitted during discussions with offerors in the competitive range. Some participants, 22 percent, answered C. This question was answered correctly by 47 percent of survey participants.

The internal control component that was missed the least was in Control Environment. The participants' average score of all of the Control Environment knowledge questions was 70.3 percent (Figure 17). The least missed question was question 9.

9.   When planning a solicitation, a good way to prevent possible co-mingling of contracts is to
A.   Use previous solicitations as a template to aid in writing this one
B.   Rely on the end user in the writing of the requirements
C.   <u>Review existing contracts to find potential overlap</u>
D.   Rely on industry in the writing of the requirements
E.   I don't know

The correct answer for question 9 is C. A good way to prevent contract co-mingling is to review the contracts for potential overlap. This question was answered correctly by 84 percent of survey participants.

d.   *Procurement Fraud Scheme Analysis*

The procurement fraud scheme that had the most missed knowledge questions was the Fraudulent Representation questions. The average score on all of the Fraudulent Representation knowledge questions was 46.1 percent. The most missed fraudulent representation scheme question was 26.

26.   A thorough review of returned government furnished property from the contractor can help reveal the following fraudulent activities EXCEPT:
A.   Items being marked with incorrect disposal conditions codes
B.   The contractor failing to return government furnished property
C.   <u>The contractor not needing the property to perform the contract</u>
D.   The government furnished property being replaced by lesser value items
E.   I don't know

The correct answer for question 26 is C. A review of government furnished property can reveal that the contractor did not need it to perform the contract. This question was missed by 44 percent of survey participants.

The procurement fraud scheme that had the least missed knowledge questions was Collusion. The survey participants received an average score of 76.0 percent on all of the Collusion questions. The least missed collusion question was number 5.

> **5.** **A reasonable way to minimize to potential of any possible collusion between an end user in your agency and an offeror is to**
> A.   Never use the recommended sources from the end user
> B.   Continually rely on the same trusted industry sources
> C.   Never use the highest bidder
> D.   <u>Have multiple sources for common requests</u>
> E.   I don't know

The correct answer for question 5 is D. This question was answered correctly by 93 percent of participants. Multiple sources can help minimize possible collusion.

D.   ANALYSIS OF ORGANIZATIONAL QUESTIONS

In addition to the 27 knowledge questions on the survey, there were 12 organizational questions. The first nine organizational questions asked the participants about their perception of procurement fraud in their organization. The last three of the 12 organizational questions asked the survey participants about their perception of the organization and its susceptibility to fraud in the contracting phases, internal control components, and procurement fraud scheme categories.

1.   Analysis of Likert Scale Questions

The survey contained nine Likert scale questions about the organization. The scaled answers were numerical and ranged from 0 to five: 5—strongly agree, 4—agree, 3—neither agree nor disagree, 2—disagree, 1—strongly disagree, and 0—I don't know. The responses to all nine of the questions averaged 3.91, and ranged from a low of 3.73 to a high of 4.78. The high average score shows that the majority of the survey participants agreed that they believe their organization had good measures in place to combat procurement fraud.

Out of the nine questions, question 3 received the highest average score. The question asked each of the participants if he or she would report fraudulent or suspicious activity if they saw or suspected it. As can be seen in Figure 19, question 3 averaged a score of 4.78. This score indicates that participants strongly agreed that they would report fraudulent or suspicious activity within their organization.

3. I would report fraudulent or suspicious activity if I saw or suspected it.
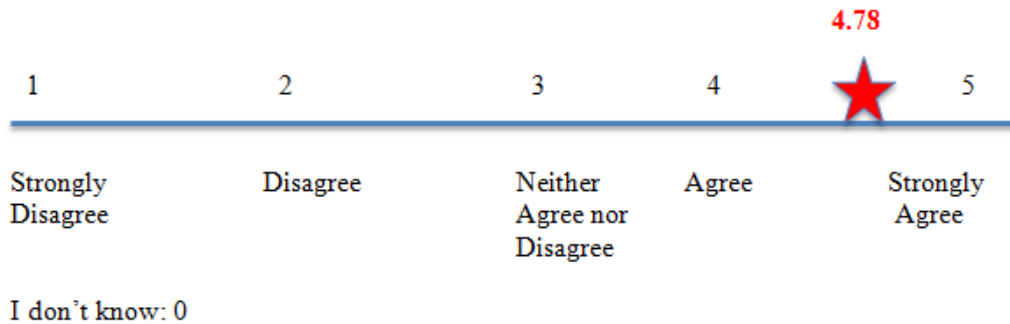
Figure 19.   Highest Scored Likert Scale Question

The Likert scale question that received the lowest scores was question 2. The question asked participants if their department was regularly reviewed by internal or external auditors. As can be seen in Figure 20, the average score for question 2 was 3.73. There were two participants that answered "I don't know." The average score of 3.73 indicates that participants generally agreed that their department is regularly reviewed by internal or external auditors.

2. My department is regularly reviewed by internal or external auditors.

I don't know: 2
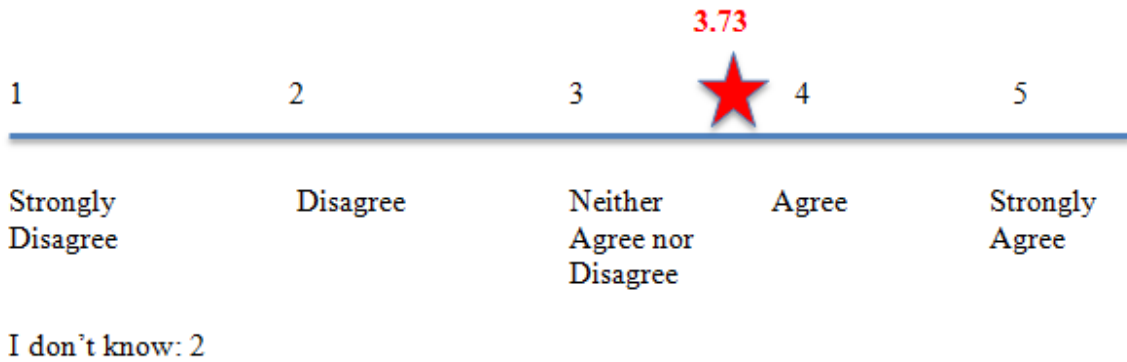
Figure 20.   Lowest Scored Likert Scale Question

In addition to the highest and lowest scored Likert scale questions, question 6 was signigicant to note. The question asked participants if they believed that they had adequate knowledge of contracting fraud schemes to perform their duties. As can be seen in Figure 21, the average score for question 6 was 3.95. The average score of 3.95 indicates that participants generally agreed that they had adequate knowledge to detect fraud schemes in the performance of their duties.

6. I have adequate knowledge of contracting fraud schemes to perform my duties.

I don't know: 0
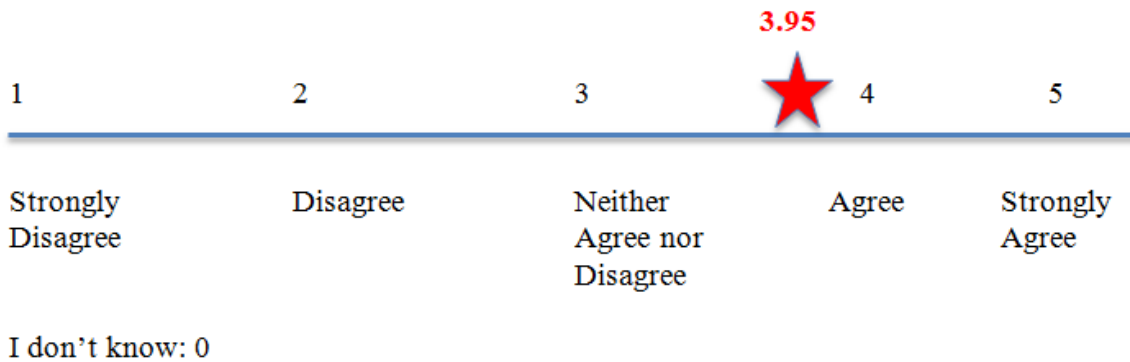
Figure 21.   Self-Rating Likert Scale Question

61

2. Analysis of Perception Questions

The researchers organized the questions into one of three categories and analyzed the percentage of fraud susceptibility within each category. These categories were contracting phase, internal control component, and procurement fraud scheme.

a. Contracting Phase

The survey asked participants which contracting phase they suspected was most vulnerable to fraudulent activity in their organization; responses are shown in Figure 21. The majority of the participants, 37 percent, said they did not suspect any fraudulent activities in their organization. Some participants, 22 percent, thought that contract administration was most vulnerable to fraudulent activity in their organization. None of the participants thought that their organization was susceptible to fraud in the procurement planning phase.
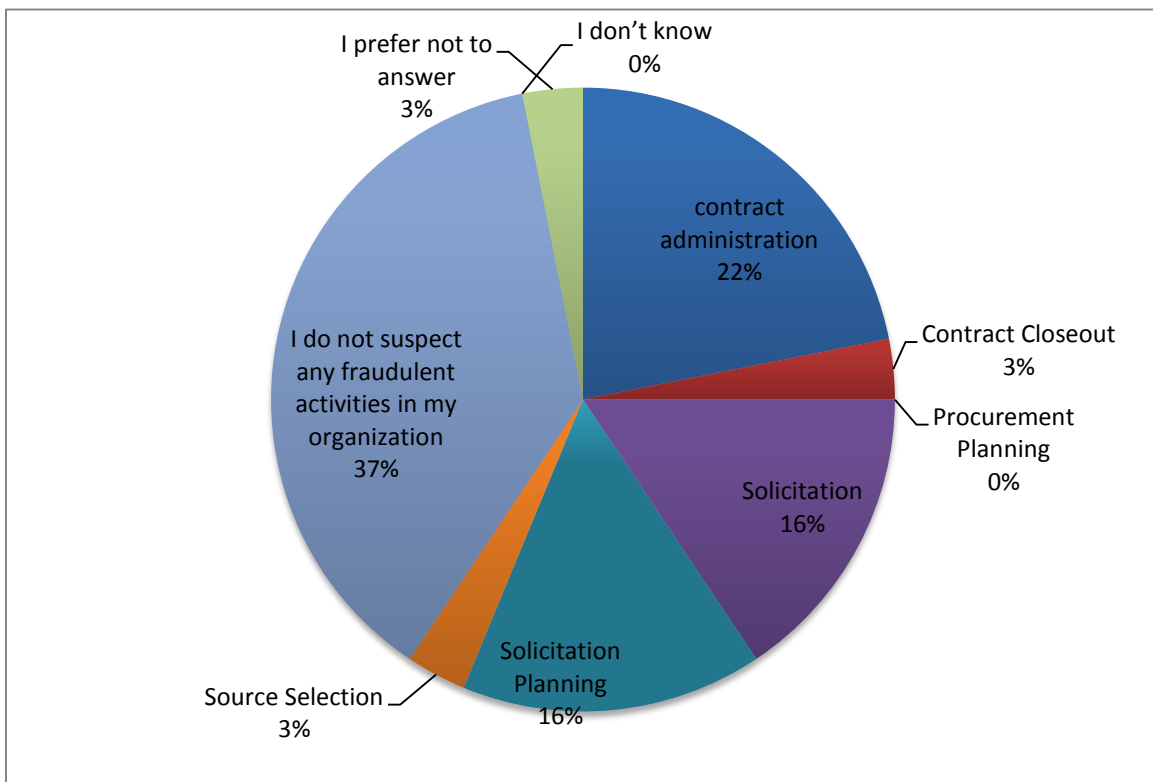
Figure 22.   Percentage of Responses to Contracting Phase Perception Question

b. *Internal Control Component*

The survey included a perception question that asked the survey participants which internal control component the participants suspected to be the most vulnerable for fraudulent activity within their organization. Half of the participants, 50 percent, said that they did not suspect any fraudulent activities in their organization. The second highest answer was information and communications. 16 percent of people suspected that the information and communications internal control component was most vulnerable to fraud activity (Figure 22).

Figure 23.   Percentage of Responses to Internal Control Perception Question

c. *Procurement Fraud Scheme*

The survey participants were asked to which procurement fraud scheme they perceived their organization to be the most susceptible. Figure 23 shows that

approximately half of the participants, 47 percent, said that they did not suspect any fraudulent activities in their organization. There were some participants, however, who thought that their organization was susceptible to conflicts of interest, 22 percent, and collusion, 13 percent.
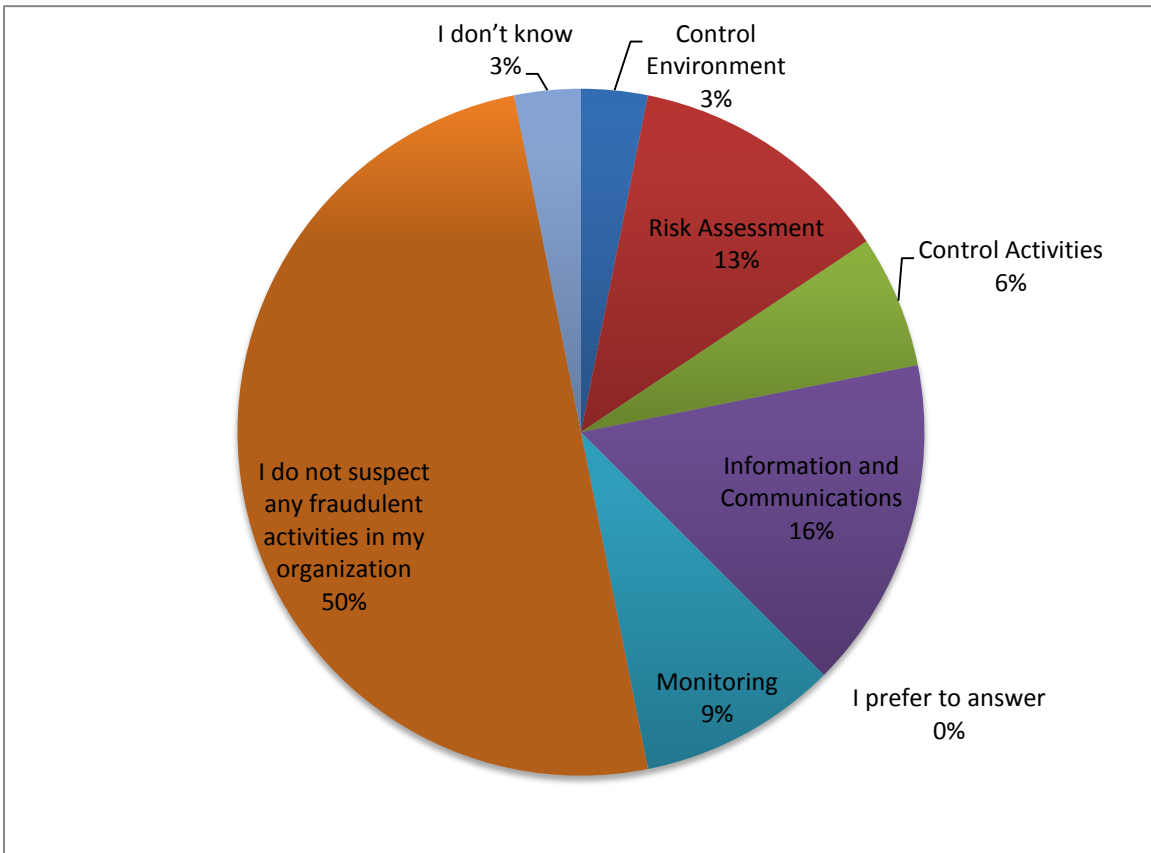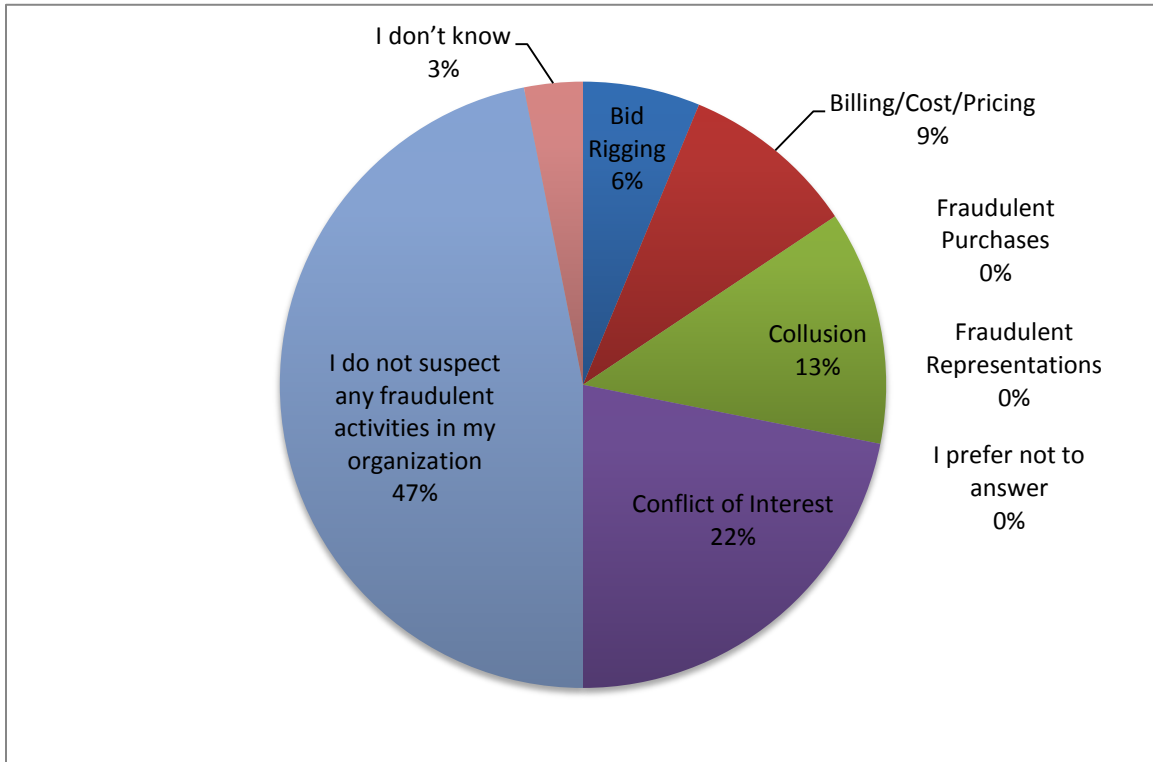

Figure 24.   Percent of Responses to Procurement Fraud Scheme Question

This marks the end of the findings and analysis portion of the research study. The next section of the research will discuss the recommendations based on the findings and analysis presented within this chapter.

E.   IMPLICATIONS OF FINDINGS

The survey participants' average scores on the knowledge questions held a negative correlation with their years of experience, with the exception of those participants who had over 20 years of experience. This negative correlation could appear for several reasons. It is possible that the participants may be getting complacent in their job. Another explanation could be that with every year of experience they gain, they also

get further away from when they completed their formal contracting training. The average knowledge test scores based on warrant also support the complacency theory. Those with a warrant received a lower score on their knowledge questions than those participants without a warrant.

In addition to the negative correlation, the research also found that the majority of respondents did not suspect fraudulent activities within their organizations (Figures 21, 22, and 23). Furthermore, for the organizational question number 6 "I have adequate knowledge of contracting schemes to perform my duties," participants averaged 3.95 on the likert scale which is close to "Agree." However, the average score on all of the knowledge questions amongst all participants on the knowledge assessment was a 66 percent. This percentage is equivalent to a "D," a failing letter grade by most academic standards. When the 66 percent average is compared to the responses noted in Figures 21, 22, and 23, it begs the question of whether the participants have the sufficient knowledge level to suspect or identify fraud if it did occur within their organization or to perform their duties. These implications led the researchers to identify multiple recommendations for increasing procurement fraud knowledge within the contracting workforce, which are discussed next.

F.   RECOMMENDATIONS BASED ON FINDINGS

Based on the findings, there are four recommendations for change within DOD procurement. These findings mainly consist of increasing the training for the contracting workforce and emphasizing the need for more effective internal controls, capable processes, and competent personnel, that in turn can decrease the DOD's vulnerability to fraudulent activities.

1.   Create and Mandate Procurement Fraud Training Programs

The research findings suggest that a possible recourse for a lack of knowledge would be to conduct procurement fraud refresher training. According to DAU, contracting personnel are required to complete 80 Continuous Learning Points every two years in order to stay current with DAWIA standards. These points can be acquired either through formal classes or training provided by the unit. Procurement fraud training

(either conducted through local training or through the continuous learning module (CLM) on Procurement Fraud Indicators) could be incorporated within the contracting requirements in order to remain qualified. This additional training would help to ensure that the more experienced contracting personnel are provided refresher training and remain current.

2.   Emphasize Monitoring Activities

The most frequently missed question out of all of the knowledge questions was in the monitoring activities internal control component category. The survey participants' average score for monitoring activities questions was 47.3 percent. Monitoring activities received the lowest score out of all of the five internal control components. Organizations place a lot of emphasis on awarding contracts but not a lot of emphasis on the administration and monitoring of the contracts once they have been awarded. The lack of organizational emphasis on monitoring activities may have been the catalyst for low scores on this portion of the survey. Additionally, 9 percent of survey participants thought that monitoring activities were susceptible to fraudulent activity. The monitoring issue could be remedied if the organization implements the three attributes associated with monitoring the internal control components: establishment of a baseline, internal control system monitoring, and evaluation of results. According to GAO (2014), utilizing these three attributes "is essential in helping internal control remain aligned with changing objectives, environment, laws, resources, and risk" (p. 64).

3.   Emphasize Post Award Contract Management Phases

The survey participants were asked which contracting phase was the most susceptible to fraudulent activity. The phase that received the most responses was contract administration. Additionally, survey participants received a 61.9 percent average score on the survey's contract administration questions. The low average score could likely be attributed to a lack of emphasis on contract administration once the contract has been awarded. Also, many personnel may not know the proper way to administer contracts. In order to remedy this, additional training pertaining to contract monitoring could be provided regularly by the organization. The training will ensure that everyone,

experienced and inexperienced, performs the administration of contracts correctly throughout the organization. Fraud is more likely to occur in areas where contracting personnel are not trained or to where not enough attention is given.

In addition to training in contract administration, contract closeout was another area in which survey participants received a low score (48 percent). In a recent study performed by GAO on closing aging contracts (2013), it was found that while military departments are making progress in better performing the closeout process, the departments must provide greater attention to contract closeout in order to develop meaningful and effective performance measures. Increased training locally, along with continued guidance at the DOD level, could result in increased knowledge in this phase of contract management.

4.   Emphasize Conflict of Interest Vulnerabilities

A large number of the survey participants had over five years of contracting experience. The longer that contracting personnel have been in the career field, the more contracting people they meet and know both inside and outside of the government. While this type of networking can be beneficial to contract managers, it could also lead to personal relationships between the contractor and the personnel within the DOD. Conflicts of interest can happen very easily once contracting personnel have been in contracting for a significant amount of time. To address the high potential for conflicts of interest and the participants' survey opinion of the higher risk area, conflict of interest could be addressed as a topic of concern within at least one course for each of the three DAWIA certification levels. In addition, all personnel within the acquisition team (including Program Managers, Commanders, and other installation stakeholders) should take an ethics currency training every two years that covers all procurement fraud schemes.

G.   SUMMARY

In this chapter, the findings from the survey were presented. The findings were broken down by the demographics of the organization surveyed. Then the survey responses were analyzed by procurement phase, internal control components, and

procurement fraud schemes. Each section analyzed the most and least missed questions. The chapter also discussed the organizational perception questions. Finally, four recommendations were provided to improve the contracting career field's knowledge of fraud and potential contracting fraud susceptibilities. The final chapter will present the conclusion of this research and recommendations for future research opportunities on contracting procurement fraud.

VI. SUMMARY, CONCLUSIONS, AND AREAS FOR FURTHER RESEARCH

A. SUMMARY

While the potential for fraud exists in any environment in which the DOD enters into contractual agreements with non-government entities, it is important to remember that the contracting function is a very powerful tool when used correctly. With the proper training and oversight throughout the contracting process, contracting professionals can be the front-line defense for reducing the potential for procurement fraud. This study deployed a survey tool in order to gain insight into the knowledge level and perceptions of the contracting workforce in regards to procurement fraud knowledge. Within Chapter II, the research study discussed the six phases of the contract management process, along with the five internal control components, and the six most common procurement fraud schemes as expressed through the procurement fraud matrix. In addition to these overarching processes, the literature review covered DOD contracting as a whole as well as the agency's response to fraud and the consequences associated with deficiencies in the DOD. Finally, the amount of fraud coverage addressed in the DAU courses was presented in order to determine whether acquisition students are presented with significant fraud training in a formal environment.

B. CONCLUSIONS

By performing research through literature and deployment of a survey tool, the research team was able to answer the three research questions posed within this study. This research study answered the questions listed below through the literature review, the deployment of the assessment tool, and the analysis of the results.

- **What is the contracting workforces' knowledge level of procurement fraud as related to the contract management process, the internal control components, and the procurement fraud scheme categories?**

There were varying levels of knowledge across the procurement fraud schemes amongst the survey participants. The survey revealed that out of the contracting phases, the participants had the best understanding of the procurement planning phase with the

highest average score (83 percent) out of all of the knowledge question sections. The participants scored the lowest, within the contracting phases, in contract closeout with a 48.4 percent. The participants' scores on the internal control components ranged from a high in the control environment with a 70.3 percent to a low in monitoring activities with participants only receiving an average score of 47.3 percent of the knowledge questions correct. The procurement fraud scheme category had the lowest knowledge test scores; participants on average scored a 46.1 percent in fraudulent representation. The highest scores within the procurement fraud scheme category were in collusion with an average score of 76 percent. The analysis shows that there are some strengths found within the contract management process, internal control components, and procurement fraud scheme categories. However, none of the categories received particularly high scores on any of the procurement fraud schemes categories. This indicates that the contracting organization may not be adequately prepared to identify procurement fraud schemes, which may leave the contracting organization vulnerable to procurement fraud.

- **What is the contracting workforce's perception of procurement fraud vulnerability as related to the contract management process, the internal control components, and the procurement fraud scheme categories?**

The survey participants' perceptions of procurement fraud vulnerability varied in relation to the contract management process, the internal control components and the procurement fraud scheme categories. Appropriately half of the participants did not suspect fraudulent activities in their organization. In the contracting phase, 37 percent of participants did not suspect fraudulent activities, but 22 percent of the participants indicated that contract administration was the contract management phase most vulnerable to fraud. In the internal control components, fifty percent of participants did not suspect fraudulent activity. However, information and communications was the next highest scoring category, with 16 percent of participants suspecting that it was the most vulnerable for fraudulent activity. Finally, the majority of participants (47 percent) did not suspect any fraudulent activity for procurement fraud schemes, but 22 percent of participants suspected that their organization was most susceptible to conflicts of interest.

Appropriately fifty percent of participants do not suspect fraud in their organization; however, there are areas for potential concern.

- **What is the procurement fraud coverage within the Defense Acquisition University (DAU) required/recommended courses for contracting professionals?**

There is very little coverage of procurement fraud with the DAU courses for contracting professionals. There is one six-hour course offered that is vectored towards auditing professionals that covers contracting fraud, and a two-hour module that is presented for all acquisition professionals, yet no courses exist within the core contracting curriculum. Additionally, while these courses may be available to all DAU students, there are no required courses for contracting professionals. A possible fix for this lack of coverage could be as simple as bringing this lack of coverage to the attention of DAU. The fact that DOD Contract Management has been on GAO's High Risk List for over 20 years is indicative that fraud is an ongoing concern for the contracting workforce (GAO, 2013). With the agency at such a high risk due to lack of personnel and oversight, it is important to educate the limited personnel in such high threat areas. In addition to the three questions, the research provided additional points of interest in which further research could be conducted in the future.
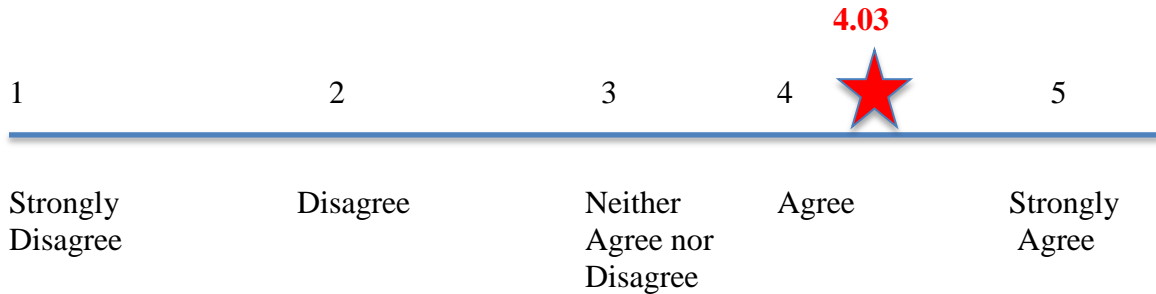
C. AREAS FOR FURTHER RESEARCH

Based on our research findings and recommendations, we identify multiple areas for further research. The survey should be deployed to several other contracting organizations within the Air Force. More information and a larger pool of participants would help to confirm the survey results of this research study. Additionally, the survey should be deployed well before August and September in order to avoid the hustle and bustle of the end of fiscal year. The end of year workload is the heaviest during the fiscal end of year and many times the potential participants do not have the time necessary to answer survey questions. The response rate would likely be higher if the survey is deployed during the months of November through April, as these tend to be the least busy for contracting professionals.

Another area for more research would be the addition of procurement fraud education questions within the survey. A portion of questions could be added to the survey that asks the participants about their experience with formal procurement fraud training. The questions should ask them how much procurement fraud training they have received and at what point in their career they received it. The questions could potentially provide more detail, such as: how many times a year do they receive fraud training, or how many procurement fraud courses did they need to take within each DAWIA certification level. The survey should add any questions that can pinpoint the existing procurement fraud training within the contracting workforce.

Finally, as this research is a continuation of research performed by Chang's study on Army contracting, the possibility of assessing Navy processes and controls could also be a point for future research. As stated by GAO (2013), fraud is a universal problem that must be addressed throughout the DOD. By deploying the survey to all of the service components, there is a greater possibility of uncovering trends that may be occurring throughout the services or pinpointing problem areas that may only be affecting one service component. Continuing research can also utilize this study, along with Chang's, to possibly compare and contrast the fraud knowledge level of contracting personnel within each distinctive service.
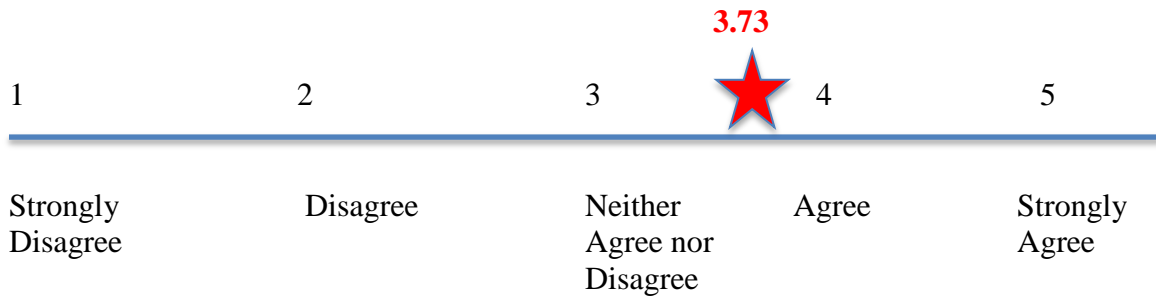
APPENDIX.   LIKERT SCALE QUESTIONS AND ANSWERS

1. My department has clear lines of authority and responsibility.

4.03

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

I prefer not to answer: 0.

2. My department is regularly reviewed by internal or external auditors.

3.73

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

I don't know: 2

3. I would report fraudulent or suspicious activity if I saw or suspected it.

4.78

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
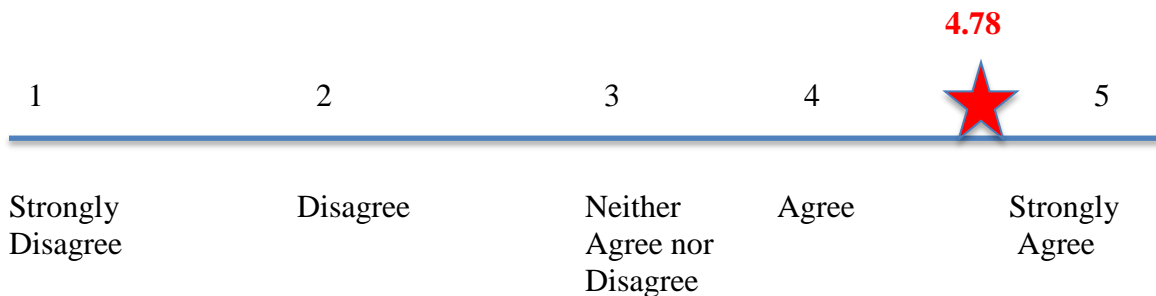
I don't know: 0

4. I have a clear way of reporting fraudulent or suspicious activity within my organization outside of my immediate supervisor.

4.5

1	2	3	4		5

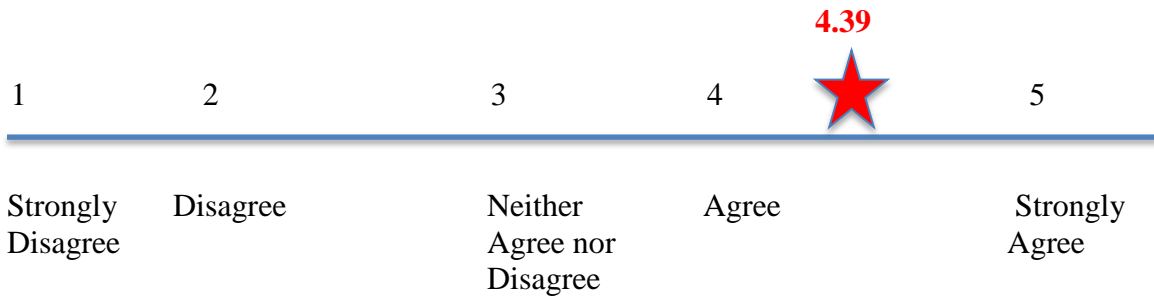Strongly Disagree   Disagree   Neither Agree nor Disagree   Agree   Strongly Agree
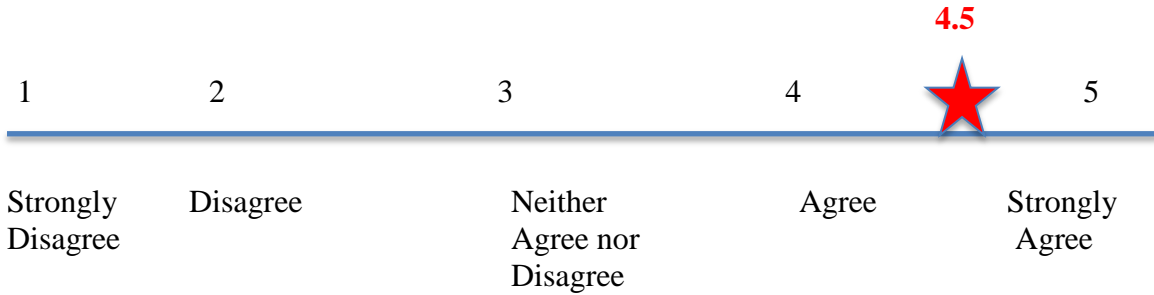
I don't know: 0

5. I know who to report to if I saw or suspected fraudulent activities.

4.39

1	2	3	4		5

Strongly Disagree   Disagree   Neither Agree nor Disagree   Agree   Strongly Agree

I don't know: 1

6. I have adequate knowledge of contracting fraud schemes to perform my duties.

3.95

1	2	3		4	5

Strongly Disagree   Disagree   Neither Agree nor Disagree   Agree   Strongly Agree
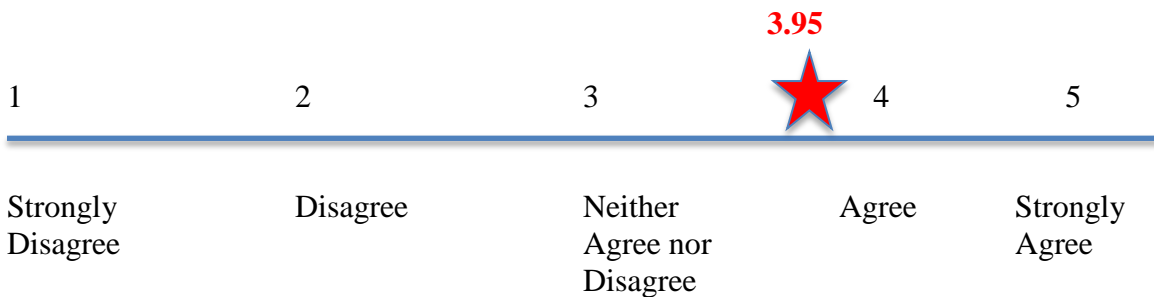
I don't know: 0

7. Instances of reported suspected fraudulent or suspicious activity have been adequately investigated by my organization.

3.95

1	2	3	⭐	4	5

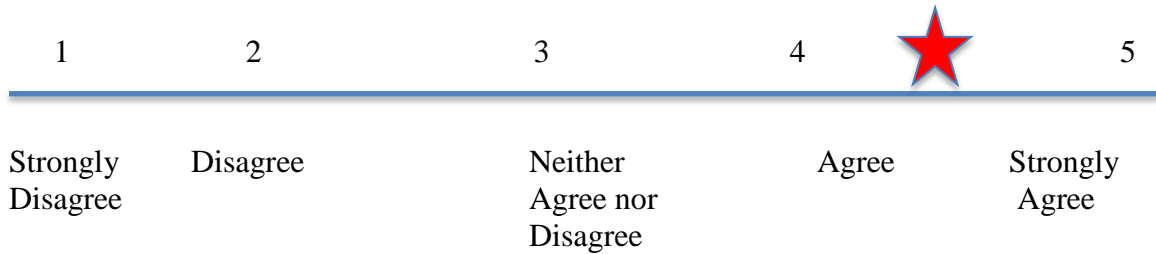| Strongly Disagree | Disagree | Neither Agree nor Disagree | | Agree | Strongly Agree |
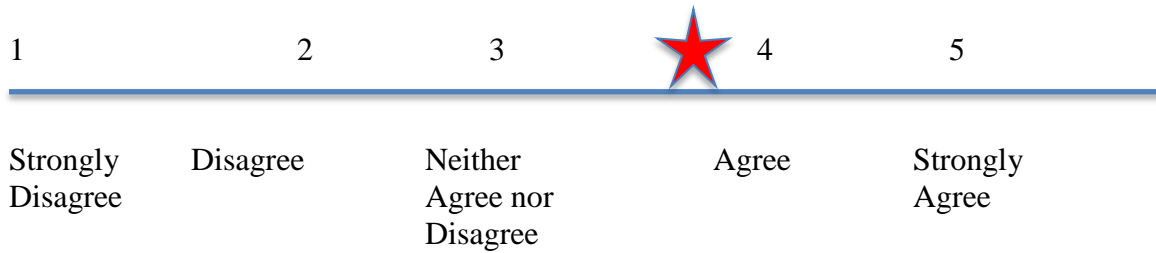
I don't know: 12

8. Employees in my organization who are found to have participated in fraudulent activities will be subject to appropriate consequences.

4.31

1	2	3	4	⭐	5

| Strongly Disagree | Disagree | Neither Agree nor Disagree | | Agree | Strongly Agree |

I don't know: 6
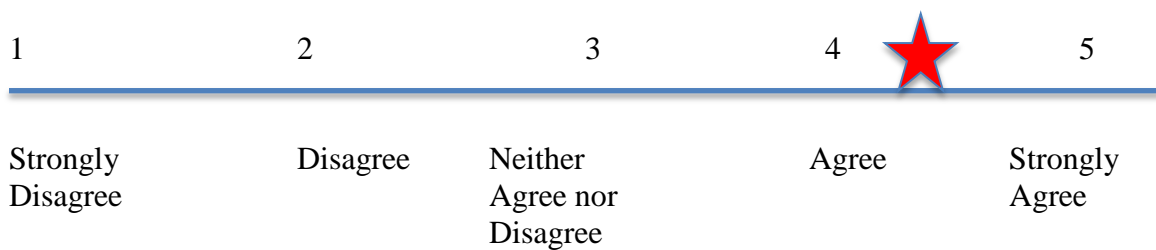
9. My organization places sufficient emphasis on the importance of integrity, ethical conduct, fairness and honesty in their dealings with employees, vendors, and other organizations.

4.25

1	2	3	4	⭐	5

| Strongly Disagree | Disagree | Neither Agree nor Disagree | | Agree | Strongly Agree |

I don't know: 0

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF REFERENCES

Ali Eid, E. M. (2014). The impact of accounting information systems (AIS) on performance measures with value relevance of auditors' communications. *Internal Auditing and Risk Management, 9*(2), 143–158.

Burwell, S. (2013). Impacts and costs of the government shutdown. Retrieved from http://www.whitehouse.gov/blog/2013/11/07/impacts-and-costs-government-shutdown

Cain, T. (2009). Auditors balance compliance and risk. *Internal Auditor*, *66*(5), 14–16.

Chang, P. W. (2013). *Analysis of internal contracting processes, internal controls, and procurement fraud schemes* (Master's thesis). Retrieved from http://calhoun.nps.edu/public/handle/10945/16

Committee of Sponsoring Organizations of the Treadway Commission. (1992). Internal control–Integrated framework executive summary. Retrieved from http://www.coso.org/documents/990025P_Executive_Summary_final_may20_e.pdf

Cohen, S. & Eimicke, W. (2008). *The responsible contract manager: Protecting the public interest in an outsourced world*. Washington, DC: Georgetown University Press.

Defense Acquisition University. (2013). 5.4 Distinction between issues and criteria. Retrieved from https://acc.dau.mil/communitybrowser.aspx?id=518215

Defense Acquisition University. (2014). Acquipedia synopses. Retrieved from https://dap.dau.mil/acquipedia/Pages/ArticleDetails.aspx?aid=22e2301f-eb77-49a8-bb10-b41e381f1d39

Defense Acquisition University. (2014). iCatalog. Retrieved from http://icatalog.dau.mil/onlinecatalog/courses.aspx?crs_id=186

Department of Defense Inspector General. (2010). *Interagency contracting problems continue at DOD organizations*. Retrieved from http://www.acq.osd.mil/dpap/cpic/cp/docs/Interagency_Contracting_Problems_Continue_at_DOD_Organizations.pdf

Department of Defense Inspector General. (2012). *Contingency contracting: A framework for reform* (D–2012–134). Retrieved from https://acc.dau.mil/CommunityBrowser.aspx?id=430856&lang=en-US

Department of Defense Inspector General. (2013). *FY2014 audit plan*. Retrieved from http://www.dodig.mil/audit/audit_plan.pdf

Department of Justice. (2012). *Justice Department recovers nearly $5 billion in False Claims Act cases in fiscal year 2012.* Retrieved from http://www.justice.gov/opa/pr/2012/December/12-ag-1439.html

Department of Justice. (2013). *Price fixing, bid rigging, and market allocation schemes: What they are and what to look for.* Retrieved from http://www.justice.gov/atr/public/guidelines/211578.htm

Department of Justice. (2014). U.S. Navy petty officer based in Japan pleads guilty in international bribery scandal. Retrieved from http://www.justice.gov/opa/pr/2014/May/14-crm-537.html

Federal Acquisition Streamlining Act of 1994, 10 U.S.C ch § 2323. (1994).

Federal Acquisition Reform Act of 1996, 10 U.S.C. § 2304. (1996).

Federal Acquisition Regulation, 48 C.F.R. ch 1. (2014).

Ferran, L. (2013, 6 November). 'Massive' Navy bribery, hooker scandal grows: Third officer charged. *ABC News*. Retrieved from http://abcnews.go.com/Blotter/massive-navy-bribery-hooker-scandal-grows-officer-charged/print?id=20809942

Garrett, G. A. (2009). *Contract administration: Tools, techniques, and best practices*. Riverwoods, IL: CCH.

Garrett, G. A. (2007). *World class contracting* (4th ed.). Riverwoods, IL: CCH.

Garrett, G. A., & Parrott, G. A. (2007). *Solicitations, bids, proposals, and source selection: Building a winning contract*. Riverwoods, IL: CCH.

General Accounting Office. (1999). *Standards for internal control in the federal government* (GAO/AIMD–00–21.3.1). Washington, DC: Author. Retrieved from http://www.gao.gov/special.pubs/ai00021p.pdf

General Accounting Office. (2001). *Internal control management and evaluation tool* (GAO–01–1008G). Washington, DC: Author. Retrieved from http://www.gao.gov/assets/80/76615.pdf

Government Accountability Office. (2006). *Contract management: DOD vulnerabilities to contracting fraud, waste, and abuse* (GAO–06–838R). Washington, DC: Author. Retrieved from http://www.gao.gov/products/GAO-06-838R

Government Accountability Office. (2011). *Defense acquisition workforce: Better identification, development, and oversight needed for personnel involved in acquiring services* (GAO–11–892). Washington, DC: Author. Retrieved from http://www.gao.gov/products/GAO-11-892

Government Accountability Office. (2012). *DOD initiative to address audit backlog shows promise, but additional management attention needed to close aging contracts* (GAO-13-131). Washington, DC: Author. Retrieved from http://www.gao.gov/products/GAO-13-131

Government Accountability Office. (2012). *Operational contract support: Management and oversight improvements needed in Afghanistan* (GAO–12–290). Washington, DC: Author. Retrieved from http://www.gao.gov/products/GAO-12-290

Government Accountability Office. (2013). *DOD initiative to address audit backlog shows promise, but additional management attention needed to close aging contracts* (GAO–13–283). Washington, DC: Author. Retrieved from http://www.gao.gov/products/GAO-13-131

Government Accountability Office. (2013). *High risk series: An update* (GAO–13–283). Washington, DC: Author. Retrieved from http://www.gao.gov/products/GAO-13-283

Government Accountability Office. (2014). *Standards for internal control in the federal government* (GA0–14–740G). Washington, DC: Author. Retrieved from http://www.gao.gov/products/GAO-14-704G

Gramling, A. A., Hermanson, D. R., Hermanson, H. M., & Ye, Z. (2010, July). Addressing problems with the segregation of duties in smaller companies. *The CPA Journal*, 30–34. Retrieved from http://web.a.ebscohost.com.libproxy.nps.edu/ehost/

Haberbush, K. L. (2000). Limiting the government's exposure to bid rigging schemes: A critical look at the sealed bidding regime. *Public Contract Law Journal, 30*, 97–122.

Handfield, R. B., LaCroix Johnson, H., Sturzl, S. R., & Tracey, T. (2014). *Foundation of supply chain management*. Tempe, AZ: Institute for Supply Management.

Hawes, C. (2014, January). Employees accuse military freight shippers of fraudulent billing scheme. *Landline Magazine*. Retrieved from http://www.landlinemag.com

Hedley, T. P., & Ben-Chorin, O. (2011, June). Auditing and monitoring activities help uncover fraud and assess control effectiveness. *The CPA Journal.* Retrieved from http://web.a.ebscohost.com.libproxy.nps.edu/ehost/

Husser, J., Gautier, L., Andre, J., & Lespinet-Najib, V. (2014). Linking purchasing to ethical decision-making : An empirical investigation. *Journal of Business Ethics, 123*(2), 327-338. Retrieved from http://web.a.ebscohost.com.libproxy.nps.edu/ehost/

Karpoff, J. M, Lee, D. S. & Vendrzyk, V. P. (1999). Defense procurement fraud, penalties, and contractor influence. *Journal of Political Economics, 107*(4), 809–842. Retrieved from http://www.jstor.org.libproxy.nps.edu/

Lander, G. H., Kimball, V. J., & Martyn, K. A. (2008). Government procurement fraud: could SOX be used to hold contractors accountable? *The CPA Journal, 78*(2) 16–24. Retrieved from http://web.a.ebscohost.com.libproxy.nps.edu/ehost/

Manuel, K. M., & Lunder, E. K. (2012). *Government procurement in times of fiscal uncertainty* (R42469). Retrieved from http://www.fas.org/sgp/crs/misc/R42469.pdf

Mullins, M. (2011). *Fraud, waste, and abuse and contingency contracts: A critical assessment of DOD and Army processes* (Master's thesis). Retrieved from http://www.dtic.mil/dtic/tr/fulltext/u2/a556298.pdf

Nesti, L. (2014). The 2010 'agreement on mutual enforcement of debarment decisions' and its impact for the fight against fraud and corruption in public procurement. *Journal of Public Procurement, 14*(1). 62–95. Retrieved from http://web.a.ebscohost.com.libproxy.nps.edu/ehost/

Office of Management and Budget. (2012, March). *Prime award spending data*. Retrieved from http://www.usaspending.gov

Office of the Undersecretary of Defense. (2011, March). Department of Defense source selection procedures. Retrieved from http://www.acq.osd.mil/dpap/policy/policyvault/USA007183-10-DPAP.pdf

Paxson, M. C. (1995). Increasing survey response rates: Practical instructions from the total-design method. *Cornell Hotel and Restaurant Administration Quarterly*, *36(*4)

Ramos, M. E. (2004, May). Evaluate the control environment. Documentation is only a start; now it's all about asking questions. *Journal of Accountancy.* Retrieved from http://www.journalofaccountancy.com/Issues/2004/May/EvaluateTheControlEnvironment.htm

Reed, T. S., Luna, P. G., & Pike, W. C. (2005). Balancing socioeconomic and public procurement reform goals: Effective metrics for measuring small business participation in public procurement. In *Challenges in Public Procurement: An International Perspective*, vol. 3. Boca Raton, FL: Academics Press.

Rendon, J. (2011). Identifying procurement fraud in defense agencies: An analysis of the government purchase card program (Symposium presentation). NPS-AM-11-C8P05Z04-099. Retrieved from http://calhoun.nps.edu/public/handle/10945/33629

Rendon, R. G., & Snider, K. F. (2008). *Management of defense acquisition projects.* Reston, VA: American Institute of Aeronautics and Astronautics.

Rendon, R. G., & Rendon, J. M. (in press). Auditability in public procurement: An analysis of internal controls and fraud vulnerability. *International Journal of Procurement Management.*

Rodriguez, E. (2013). *Analysis of the United States defense and civilian contracting workforce's training on procurement fraud, waste, and abuse* (Master's thesis). Retrieved from http://calhoun.nps.edu/public/handle/10945/16

Spar, K. (2013). Budget 'sequestration' and selected program exemptions and special rules (R42050). Retrieved from http://fas.org/sgp/crs/misc/R42050.pdf

Special Inspector General for Iraq Reconstruction. (2012). *Gaps in business system reviews of contractors with generally less than $100 million annually in contracts in Iraq increase U.S. government vulnerabilities to fraud, waste, and abuse.* (SIGIR 12–019). Washington, DC: Author. Retrieved from http://cybercemetery.unt.edu/archive/sigir/20131001085107/http://www.sigir.mil/files/audits/12-019.pdf

Tripp, R. S., Lynch, K. F., Romano, D. M., Shelton, W., Ausink, J. A., Duran, C. K., …Sollinger, J. M. (2012). *Air Force Materiel Command reorganization analysis.* Santa Monica, CA: RAND.

United States Attorney's Office. (2013). *Former Air Force employee and two contractors charged with bribery, theft of government funds, fraud, and making false statements relating to Air Force contracts.* Retrieved from http://www.justice.gov/usao/fln/press/2013/aug/sims.html

United States -v. Bornstein, 423 U.S. 303 (96 S.Ct. 523, 46 L.Ed.2d 514) (1975).

U.S. Environmental Protection Agency Office of Inspector General. (2014). *Ineffective oversight of purchase cards results in inappropriate purchases at EPA* (14–P–0128). Retrieved from http://www.epa.gov/oig/reports/2014/20140304-14-P-0128.pdf

U.S. General Services Administration. (2012). *Procurement fraud handbook.* Retrieved from http://www.gsaig.gov/index.cfm/other-documents/other/

U.S. Office of Government Ethics. (2014). Current government employees. Retrieved from http://www.oge.gov/Topics/Financial-Conflicts-of-Interest-and-Impartiality/Current-Government-Employees/

Walker, H., Bakker, E., Schotanus, F., & Harland, C. (2013). Collaborative procurement: A relational view of buyer–buyer relationships. *Public Administration Review, 73*(4), 588–598.

Widmann, R. (2014). AFNWC/PZ immersion brief. Presented at Kirtland Air Force Base, NM.

Wolfenbarger, J. (2013). *Sequestration impacts our mission, people and bases.* Retrieved from www.arnold.af.mil

INITIAL DISTRIBUTION LIST

1.   Defense Technical Information Center
        Ft. Belvoir, Virginia

2.   Dudley Knox Library
        Naval Postgraduate School
        Monterey, California