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Auditability in Procurement: An Analysis of DoD Contracting Professionals' Procurement Fraud Knowledge

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Abstract

The purpose of this research was to assess Navy contracting professionals' procurement fraud knowledge, as well as contract management processes and related internal controls, and to analyze their perceptions regarding their organization's procurement fraud susceptibility. This research study utilized a previously developed web-based survey designed to assess the DoD procurement workforce's knowledge of procurement fraud schemes, internal controls, and contract management processes as well as their perceptions of fraud susceptibility in each of these areas. Based on the research findings, the Navy may be lacking auditability in their organizations due to a lack of procurement fraud knowledge. Recommendations are provided to the Navy and DoD regarding increasing the procurement fraud knowledge of their contracting professionals in order to help decrease procurement fraud vulnerabilities within their organizations. As DoD agencies continue to strive for accountability, integrity, and transparency in their procurement of goods and services, procurement fraud knowledge and auditability will continue to increase in importance.

Background

The Department of Defense (DoD) procurement workforce manages millions of contract actions, and billions of public dollars are spent on supplies and services in order to achieve the mission of the DoD ("Federal Procurement," 2017). The DoD must ensure that each tax dollar, hard-earned by the American people, is being spent appropriately with the highest degree of public trust.

The Department of Defense Inspector General (DoDIG) and the Government Accountability Office (GAO) have identified issues such as lack of adequately trained contracting personnel, lack of capable contract management processes, and lack of effective contract management internal controls within the federal government (DoDIG, 2009, 2014; GAO, 2013). These contract management issues may make the DoD vulnerable to procurement fraud (Rendon, R. G., & Rendon, 2015).

With procurement fraud cases on the rise, in order to achieve its mission, it is important that the DoD procurement workforce have the necessary procurement fraud knowledge to properly manage the procurement function with integrity, accountability, and transparency (Cohen & Eimicke, 2008; Thai, 2014). Analyzing the procurement fraud knowledge level of Navy contracting professionals and making recommendations for improvement of procurement fraud education within the Navy, as well as within the DoD, can

help ensure that taxpayer funds are used effectively and help ensure the public interest is protected. Integrity, accountability, and transparency in federal government procurement are crucial.

The purpose of this research was to assess Navy contracting professionals' procurement fraud knowledge, as well as contract management processes and related internal controls, and to analyze their perceptions regarding their organization's procurement fraud susceptibility. The research questions for this study include the following:

1. What is the Navy contracting professionals' procurement fraud knowledge level of procurement fraud schemes as related to contract management processes, internal control components, and procurement fraud scheme categories?
2. What is the Navy contracting professionals' perception of procurement fraud as related to the contract management processes, internal control components, and procurement fraud scheme categories?

As the DoD works toward being audit ready for a financial statement audit in FY2018, auditability is of utmost importance. For an organization to be auditable, it should ensure that its people are competent, its processes are capable, and its internal controls are effective (Rendon, J. M., & Rendon, 2016). Competent people, which is the focus of this research, are one of the components of the auditability triangle (Rendon, J. M., & Rendon, 2016).

Literature Review

This section provides a brief literature review that sets the groundwork for this research study. Scholarly journal articles, professional journal articles, government reports, and previous research studies in the areas of auditability, contract management phases, internal controls, and procurement fraud scheme categories are discussed. The following sections address auditability, contract management phases, internal control components, procurement fraud scheme categories.

Auditability

Auditability occurs at different levels of an organization and flows from the lowest level of an organization upwards. The process of "making things auditable" requires organizations to establish and actively manage an institutionally acceptable knowledge management system supporting its governance of processes and practices (Power, 1996, p. 289). Rollins and Lanza (2005) support the need for an increased emphasis on effective internal controls due to an increase in procurement fraud cases. In addition, Crawford and Helm (2009) contend that public sector governance is important to ensure a commitment to compliance, accountability, and transparency. Prior research supports the importance of competent personnel and competent organizations related to capable processes in order to ensure successful procurement projects (Frame, 1999).

In response to internal control weaknesses and resulting procurement process deficiencies, the DoD is trying to increase its emphasis on procurement training and the development of procurement workforce competencies (GAO, 2002) as well as auditability in its procurement organizations. Auditability within federal government organizations is necessary in order to ensure the integrity, accountability, and transparency of its procurement programs, fight the battle against procurement fraud, and ensure value for money (Rendon, R. G., & Rendon, 2015).

As reflected in Figure 1, R. G. Rendon and Rendon (2015) contend that auditability encompasses competent personnel, capable processes, and effective internal controls. Having competent people includes personnel having appropriate education, adequate training, and relevant experience. The focus of this research is on competent personnel in terms of procurement fraud knowledge.

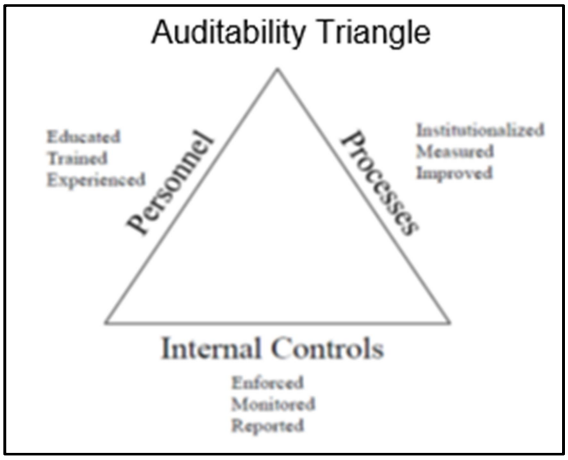

Figure 1. Auditability Triangle
(Rendon, R. G., & Rendon, 2015)

Contract Management Phases

Rendon and Snider (2008) state that the contract management phases include pre-award, award, and post-award. The pre-award phase consists of the procurement planning, solicitation planning, and solicitation processes, which are discussed in the following sections.

Pre-Award: Procurement Planning. Procurement planning is a vital aspect of contract management as it encompasses key activities such as defining the requirement, conducting market research, developing budgets and cost estimates, and conducting risk analysis (Rendon, J. M., & Rendon, 2015).

Pre-Award: Solicitation Planning. Solicitation planning includes key activities such as determining the procurement method and contract type, developing the solicitation document, determining the contract-award strategy, and finalizing the solicitation (Rendon, J. M., & Rendon, 2015).

Pre-Award: Solicitation. The solicitation process involves obtaining information (proposals) from the sellers regarding how project needs can be met (Rendon, R. G., 2008).

Award: Source Selection. The source selection process includes key activities such as applying evaluation criteria to the management, cost, and technical proposals, negotiating with suppliers, and executing the contract award strategy (Garrett, 2013; Rendon, R. G., 2008).

Post-Award: Contract Administration. The contract administration process involves key activities such as conducting a pre-performance conference, monitoring the contractor's work results, measuring the contractor's performance, and managing the contract change control process (Rendon, R. G., 2008).

Post-Award: Contract Closeout. The contract closeout process includes key activities such as processing government property dispositions, finalizing acceptance of

products or services, making final contractor payments, and documenting the contractor's final past-performance report (Rendon, R. G., 2008). In addition to capable contracting processes, effective internal controls are also important for federal agencies to become more auditable (Rendon, R. G., & Rendon, 2015).

Internal Control Components

Effective internal controls ensure the organization is "[complying] with laws and regulations, monitoring procedures to assess enforcement, and reporting material weaknesses" (Rendon, R. G., & Rendon, 2015, p. 716). In May 2013, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) updated its internal control integrated framework, which now includes 17 principles within the five components of internal control (COSO, 2013). In September 2014, the GAO updated its *Standards for Internal Control for the Federal Government* (Green Book; GAO, 2014). Figure 2 illustrates the five components of internal control (COSO, 2013, p. 6).

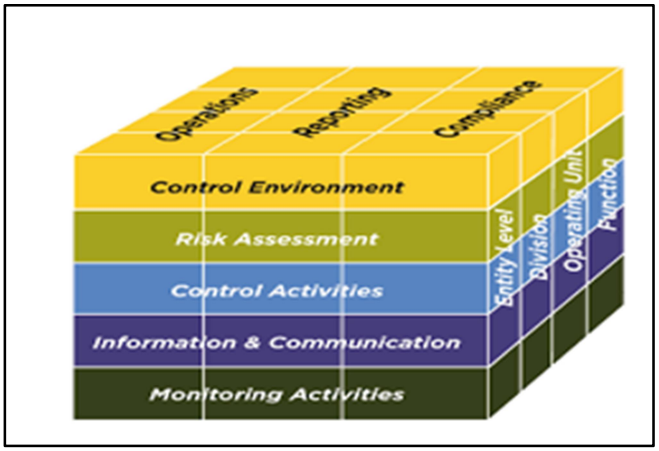

Figure 2. Relationship of Internal Control Objectives and Components
(COSO, 2013, p. 6)

Figure 3 illustrates all of the 17 principles associated with each of the five internal control components. The five components of the integrated internal control framework are discussed in the following sections (COSO, 2013).

Control Environment. The control environment component of the integrated internal control framework sets the tone at the top and is related to the integrity and ethical behavior of the organization's management (COSO, 2013).

Risk Assessment. The risk assessment component of the integrated internal control framework involves assessing what could go wrong within the organization and what management can do to mitigate any potential risks, including fraud risks (COSO, 2013; GAO, 2014).

Control Activities. The control activities component of the integrated internal control framework incorporates all of the control procedures that the organization needs to implement in order to reach its goals and objectives (COSO, 2013).

Information and Communication. The information and communication component of the integrated internal control framework includes internal and external communications as well as the accounting system (COSO, 2013).

Monitoring Activities. The monitoring activities component of the integrated internal control framework entails the close observation of all of the other internal control components to ensure that the controls are being practiced appropriately (COSO, 2013).

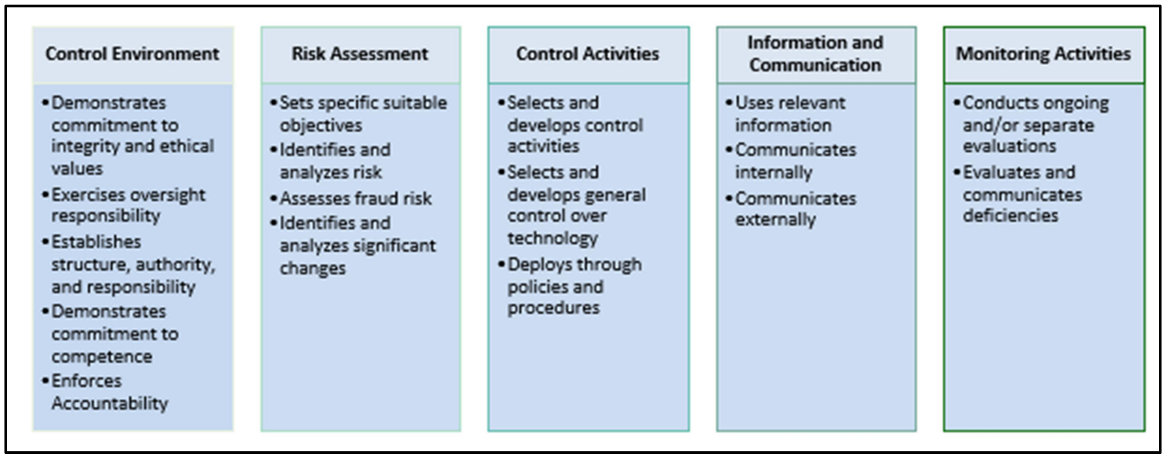

Figure 3. COSO's 17 Fundamental Principles
(COSO, 2013, p. 6)

Procurement Fraud Scheme Categories

Internal controls that are not appropriately mandated and implemented may leave the federal government vulnerable to procurement fraud. Tan (2013) found that incidents of procurement fraud in the DoD and the federal government could be traced to ineffective internal controls, which left government organizations vulnerable to fraud, waste, and abuse. The Association of Certified Fraud Examiners (ACFE), a fraud-fighting organization, defines fraud as "a knowing misrepresentation of the truth or concealment of a material fact to induce another to act to his or her detriment" (ACFE, 2016, para. 2). In the 1940s, after interviewing embezzlers in jail, Cressey (1972), a criminologist, found that that the embezzlers had a perceived pressure (motivation), a perceived opportunity, and a justification (rationalization) in common, now known as the fraud triangle (Wells, 2001). The fraud triangle is illustrated in Figure 4 (Albrecht, 2014).

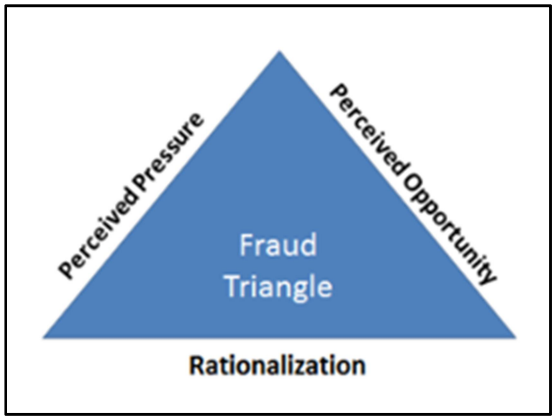

Figure 4. Fraud Triangle
(Albrecht, 2014, para. 1)

While there are numerous fraud schemes, they can be categorized into six major procurement fraud scheme categories, which are illustrated in Table 1 (Rendon, J. M., & Rendon, 2015).

Collusion. Collusion is "a situation where two or more employees work together to commit fraud by overcoming a well-designed internal control system" (Wells, 2005, p. 122). The collusion fraud scheme category includes procurement fraud schemes such as kickbacks, bribery, and deliberate split purchases (Rendon, J. M., & Rendon, 2015).

Bid Rigging. Bid rigging "is a process by which an employee assists a vendor to fraudulently win a contract through the competitive bidding process" (Wells, 2005, p. 283). Bid-rigging schemes include collusion bidding by contractors, excluding qualified bidders, leaking bid data, manipulation of bids, rigged specifications, and unbalanced bidding (Rendon, J. M., & Rendon, 2015).

Conflict of Interest. Conflict of interest is "when an employee, manager, or executive has an undisclosed economic or personal interest in a transaction that adversely affects the company" (Wells, 2005, p. 273). Conflict of interest fraud schemes include conflicts of interest, unjustified sole source awards, and phantom vendors (Rendon, J. M., & Rendon, 2015).

Billing, Cost, and Pricing Schemes. Billing, cost, and pricing schemes involve "fraudulent payment by submitting invoices for fictitious goods or services, inflated invoices, or invoices for personal purchases" (Wells, 2005, p. 98). Billing, cost, and pricing schemes include such things as cost mischarging; defective pricing; change order abuse; co-mingling of contracts; false, inflated, or duplicate invoices; and false statement claims (Rendon, J. M., & Rendon, 2015).

Fraudulent Purchases. Fraudulent purchases involve purchasing "personal items with company money" (Wells, 2005, p. 114). Fraudulent purchases include purchases for personal use or resale, unnecessary purchases, and imprest fund abuse (Rendon, J. M., & Rendon, 2015). GAO (2002) found that fraudulent purchases occur in the government purchase card programs within the federal government.

Fraudulent Representation. Fraudulent representation includes failure to meet contract specifications and product substitution (Rendon, J. M., & Rendon, 2015). Product substitution is also known as "bait and switch."

Table 1. Categories of Procurement Fraud Schemes

(Rendon, J. M., & Rendon, 2015)

Categories of Procurement Fraud Schemes					
Collusion	**Conflict of Interest**	**Bid Rigging**	**Billing/Cost/ Pricing Schemes**	**Fraudulent Purchases**	**Fraudulent Representation**
Bribes & Kickbacks	Conflict of Interest	Collusive Bidding by Contractors	Cost Mischarging	Purchases for Personal Use or Resale	Failure to Meet Contract Specifications
Split Purchases	Unjustified Sole Source Awards	Excluding Qualified Bidders	Defective Pricing	Unnecessary Purchases	Product Substitution
	Phantom Vendor	Leaking Bid Data	Change Order Abuse	Imprest Fund Abuse	
		Manipulations of Bids	Co-mingling of Contracts		
		Rigged Specifications	False, Inflated, or Duplicate Invoices		
		Unbalanced Bidding	False Statement and Claims		

Conceptual Framework

The conceptual framework for this research entails the auditability triangle. R. G. Rendon and Rendon (2015) contend that "the theory of auditability incorporates aspects of governance which emphasizes effective internal controls, capable processes, and competent personnel" (p. 715). These major elements of the auditability triangle, which are illustrated in Figure 1, present the conceptual framework for this research and focus on the competent personnel element.

In order for federal procurement organizations to be auditable, they need to have competent people, capable processes, and effective internal controls. Since contracting professionals play an essential role in the procurement process, they have unique opportunities for detecting and deterring procurement fraud. However, without proper and adequate knowledge of procurement fraud schemes, as well as effective internal controls and capable contracting processes, these contracting professionals may not be able to deter or detect significant procurement fraud activities within the federal government organizations.

Research Methodology

The research methodology for this research study includes a literature review covering contract management phases, internal control components, and procurement fraud schemes. The literature review consists of the GAO reports as well as nongovernmental literature and scholarly articles. Furthermore, this research methodology involved the use of a previously developed knowledge assessment tool that was used to assess Navy contracting professionals.

The web-based assessment tool includes 27 knowledge-based questions regarding contracting processes, internal controls, and procurement fraud schemes. In addition, the assessment tool also includes 12 organization-based questions related to the contracting officers' perceptions of internal controls within their organizations. These survey questions were designed to assess the contracting officers' perceptions of their organizations regarding susceptibility to fraudulent activity. The organization-based items were adopted and modified from the Internal Control Survey developed by the New York State Internal Control Association (NYSICA, 2006).

After following the appropriate Institutional Review Board (IRB) procedures and obtaining the protocol approval from the Naval Postgraduate School IRB office, the web-based assessment tool was deployed using the Naval Postgraduate School online survey-hosting service LimeSurvey. The survey link was e-mailed to a Navy-designated person who was not in the chain of command, who forwarded the e-mail message with the web link to the Navy contracting professionals at a Navy contracting command. The web-based assessment tool was available for a four-week period. Based on the research findings, recommendations are made to the Navy and the DoD for improving its contracting professionals' procurement fraud knowledge as well as its contract management processes and internal controls.

Research Findings

The web-based assessment tool was deployed on January 26, 2016, to a total eligible population of 82 Navy contracting professionals located at a Navy contracting command. The assessment tool was initiated by 44 respondents, and was completed by 32 respondents, resulting in a response rate of 39% (Grennan & McCrory, 2016).

All of the 32 respondents were Navy civilian contracting professionals. Figures 5–7 reflect demographics of the respondents. The figures show the number of respondents as well as the percentage. For example, 1, 3% for the 11 to 20 years category in Figure 5 indicates one respondent, which was 3% of the total respondents had 11 to 20 years of experience. Regarding the experience level, the majority of the respondents (10 respondents, 32%) had 0–2 years of experience. Regarding their DAWIA levels shown in Figure 6, the majority of the respondents (15 respondents, 47%) had DAWIA Certification Level II, and 22% (7 respondents) had no DAWIA certification levels. Regarding their warrant status shown in Figure 7, the majority of the respondents (78.13%) did not have a warrant.

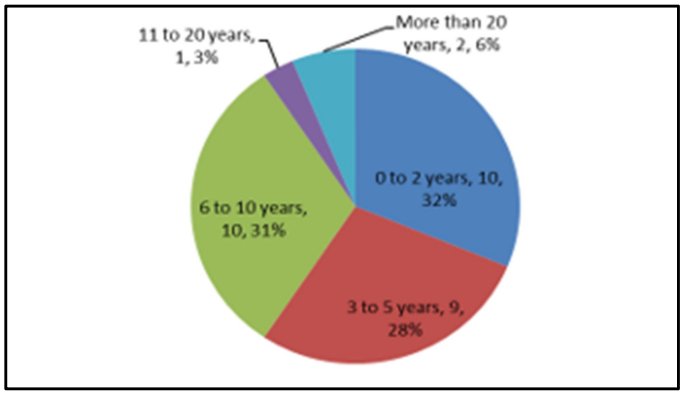

Figure 5. Number of Participants by Years of Experience
(Grennan & McCrory, 2016)

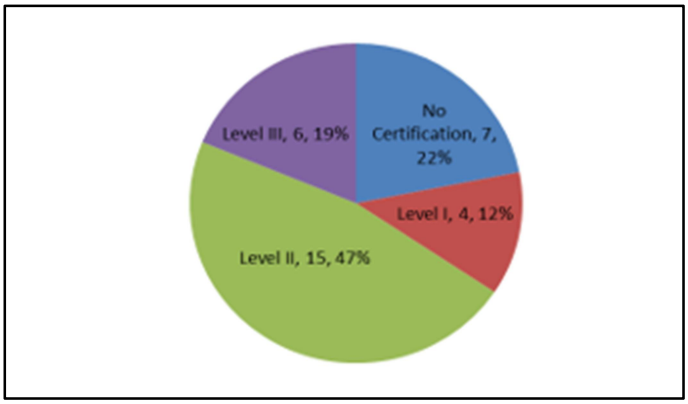

Figure 6. Number of Participants by DAWIA Certification Level
(Grennan & McCrory, 2016)

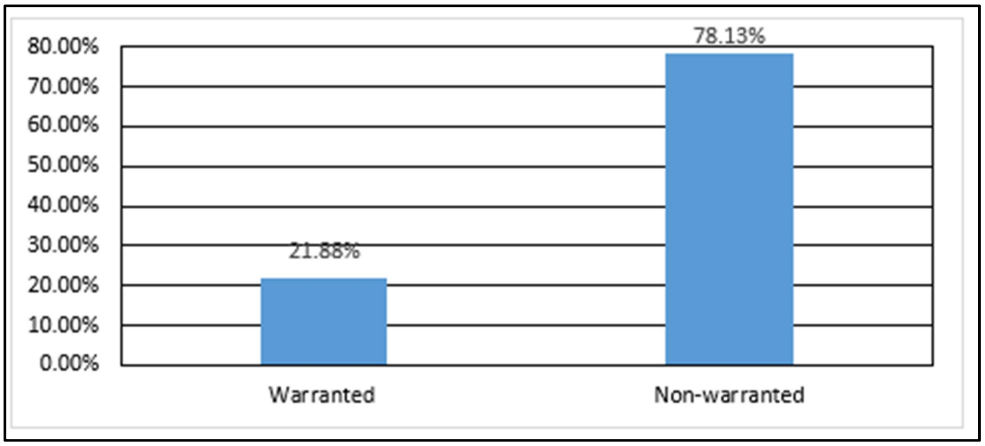

Figure 7. Percentage of Participants by Warrant Status
(Grennan & McCrory, 2016)

The average score on the knowledge portion of the web-based assessment tool was 58% correct of the 27 knowledge-based questions. Figures 8–10 reflect the average score based on years of experience level, DAWIA certification level, and warranted contracting officer status. As contracting experience and DAWIA level increases, so does the average score on the knowledge assessment.

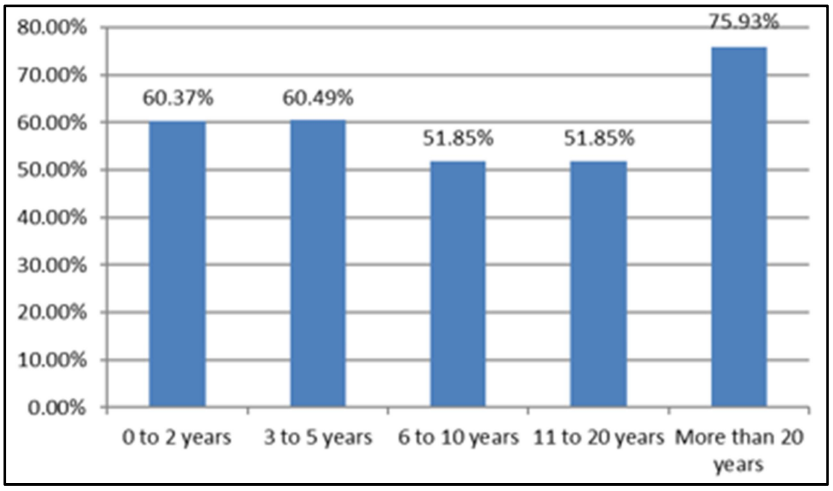

Figure 8. Average Score by Years of Experience
(Grennan & McCrory, 2016)

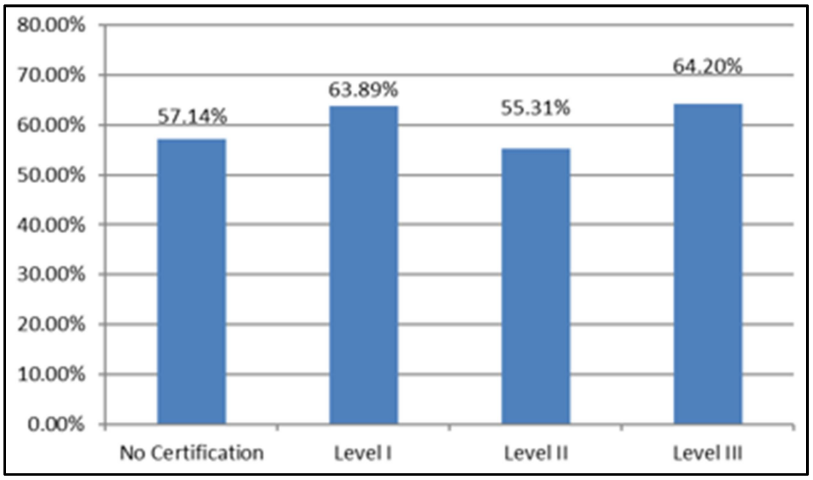

Figure 9. Average Score by DAWIA Level
(Grennan & McCrory, 2016)

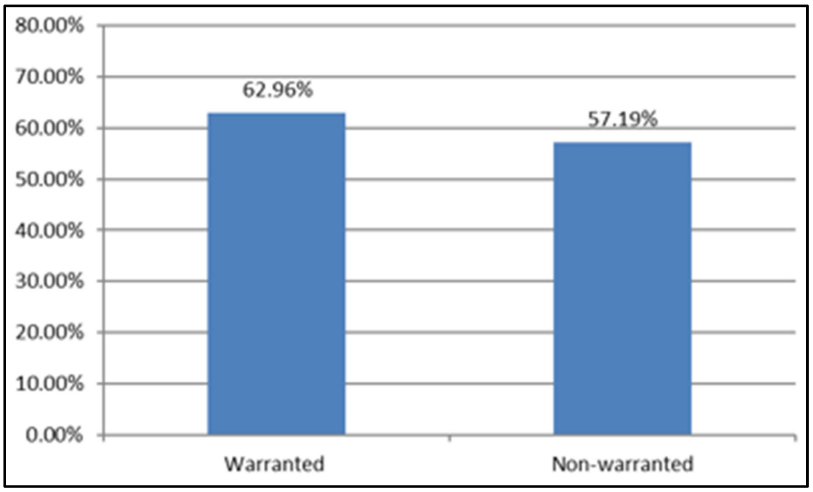

Figure 10. Average Score by Warrant Status
(Grennan & McCrory, 2016)

As previously stated, each knowledge assessment question was related to contract management processes, internal control components, and procurement fraud schemes. Figures 11–13 reflect the average score based on each of these areas. From the perspective of the contract management process as shown in Figure 11, assessment knowledge questions related to the procurement planning process had the highest average score, compared to questions related to contract closeout, which had the lowest score. From the perspective of the internal control components as shown in Figure 12, assessment knowledge questions related to the control environment component had the highest average score, compared to questions related to information and communication, which had the lowest score. From the perspective of procurement fraud schemes as shown in Figure 13, assessment knowledge questions related to bid rigging scheme had the highest average score, compared to questions related to conflict of interest schemes, which had the lowest score.

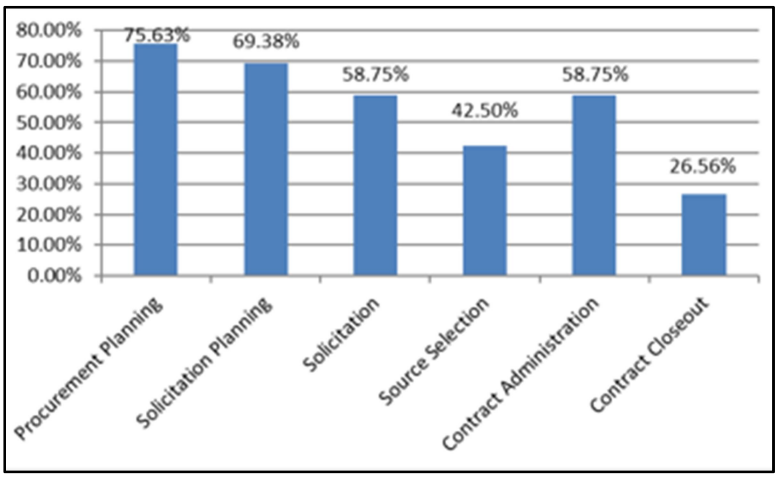

Figure 11. Average Score by Contract Management Process
(Grennan & McCrory, 2016)

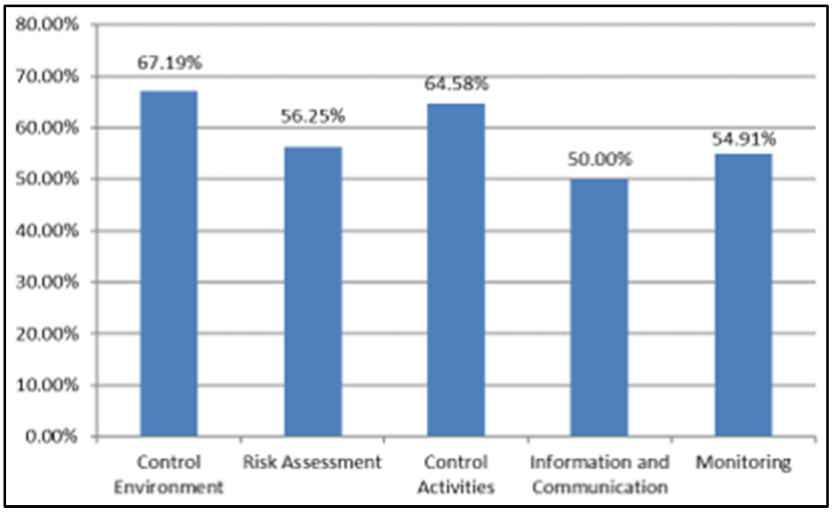

Figure 12. Average Score by Internal Control Component
(Grennan & McCrory, 2016)

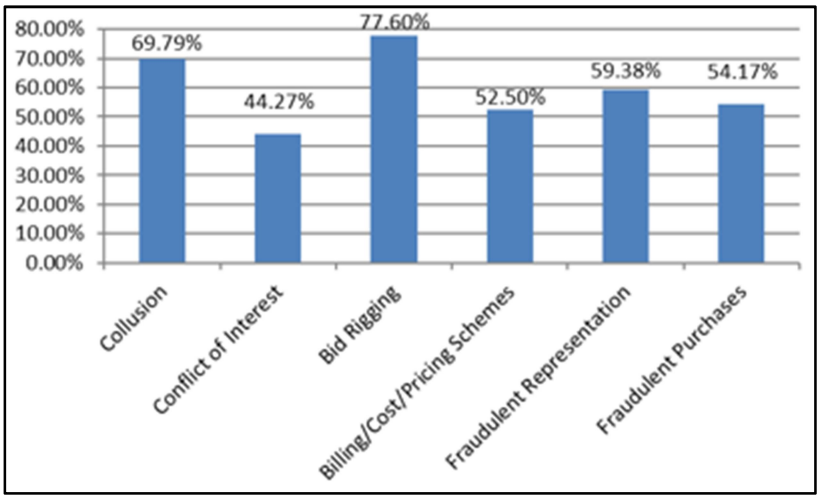

Figure 13. Average Score by Procurement Fraud Scheme
(Grennan & McCrory, 2016)

Analysis of Organizational Perception Findings

The web-based assessment tool also included survey questions related to the participants' perceptions of their organization's susceptibility to vulnerabilities to procurement fraud within the contract management phases, internal control components, and procurement fraud schemes. Figures 14–16 reflect the responses to these assessment questions.

As shown in Figure 14, when asked which contract management phase is most vulnerable to fraud in their organization, the contract administration phase was selected the most often (21.88%) and procurement planning, solicitation planning, and source selection were all selected the least often (0% for each one). Approximately 19% responded that they did not know, approximately 44% of the respondents stated they did not suspect fraud, and approximately 3% responded that they preferred not to answer.

As shown in Figure 15, when asked which internal control component is most vulnerable to fraud in their organization, the monitoring activities component was selected the most often (13%) and control environment was selected the least often (0%). Approximately 22% responded that they did not know, approximately 47% of the respondents stated they did not suspect fraud, and approximately 6% responded that they preferred not to answer.

As shown in Figure 16, when asked to which procurement fraud scheme they perceived their organization was most susceptible, collusion and conflict of interest were selected the most often (6.25% each) and bid rigging was selected the least often (0%). Approximately 19% responded that they did not know, approximately 53% of the respondents stated they did not suspect fraud, and approximately 6% responded that they preferred not to answer.

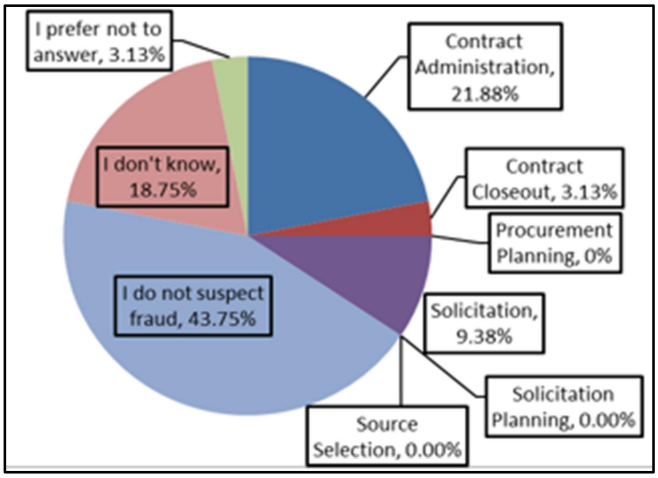

Figure 14. Percentage of Responses to Contract Management Phase Perception Question
(Grennan & McCrory, 2016)

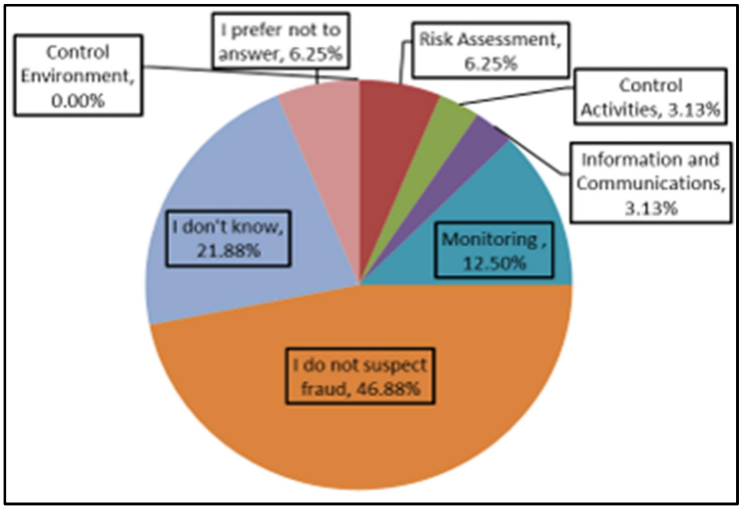

Figure 15. Percentage of Responses to Internal Control Component Perception Question
(Grennan & McCrory, 2016)

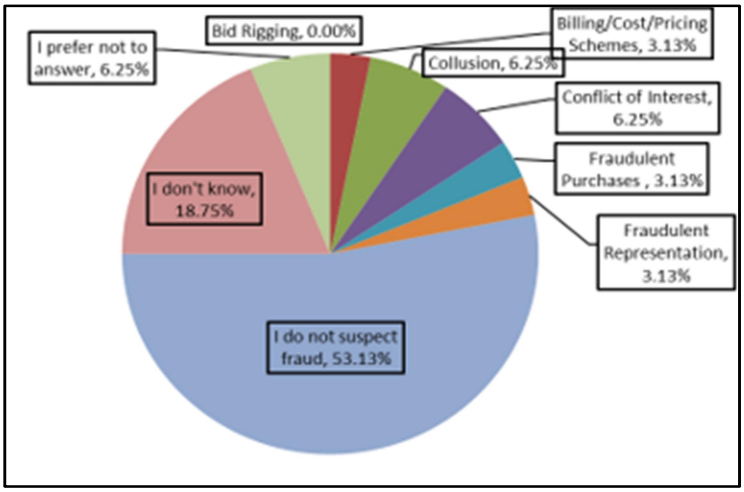

Figure 16. Percentage of Responses to Procurement Fraud Scheme Perception Question
(Grennan & McCrory, 2016)

Nine of the organizational questions were related to the contracting professionals' perceptions of their organization's internal controls and were designed to determine if any aspects of the organizations' internal control structure, processes, or culture made the organization more susceptible to fraudulent activity. The Likert Scale responses ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). The average response mean to all of the nine questions was 4.24, and the range of responses was from 3.66 to 4.72. The lowest response mean (3.66) was for the item "I have adequate knowledge of contracting fraud schemes to perform my duties." Zero respondents answered "I Don't Know." The highest response mean (4.72) was for the item "I would report fraudulent or suspicious activity if I saw or suspected it." Zero respondents answered "I Don't Know."

Implications of Findings

The results of both the knowledge assessment and the organization perception assessment have interesting implications. The contracting professionals' average score on the overall knowledge assessment (58%) indicates a possible knowledge deficiency in procurement phases, internal controls, and procurement fraud schemes. This finding, along with the average response mean to the organization perception item "I have adequate knowledge of contracting fraud schemes to perform my duties" of 3.66, suggests that perhaps the contracting professionals are overly optimistic in self-assessing their knowledge of procurement fraud schemes.

Furthermore, a significant percentage of the respondents indicated "I do not suspect fraud" in relation to the organization's contracting phases (43.75%), internal control components (46.88%), and procurement fraud scheme susceptibility (53.13%). These findings, along with the low scoring knowledge assessment may indicate that although the majority of contracting professionals do not suspect fraud in their organizations, they also do not have a sufficient working knowledge of procurement fraud. The contracting professionals' limited knowledge of procurement fraud and their perception that their organization is not susceptible to fraud may reveal that the organization could in fact be vulnerable to some form of procurement fraud. An example of this type of vulnerability to procurement fraud can be found in the Fat Leonard case, which is still currently under investigation.

Recommendations

The results of the knowledge-based assessment indicated that, although the average score was 58%, the contracting professionals' knowledge of contracting processes, internal controls, and procurement fraud schemes increases as years of experience and DAWIA certification level increase. Recent research shows that the DAWIA required courses for contracting certification do not include a mandatory fraud training or awareness course (Castillo & Flannigan, 2014). The first recommendation is for the Defense Acquisition University (DAU) to incorporate coverage of internal controls and procurement fraud schemes in the mandatory contracting curriculum.

Another recommendation is to further explore the organization's information and communication internal control component and improve monitoring activities. Yet another recommendation is for the Navy and DoD as a whole to place serious emphasis on educating its contracting professionals regarding procurement fraud schemes and fraud awareness as well as areas vulnerable to procurement fraud.

Conclusion

In an environment of increased spending in government contracting for goods and services in the DoD, there is also an increased risk of public dollars being vulnerable to fraud, waste, and abuse (GAO, 2006). In addition, there is an increased risk of contracting organizations not getting the best value and not having contracting requirements met.

Contract management deficiencies and related internal control weaknesses have resulted in procurement fraud within the DoD (GAO, 2006; DoDIG, 2009). The results of this research indicate that contracting professionals in the Navy scored low in their knowledge of procurement fraud (Grennan & McCrory, 2016). At the same time, the contracting professionals self-assessed that they had sufficient procurement fraud knowledge to deter and detect procurement fraud. The implications of the results of the analysis indicate that there is a need for making procurement fraud education available to contracting personnel in order to make them more aware of vulnerabilities to fraud in federal government procurement.

This research investigated the Navy contracting professionals' perception of their organization's vulnerability to procurement fraud. This research indicates that the Navy contracting professionals' limited knowledge of procurement fraud and their perception that their organization is not susceptible to fraud may reveal that the organization could in fact be vulnerable to procurement fraud as in the case of the Fat Leonard incidents, which are still under investigation.

Overall, competent personnel, capable processes, and effective internal controls, which are the three components of the auditability triangle, may help federal agencies in their efforts to reduce, detect, and deter procurement fraud in their organizations throughout the Navy and DoD. In light of the potential fraud vulnerabilities within federal government contracting organizations, it is crucial that the Navy and DoD acquisition workforce have the necessary knowledge of procurement fraud schemes and procurement fraud indicators in order to help deter and detect procurement fraud and attain the best value for the government. As the federal government continues to increase procurement of goods and services, the pressure to reduce costs warrants federal agencies to strive to decrease its vulnerability to procurement fraud.

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