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RELATIONSHIP BETWEEN CONTRACTING OFFICER REPRESENTATIVES, SURVEILLANCE, AND CONTRACTOR PERFORMANCE

Ortega, Alan

Monterey, CA; Naval Postgraduate School

NAVAL POSTGRADUATE SCHOOL

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RELATIONSHIP BETWEEN CONTRACTING OFFICER REPRESENTATIVES, SURVEILLANCE, AND CONTRACTOR PERFORMANCE

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By: **Alan Ortega**

Advisor: **Rene G. Rendon**
Co-Advisor: **William A. Muir**

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The Air Force has found itself expanding contracted services at the installation level due to a decrease in manpower across several specialties. These additional requirements demand surveillance, but also bring into light the effectiveness of contracting officer representatives (COR) when dealing with complex services. The intent of this project is to analyze whether the COR experience, training, and surveillance frequency have an impact on contractor performance. This analysis includes a review of COR training and experience retrieved from the Contracting Officer Representative Tracking Tool (CORTT). Moreover, it includes a review of Quality Assurance Surveillance Plans (QASP) and the frequency of reports in the same system. It also includes a review of policy surrounding surveillance, training, and experience requirements. Finally, the results are compared with Contractor Performance Assessment Reporting System (CPARS) data that states the performance of service contracts. The intent is to determine whether statistically significant relationships exist between quality assurance programs and contractor performance.

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Alan Ortega, Captain, United States Air Force

Submitted in partial fulfillment of the
requirements for the degree of

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Approved by: Rene G. Rendon
Advisor

William A. Muir
Co-Advisor

Rene G. Rendon
Academic Associate
Graduate School of Business and Public Policy

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ABSTRACT

The Air Force has found itself expanding contracted services at the installation level due to a decrease in manpower across several specialties. These additional requirements demand surveillance, but also bring into light the effectiveness of contracting officer representatives (COR) when dealing with complex services. The intent of this project is to analyze whether the COR experience, training, and surveillance frequency have an impact on contractor performance. This analysis includes a review of COR training and experience retrieved from the Contracting Officer Representative Tracking Tool (CORTT). Moreover, it includes a review of Quality Assurance Surveillance Plans (QASP) and the frequency of reports in the same system. It also includes a review of policy surrounding surveillance, training, and experience requirements. Finally, the results are compared with Contractor Performance Assessment Reporting System (CPARS) data that states the performance of service contracts. The intent is to determine whether statistically significant relationships exist between quality assurance programs and contractor performance.

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LIST OF ACRONYMS AND ABBREVIATIONS

AFRICOM	Africa Command
CMBOK	Contract Management Body of Knowledge
COR	Contracting Officer Representative
CPARS	Contractor Performance Assessment Reporting System
FAR	Federal Acquisition Regulation
IPT	Integrated Product Teams
PWS	Performance Work Statement
QAE	Quality Assurance Evaluator
QASP	Quality Assurance Surveillance Plan
SOW	Statement of Work

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ACKNOWLEDGMENTS

I would like to thank my family, advisors, the city of Monterey, and the smooth rolling roads of California for great cycling conditions. My short time in the contracting career field has revealed that successful contracts do not happen solely with hard work; they are a combination of efforts and compromise by two sets of people who want to achieve the best possible outcomes. Embarking on this research was an attempt to understand what factors within our contract management system help us accurately represent the success or failure of contracts.

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I. INTRODUCTION

A. BACKGROUND

The installation-level support requirements, such as aircraft maintenance or communications, have significantly increased across the Air Force. The Air Force has incorporated these increased requirements into their contracts for these services. The increase in the contracting of these support requirements results in the importance of contractor performance for these requirements.

In fiscal year (FY) 2016, the Department of Defense (DoD) spent close to $150 billion in contracted services (Government Accountability Office [GAO], 2018). This number has steadily increased since 2016 with a recorded $163.7 billion spent on services compared to the $163.8 billion spent on products (Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics [OUSD(ATL)]), 2017). The $163 billion encompassed several categories of contracted services, the largest of which are knowledge-based services, research and development services, facility services, and equipment-related services (OUSD[ATL], 2017), which all support installations across the DoD.

The increase in services performed by contractors drives an increase in contractor surveillance performed by the government. The level of experience, training, surveillance frequency, and quality plan of government monitors give the contracting officer critical information to manage the performance of DoD contractors. Determining how the overall quality assurance program relates to contractor performance is critical in the contract management process.

B. PROBLEM STATEMENT

The level of experience, training, surveillance frequency, and quality plan of government monitors differs based on the contracted services at the installation. These differences may lead to different levels of contractor performance. Several standards have been implemented to standardize training, experience, and surveillance, but it is not yet clear whether there is a relationship between these factors and contractor performance. The success of contracted services depends on the effectiveness of the quality assurance

program, which consists of the government monitor experience, training, surveillance frequency, and plan. The question is whether the quality assurance program is effective in managing contractor performance.

C. PURPOSE OF RESEARCH

The purpose of this research is to determine how the government quality assurance program (experience, training, surveillance frequency, and quality plan) impacts contractor performance. Determining the impact could lead to an increased level of contract management capability within the DoD.

D. RESEARCH QUESTIONS

This research answers the following questions:

1. What is the relationship between the government monitor experience and contractor performance?

2. What is the relationship between government monitor training and contractor performance?

3. What is the relationship between the surveillance frequency, quality plan, and contractor performance?

E. METHODOLOGY

This is a quantitative research project. The research methodology encompasses collecting data about the government monitors and contractor performance for services. Government monitor information comes from the Contracting Officer Representative Tracking Tool (CORTT) and contractor performance comes from Contractor Performance Assessment Reporting System (CPARS).

Extracting data from CORTT depicts the level of experience and training for the contracting officer representative (COR). The data set also provides monthly surveillance frequency along with the adequacy of Quality Assurance Surveillance Plans (QASP). The CPARS data provides information about yearly contractor performance. The CORTT is

compared with CPARS data. The two data sets reveal relationships, and lack thereof, that exists between the quality assurance program and contractor performance.

F. BENEFITS AND LIMITATIONS

The purpose of this research is to determine how the government's quality assurance program (experience, training, surveillance frequency, and plan) impacts contractor performance. Findings from this research will provide the DoD with more effective ways to manage contractor performance on services contracts.

For example, if the research reveals that COR contract experience is positively related to contractor performance, this research can support an increase of contract experience requirements when selecting CORs. Furthermore, a positive relationship between COR experience and contractor performance may allow the DoD to focus on appointing more CORs who have superior technical experience relating to the particular service requirement. Additionally, a strong correlation between surveillance frequency and contractor performance may lead organizations to increase surveillance of contracted services.

On the other hand, a negative relationship between the quality assurance program and contractor performance can help guide the development of new management priorities to manage contractor performance. Findings of this research can also aid in the structure of quality assurance programs to more adequately manage contractor performance.

Limitations of this research include the sample size of the data collected. Furthermore, the quality of data obtained between installations differs due to differing willingness to grant access to source selection sensitive information.

Moreover, the sample size is limited to contracts from three U.S. Air Force installations with varying missions. This effectively excludes all other DoD organizations. Furthermore, narratives from the CPARS system are excluded due to their Source Selection Sensitive nature and due to the lack of time available to translate narratives into qualitative data. The contracts used also exclude military construction (MILCON) projects and weapon system or supporting contracts.

G. ORGANIZATION OF REPORT

This research is organized into five distinct sections to reveal how the government's quality assurance program (COR experience, training, surveillance frequency, and Quality Assurance Surveillance Plan [QASP]) impacts overall contractor performance. The research comprises an introduction, a literature review, the research methodology, an analysis of the findings, and a conclusion, containing a summary and areas for further research.

Chapter I introduces the research. It also discusses the background of the quality assurance program and the management of contractor performance. Furthermore, it presents the problem statement, purpose, and research questions for this research, followed by the methodology, benefits and limitations, and organization of the report. Finally, it summarizes the direction of this research.

Chapter II, the literature review, consists of academic theory describing interactions between the government and the contractor as well as a detailed overview of the service contracting process. It also includes a review of the service contracting team members pertinent to this research and a discussion of current COR training and experience requirements. Furthermore, it discusses the DoD's methods of contractor surveillance along with policy and guidance for developing Quality Assurance Surveillance Plans (QASP). Moreover, this chapter addresses CPARS and current issues the DoD faces in recording contractor performance. Finally, it presents previous studies regarding management of contractor performance.

The research methodology chapter, Chapter III, includes a discussion of how this research was conducted. It explains data collection methods and the manner in which qualitative data was converted into quantitative data. Moreover, it reviews the primary model used for analysis data to determine if there is a relationship between the quality assurance program and contractor performance.

Chapter IV, the analysis and implications of findings chapter, applies linear regression and correlation formulas to determine the relationship between the quality

assurance program and contractor performance. It also provides additional findings that were not necessarily part of the model yet relevant to the research.

The summary, conclusions, and areas for further research are in Chapter V and make critical implications and statements about how the quality assurance program (COR training, experience, surveillance frequency, and QASPs) impacts overall contractor performance. Additionally, it makes recommendations for further research.

H. SUMMARY

This chapter introduced how this research intends to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts contractor performance.

The chapter introduced a problem faced by the DoD: Does its quality assurance program effectively manage contractor performance? The chapter introduced research questions along with the methods used in answering those questions. The purpose of this research is to determine how the government's quality assurance program (experience, training, surveillance frequency, and plan) impacts contractor performance.

Additionally, this chapter included a discussion of the benefits and limitations of the research along with the overall organization of the report. The following literature review discusses the current literature, guidance, and available policy relevant to determining how the quality assurance program impacts contractor performance.

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II. LITERATURE REVIEW

A. INTRODUCTION

The purpose of this research is to determine how the quality assurance program (experience, training, surveillance frequency, and plan) impacts contractor performance. This chapter presents a theoretical basis and how it relates to the quality assurance program and the management of contractor performance. This chapter also supports this research by discussing the DoD's service contract management process. Additionally, this chapter discusses the members of the service contracting team, COR training, and experience requirements. Moreover, this chapter reviews regulations that enable the management of contractor performance, the methods used to manage contractor performance, and the QASP. Furthermore, it discusses how the government uses CPARS to record contractor performance. Also, this chapter discusses the challenges observed by the DoD and external agencies, which further reinforce the need to answer the research questions surrounding the DoD's quality assurance program and contractor performance. Finally, this chapter offers a review of academic work completed on the topic of the quality assurance program and contractor performance.

B. THEORETICAL BASIS (AGENCY AND AUDITABILITY THEORY)

The government's use of a quality assurance program to manage contractor performance stems from agency theory. Agency theory is an economic theory that can be applied to contracts between a principal and agent: the government and a contractor (Rendon, 2015). The theory focuses on the presence of competing objectives between the principal and the agent (Rendon, 2015). For example, the government is charged with ensuring that dollars spent are producing acceptable services, while the contractor is concerned with meeting profit objectives and increasing shareholder value (Rendon, 2015).

Matters between the principal and agent are further complicated due to information asymmetry (Rendon, 2015). The government tends to have more information about their mission, while the contractor has more information on what cost drivers are involved in meeting a particular requirement (Rendon, 2015).

The presence of competing objectives and information asymmetry leads to discretionary behavior (Rendon, 2015). Rendon further elaborates that discretionary behavior can result in either consummate or perfunctory decisions that lessen the likelihood of both the principal and agent meeting their objectives. The principal can establish mechanisms to mitigate adverse selection, such as conducting market research (Rendon, 2015). Also, the principal can set up mechanisms to counter the effects of moral hazard during contract performance, such as the establishment of a quality assurance program (Rendon, 2015).

A quality assurance program can be useful in countering the effects of moral hazard, but only if the principal incorporates the concepts of auditability theory.

Auditability theory leverages governance concepts whilst highlighting effective internal controls, capable processes, and competent personnel (Rendon & Rendon, 2015). When referencing quality assurance programs and contractor performance, "internal controls" refers to the government's ability to report material weaknesses and enforce compliance with laws and regulations (Rendon & Rendon, 2015).

"Capable processes" refers to the services contracting team's ability to perform contract administration and closeout functions, including managing contractor performance (Rendon, 2015). Finally, an aspect of auditability theory called "competent personnel" focuses on ensuring that personnel are adequately trained and experienced to perform their assigned responsibilities (Rendon, 2015). In this research, competency is applied to whether members of the service contracting team have the adequate experience and training.

Agency theory and auditability theory provide a theoretical basis from which to analyze the quality assurance program and management of contractor performance. Furthermore, the theories create a basis from which to discuss the remaining sections in this chapter.

The following section discusses the service contracting process the DoD uses to achieve its objectives.

C. SERVICE CONTRACTING PROCESS

The service contract management process is described in the *Contract Management Body of Knowledge* (CMBOK) as consisting of three phases: pre-award, award, and post-award (National Contract Management Association [NCMA], 2017). Several competencies exist within the three phases. The remainder of this section focuses on these three phases and the activities performed in each phase: acquisition planning, requesting offers, and source selection (NCMA, 2017). The remainder of this section focuses on the pre-award, award, and post-award phases and the activities in each.

The pre-award phase includes acquisition planning, which involves the coordination and integration of multiple efforts to satisfy an organization's needs in a timely and reasonable manner (NCMA, 2017). Acquisition planning includes definition of requirements as well as preparation for all necessary acquisition actions to include negotiation (NCMA, 2017). It also includes the discussion of acquisition constraints, performance requirements, cost/technical/schedule risks, and tradeoffs (NCMA, 2017). Furthermore, the acquisition plan discusses the contract type (firm fixed or cost reimbursement) that would best suit the buyer's needs (NCMA, 2017). These steps support the development of an actual solicitation that can be sent to offerors (NCMA, 2017).

The pre-award phase also includes a solicitation (NCMA, 2017). A solicitation constitutes the intentional selection of standardized documents to aid in offerors submitting proposals. (NCMA, 2017). NCMA (2017) also states that the documents include template contracts, standard forms, description of needs, and terms and conditions that adequately protect both parties.

The final steps in the pre-award phase are requesting offers and conducting source selection, which ultimately lead to a contract (NCMA, 2017). NCMA states that requesting offers begins by validating the solicitation package and then publicizing the opportunity through approved methods to obtain proposals and incite competition. Giving offerors sufficient time and information leads to increased competition, which supports the success of the acquisition (NCMA, 2017).

The award phase begins with source selection, which is the process of determining which company wins a contract (NCMA, 2017). Source selection considers the evaluation of factors stated in solicitation packages and sometimes involves negotiations with offerors (NCMA, 2017). Source selection also considers the past performance of a contractor along with their ability to successfully meet the requirement (contractor responsibility; CMBOK, 2017). Once source selection is completed, a contract is awarded and the final phase, post-award, begins (NCMA, 2017).

The post-award phase consists of critical functions: contract administration, ensuring quality, subcontract management, managing changes, and contract closeout (NCMA, 2017).

Contract administration begins with strong and effective communication (NCMA, 2017). Strong and effective communication includes having two-way dialogue that enables contract performance (NCMA, 2017). This can be achieved through meetings, written reports, and verbal methods of communication (NCMA, 2017).

Contract administration also includes observing, monitoring, and documenting performance (NCMA, 2017). Observation and monitoring help the buyer verify that parties are either acting consummately or perfunctorily (NCMA, 2017). This can then activate different terms and conditions within the contract to correct behavior (NCMA, 2017). Observation and monitoring reveal any issues that might exist in the cost, schedule, or performance of the contract (NCMA, 2017). Recording performance is also an important aspect because it can serve as a written record that can assist with future actions between the buyer and seller (NCMA, 2017).

Contract administration also includes resolving any disagreements between both parties (NCMA, 2017). Disagreements are usually in the manner of claims against parties or requests of equitable adjustments (NCMA, 2017).

Ensuring quality focuses on making sure that products or services received by the buyer are meeting particular industry or contract standards (NCMA, 2017). This includes the implementation of quality assurance tools such as continuous process improvement, six sigma, and International Standards Organization (NCMA, 2017). It also includes

acceptance testing and inspection of specific articles and services (NCMA, 2017). Ensuring quality also emphasizes the recording of any issues or successes so that the buyer can have an accurate performance record for future actions between the buyer and the seller (NCMA, 2017).

Subcontractor management is usually a function performed by the seller (NCMA, 2017). The buyer appoints the seller as the single point of contact for managing subcontractors (NCMA, 2017). The seller's responsibility to manage subcontractors means that the buyer (in this research, the government) has no privity of contract with subcontractors (NCMA, 2017). The lack of privity makes it difficult to enforce sanctions and incentives for subcontractor behavior (NCMA, 2017). The lack of privity ultimately creates issues when trying to manage contractor performance (NCMA, 2017). Fortunately, flow-down clauses that apply to subcontractors are enforceable by the buyer (NCMA, 2017).

Terms and conditions between the buyer and seller may change throughout the life of the contract (NCMA, 2017). These changes are defined through change management (NCMA, 2017). Change management encompasses processing modifications to terms and conditions in a manner that adequately defines the requirement and contract performance (NCMA, 2017). Changes can be either bilateral (both parties must agree) and unilateral (only one party has to agree) (NCMA, 2017). The type of change is mostly dictated by its nature (NCMA, 2017). Equitable adjustments were money has to be exchanged tends to be bilateral while administrative changes end up being unilateral. (NCMA, 2017).

Contract closeout is the final step in the post-award phase of contracting (NCMA, 2017). Closing out a contract relies heavily on the quality and quantity of work performed during contract administration in order to validate that all terms and conditions of the contract have been met (NCMA, 2017). Closing out a contract includes verifying receipt and acceptance of all services (NCMA, 2017). This includes verifying that all payments to the contractor have been made (NCMA, 2017). It also involves returning or disposing of exchanged property, closing subcontracts, and obtaining final patent and royalty reports (NCMA, 2017). Furthermore, closing out a contract includes closing out any open disputes

or claims, signing documentation stating contract completion, and de-obligating any funds that may still be allocated to the effort (NCMA, 2017).

The remainder of this chapter is focused on specific government functions performed post award that compose the quality assurance program and encompass management of contractor performance. These functions are performed by members of the services contracting team. The following section introduces key members of the service contracting team.

D. SERVICE CONTRACTING TEAM

The Federal Acquisition Regulation (FAR) states that the intent of acquisition is to obtain the best value for the organization in a way that achieves public policy objectives, retains the public's trust, and meets requirement in a timely manner (FAR, 2018). To do so, the FAR also establishes the need for integrated teams and empowers them to make sound decisions within their scope of responsibilities (FAR, 2018).

Members include subject matter experts, acquisition professionals, the customer, and the contractors who meet the customer's needs (FAR, 2018). The DoD's approach is not dissimilar from concepts adopted within commercial sectors. The benefit is that integrated product teams (IPT) improve efficiency within a team and therefore within the organization (Monczka, 2012).

The key members of the service contracting team that this research focuses on are the contracting officer and the contracting officer representative (COR).

"Contracting officers have authority to enter into, administer, or terminate contracts and make related determinations and findings." (FAR, 2018, Part 1). They are solely authorized to bind the government into a contract (FAR, 2018, Part 1). They may not bind the government beyond the authority which they are given (FAR, 2018, Part 1). When it comes to contract administration, the government typically appoints an administrative contracting officer. Administrative contracting officers are charged with executing contract administration functions, such as managing contractor performance (NCMA, 2017). The ACO appoints a contracting officer representative (COR) to manage the contractor's

performance (NCMA, 2017). The COR is a technical expert on the services being contracted, such as an aircraft mechanic for an aircraft maintenance contract (NCMA, 2017). They are not experts in the contracting field (NCMA, 2017).

The role of the COR is pivotal in the management of contractor performance (FAR, 2018). They provide technical guidance to the ACO in regard to statements of work and contract specifications (FAR, 2018). CORs also keep the ACO updated on the overall status of the contract (FAR, 2018).

COR duties include reporting compliance with terms and conditions, the contractor's ability to perform the contract, and security violations that may impact the organization. CORs accomplish their duties through various surveillance methods and record their observations for future use in acquisition.

The key members of the services contracting team are pivotal in building the quality assurance program and managing contractor performance. Due to their criticality, the DoD establishes experience and training requirements. The following section discusses the experience and training requirements for CORs.

E. COR TRAINING AND EXPERIENCE REQUIREMENTS

Having the proper amount of people performing acquisition functions in an organization is insufficient (Rendon, Apte, & Apte, 2012). It is equally important to make sure people who are performing acquisition functions are trained appropriately (Rendon, Apte, & Apte, 2012). As discussed in earlier sections, auditability theory demands that the people performing contract management functions possess the correct experience and training. The DoD has implemented standards for training and experience in order to select successful CORs that contribute to a strong quality assurance program.

All CORs must be employees of the U.S. government or foreign government partners, and they cannot be contractor personnel (DoD, 2015). CORs must be assigned for all service contracts or in any other instance the contracting officer determines a COR is necessary (DoD, 2015).

CORs must also meet training and experience requirements that vary based on the complexity of the requirement (DoD, 2015). These requirements include several courses taught through the Defense Acquisition University and the local contracting office (DoD, 2015). Requirements are also met through experiences that showcase the needed competencies for the complexity of the contract (DoD, 2015). The three generalized types of work range from Type A to C (DoD, 2015).

Type A contracts do not typically have technical or administrative complexity (DoD, 2015). Furthermore, they are not very risky and have a low likelihood of needing renegotiation (DoD, 2015). Additionally, Type A contracts tend to be standing requirements that have previously been met with similar contracts (DoD, 2015). In these scenarios, a CORs training and experience requirements are minimal. Experience requirements include working in the agency for at least six months, relevant technical experience in regard to the contracted service, and general competencies with business and performance management (DoD, 2015).

DAU and DoD training requirements for Type A contracts include the following (DoD, 2015):

- Contracting Officer's Representative with a Mission Focus
- COR in a Contingency Environment (when applicable)
- Wide Area Workflow (WAWF) Use
- component-provided ethics training
- any additional training required by the local contracting office (DoD, 2015, p. 27)

CORs are also required to complete refresher training (DoD, 2015). The refresher must include eight hours of COR-specific training every three years or before assuming the role of a COR, or if they have not conducted COR roles for the previous two years (DoD, 2015). They must also complete additional refresher training as dictated by their local

contracting office (DoD, 2015). Additional details on competencies, experience, and training requirements are listed in Appendix Table 2.

Type B contract requirements demand a higher level of training and experience for CORs because of the increase in risk and technical and contractual complexity (DoD, 2015). Their technical expertise will guide them in interpreting technical deliverables and executing complex contract surveillance. CORs in Type B contracts must possess a minimum of 12 months of experience in contract surveillance within the organization (e.g., U.S. Air Force), have relevant technical experience, and meet a broader list of general competencies (DoD, 2015).

CORs in Type B contracts must meet all previously established training requirements for CORs assigned to Type A contracts, but the DAU course is replaced with a course called Contracting Officer's Representative (DoD, 2015).

Refresher training for CORs on Type B contracts includes a minimum of 16 hours every three years, before assuming responsibilities, and if they have not served as a COR within the previous two years (DoD, 2015). Additional details on competencies, experience, and training are articulated in Appendix Table 3.

CORs assigned to Type C contracts are required to have the highest training and experience because of the unique nature of these contracts (DoD, 2015). The most notable difference is the requirement to complete specialized or technical training that will aid with the management of the contract (DoD, 2015). Additional information can be referenced in Appendix Table 4.

COR training requirements are clear and well-communicated within regulations as instructions as demonstrated in Appendix and through the analysis within this section. The same level of clarity and communication is also present for contract language enabling the management of contractor performance. The following section presents how the Federal Acquisition Regulation (FAR) enables CORs to manage contractor performance.

F. MANAGING CONTRACTOR PERFORMANCE

The federal government has guidance and clauses within the FAR to manage quality, which relates to contractor performance, when contracting for services. The guidance and clauses give the government specific rights to inspect services in a manner that protects the government's interests (FAR, 2018, Part 46). This section discusses the types of contract quality requirements along with key clauses that enable the government to manage contractor performance.

Contract quality requirements fall into four general categories and are used as appropriate for contracted services (FAR, 2018, Part 46). First, for commercial items, the government is directed to use customary market practices (the contractor's quality system; FAR, 2018, Part 46). The only time the government should substitute the commercial practices, in ways such as in-process inspection, is when doing so would not interfere with standard processes for the industry (FA, 2018, Part 46).

Second, government reliance on inspection by the contractor directs that the government will not inspect articles or services unless the contracting officer determines that government inspections are in the best interests of the government (FAR, 2018, Part 46). The determination of best interest includes quantifying the expected losses for defective work, the likelihood of the contractor replacing defective articles or services, and the cost of conducting inspections (FAR, 2018, Part 46).

Third, standard inspection requirements require a quality inspection system that both parties agree on (FAR, 2018, Part 46). They must also allow the government to conduct inspections and tests of items or services while in progress (FAR, 2018, Part 46). Finally, the contractor has to keep complete records of their inspection work and make them accessible to the government (FAR, 2018, Part 46).

Fourth, higher-level contract quality requirements are normally reserved for critical items and services. Higher-level contract quality is typically reserved for items or services that require attention to organization, planning, working instructions, documentation control, and advanced metrology (FAR, 2018, Part 46).

The four types of contract quality requirements set precedence for terms and conditions to apply in contracts to manage contractor performance. The clauses used are discussed in the following paragraphs.

The clause titled "Inspection of Services-Fixed Price" gives the federal government the ability to protect its interest when dealing with services acquired using fixed price contracts (FAR, 2018, 52.246). It directs that the contractor implements an inspection system that both parties can agree on (FAR, 2018, 52.246). The clause also describes the government's ability to inspect work without causing delays (FAR, 2018, 52.246). It also gives the government the right to perform an inspection on the contractor premises if needed (FAR, 2018, 52.246). The most potent power the clause gives the government is the right to demand reperformance of services if they do not meet standards, without an increase of costs (FAR, 2018, 52.246). If the contractor cannot reperform the services, the government has the right to modify the contract to account for the services not performed and terminate the contract for default if needed (FAR, 2018, 52.246).

The Defense Federal Acquisition Regulation Supplement (DFARS) includes additional provisions for quality assurance on services as well. One of them includes 252.236-7009, Option for Supervision and Inspection Services, which gives the government the right to direct the contractor to perform any part or all of the supervisions and inspection services related to a construction contract (DFARS, 2018, 252.236-7009). The DoD also establishes the need to develop plans on how to conduct quality assurance, which should focus on areas that are inherently risky when being performed through contract (DFARS, 2018, 237.171-4).

The Air Force has developed a thorough instruction to guide the prescriptions in the FAR and DFARS, Air Force Instruction 63–138, *Acquisition of Services*. The main objective of this instruction is to highly leverage the contractor's quality management and/ or inspection system (Department of the Air Force [DAF], 2017). They implemented a four-step model to evaluate the effectiveness of a contractor's quality management system. The steps in the model are detection, identification, correction, and follow up (DAF, 2017). Detection focuses on finding problems and defects within the contractor's quality management program. Identification focuses on the root causes to the aforementioned

issues. The correction step is designed to solve root causes of quality issues. Finally, the follow-up step is designed to ensure quality-related problems and defects do not reoccur (DAF, 2017). Figure 1 demonstrates the process discussed previously.

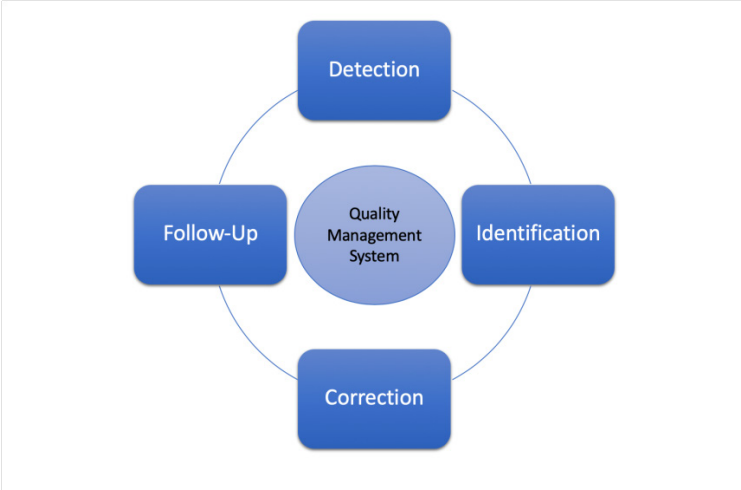


Figure 1. Quality Management System. Adapted from DAF (2017, p. 34)

According to the Department of the Air Force instructions on contract management, that the primary responsibility of quality assurance and oversight is to assess the Quality Management System (QMS) and inform program managers and contracting officers of any deviation in quality (DAF, 2017). This begins with pre-award actions, such as aligning service summary performance objectives with Contractor Performance Assessment Reporting System rating areas and making sure the performance objectives are measurable and able to be surveilled (DAF, 2017). The AFI also directs that performance objectives can be adequately evaluated by government personnel and contractor quality management systems. The government personnel evaluation methodology is described within a Quality Assurance Surveillance Plan, discussed in greater detail later in this report.

After contract award, the focus shifts on validating whether the contractor's QMS is detecting performance issues before the COR is detecting those performance issues. Post-award quality assurance also validates the balance between inspections being performed by the government and the contractor (DAF, 2017).

Significant importance is placed on making sure the government is not replacing the contractor's own quality assurance system while retaining the right to refuse or request reperformance of defective services. The government implements their rights in the form of a Quality Assurance Surveillance Plan (QASP). The following section describes the purpose and contents of a QASP.

G. QUALITY ASSURANCE SURVEILLANCE PLAN

"The purpose of a QASP is to provide a planned process for surveilling the contractor's actual performance and comparing that performance against the contractual requirements to determine conformity with the technical requirements of the contract." (DAF, 2017, p. 43). The Department of the Air Force's intent is to encompass the following (DAF, 2017):

- Performance planning and preparation
- performance assessment surveillance
- performance results analysis and reporting
- performance follow-up with all parties to correct performance issues.

The QASP also contains the minimum required surveillance requirements which will vary based on the risk associated with the contracted services (DAF, 2017). It also specifically lists the surveillance methods that will be used, along with the frequency (DAF, 2017). This plan is normally approved by the contracting officer, program manager and/or unit commander, and the quality assurance program coordinator (DAF, 2017).

The *Defense Acquisition Guide (DAG*), as hosted by Defense Acquisition University (DAU), provides a general set of questions that the document should answer once completed:

- Is the value of evaluating the contractor's performance on a certain task worth the cost of surveillance?
- Has customer feedback been incorporated into the QASP?

- Have assessment tools, i.e., methods of surveillance, sampling guides, etc., been provided in the QASP? (DAU, 2018)

The DAG also provides templates in order to facilitate the creation of documents. These templates include listing the guiding principles behind surveillance (mission, vision, and purpose). Moreover, they include the authority for development of a QASP and the specific roles and responsibilities of the program manager, contracting officer, COR, other key government personnel, and contractor provided representatives. The templates also list the definition of performance as displayed in the contract and CPARS, which typically range from *unsatisfactory* to *excellent/outstanding* (DAU, 2018). Finally, the QASP discusses how performance will be reported and documented (DAU, 2018).

The QASP ensures all key personnel are aware of the methods through which the government evaluates contractor performance. The following section describes the methods used by the government when evaluating contractor performance.

H. GOVERNMENT SURVEILLANCE METHODS

The government retains the right to inspect all services performed by a contractor to the extent that is practicable for both parties (DAF, 2017). This can be done through four main types of surveillance: 100% inspections, periodic surveillance, customer complaint, or audit reviews (DAF, 2017). The methods chosen for specific service contracts should aim to implement adequate risk management (DAF, 2017).

The 100% inspection method should primarily be used for contracts that do not occur frequently, are critical to the mission, or have stringent performance requirements (DAF, 2017). The COR's job is to inspect the contractor's performance every time they are performing services (DAF, 2017).

Periodic surveillance methods involve any method in which the COR inspects less than 100% of the time (DAF, 2017). This may include monthly or quarterly inspections or methods that encompass target areas (DAF, 2017). It can also include spot inspections or random samples of specific performance objectives within the performance work statement (DAF, 2017). Special care should be taken to analyze "in-process" performance (DAF,

2017). Even though it is not 100%, the goal of this surveillance method is to adequately verify that the contractor is meeting all required performance objectives (DAF, 2017).

The customer complaint method is an inexpensive method to conduct surveillance but requires additional investment in training of personnel (DAF, 2017). Customers who receive services should receive training on what the contractor should be doing (DAF, 2017). Not doing so may generate customer complaints that do not necessarily identify performance issues (DAF, 2017). Additional training can also lessen the likelihood of a customer inadvertently asking the contractor to provide services that are not part of the contract (DAF, 2017). CORs must be cautious in making sure the use of customer complaints does not turn into a delegation of their duties to perform surveillance (DAF, 2017).

The audit review method is focused on leveraging the contractor's Quality Management System (DAF, 2017) by using their own process outputs. This involves inspecting audits conducted by the contractor and making sure they are meeting performance requirements, identifying quality issues, and taking initiative to correct any deviations in quality (DAF, 2017). The COR should make every effort to schedule their surveillance in a period where the reports and metrics would already be prepared by the contractor (DAF, 2017).

Regardless of the methods used for surveillance, the COR should establish a schedule to adequately capture the contractor's overall performance in accordance with their contract (DAF, 2017). The schedule can include monthly or quarterly surveillances (DAF, 2017). The frequency should be dictated by the time needed to evaluate all critical performance measurements and 10%-20% of non-critical performance measurements (DAF, 2017). The actual schedule itself must also be treated as "For Official Use Only" in order to avoid skewing results (DAF, 2017).

Once a surveillance is complete, the contractor should have the opportunity to respond to discovered performance issues (DAF, 2017). Any lack of correction can be documented for future collection in CPARS (DAF, 2017). Furthermore, the COR should

document the reasoning behind not conducting surveillance in accordance with completed schedules (DAF, 2017).

The methods described previously, along with the remaining components of the QASP, are essential for managing contractor performance. The following section discusses the government's tool for recording contractor performance.

I. CONTRACTOR PERFORMANCE ASSESSMENT REPORTING SYSTEM

Organizations need a structured way of evaluating suppliers, such as a scorecard (Monczka, 2012). Scorecards are used to make sure certain supplier criteria are met prior to awarding a contract and to track supplier performance over time (Monczka, 2012). Criteria can include cost control, delivery, quality management, and other qualitative and quantitative factors (Monczka, 2012). The government has developed a scorecard system for its suppliers and records their ongoing and final performance through the Contractor Performance Assessment Reporting System (CPARS).

CPARS encompass a wide array of data to include contract type, contractor name, complexity of effort, value of contract, period of performance, and location (General Services Administration, [GSA], 2017). CPARS is used for suppliers delivering supplies, large assets (airplanes), systems engineering, construction, and services. The following discussion focuses on the performance ratings for services. Once entries are recorded, the information is used to determine past performance for a contractor.

CPARS assesses supplier performance using five different ratings across six or more areas of performance (GSA, 2017). These ratings are bolstered with quality and easily discernable narratives that support ratings (GSA, 2017). The General Services Administration has established five ratings as described below:

- Exceptional: Performance meets contractual requirements and exceeds many to the government's benefit. The performance element or sub-elements had few minor problems for which corrective actions were highly effective.

- Very Good: Performance meets contractual requirements and exceeds some to the government's benefit. The performance element or sub-element being evaluated was accomplished with minor errors for which corrective actions were effective.

- Satisfactory: Performance meets contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.

- Marginal: Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being evaluated reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.

- Unsatisfactory: Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains a serious problem(s) for which the contractor's corrective actions appear or were ineffective. (GSA, 2017, adapted from table on p.48)

The ratings listed must always be justified through events that generated significant proof of the respective level of performance (GSA, 2017). For example, if the contractor was rated exceptional, no significant weaknesses must exist in their performance. If performance was unsatisfactory, negative results from a management tool should support the rating (GSA, 2017). Ratings apply to six or more categories: quality, schedule, cost control, management, use of small businesses, regulatory compliance, and other areas unique to the contract (GSA, 2017).

Quality, as it pertains to services, typically involves evaluating operations support along with design contracts and construction (GSA, 2017). Areas of consideration include whether reports delivered are accurate, services meet specifications or standards laid out in

the contract, professional standards are met, and the level of government direction that was required when performance problems arose during performance (GSA, 2017).

Schedule focuses on evaluating the supplier's timeliness on completing tasks or overall contracts. This includes management of work along with meeting particular milestones and/or deadlines (GSA, 2017). It also includes contractors correcting schedules without government intervention to meet requirements. Finally, the schedule category includes whether the contractor communicated schedules and changes via deliverables per contract terms (GSA, 2017).

Cost control focuses on assessing the supplier's ability to forecast, manage, and control costs within a particular contract (GSA, 2017). Furthermore, cost control assesses what efforts the contractor takes to effectively manage resources. Specific articles to evaluate include accuracy of billing, internal budgetary controls, innovative efforts that decrease costs, and whether the contractor notified the government about cost overruns (GSA, 2017).

Management focuses on assessing all integration and coordination efforts to ensure a contract is properly executed (GSA, 2017). This includes determining the contractor's orientation with all stakeholders, along with initiative in fixing issues, management of property, and management of subcontracts (GSA, 2017). There are also subcategories within the management section (GSA, 2017). General Services Agency (2017) describes them as:

- Management responsiveness: The measure of responsive and cooperative behavior with the customer and government to ensure positive contract outcomes.

- Subcontract management: The measure of integration of subcontractors with prime contractors, efforts to rectify subcontractor problems and to prevent them from impacting overall performance, and the compliance of subcontractors with regulatory and safety standards.

- Program management and other management: The extent to which the contractor empowers program managers to complete contracts, along with the manner in which the contractor handles risk to include mitigation plans.

- Management of key personnel: The assessment of the contractor's ability to select, retain, support, and replace key personnel for contract efforts. This includes using adequate qualification factors for personnel, the effectiveness of key personnel, and the adequate replacement of personnel by using the same qualifications or exceeding them (GSA, 2017, p. 64).

Use of small businesses is somewhat unique to the government. This category focuses on making sure the contractor is complying with FAR subpart 19.7 and 15 U.S.C. § 637, which contain statutory requirements for including small businesses in some contracts (GSA, 2017). This also includes evaluating a contractor's plan to include small businesses in their effort (GSA, 2017).

Regulatory compliance focuses on making sure the contractor monitors, reports, and corrects any issues relating to things like human trafficking, nonpayment of subcontractors, tax delinquency, defective cost or pricing data, terminations, and suspensions and debarments (GSA, 2017). This also includes the assessment of compliance with the Clean Air Act, the Clean Water Act, safety, and labor regulations (GSA, 2017).

The *other areas* section is focused on assessing factors that only apply to the particular contract an sometimes to cover areas that do not align with the intent of other sections of the report (GSA, 2017). Incentive or award fee justifications are usually captured in this area along with things such as security compliance (GSA, 2017).

The government's implementation of a scorecard system is pivotal in the management of contractor performance to guide future procurement. The most important factor of their scorecard system is the fact that the contractor has an opportunity to provide input about their ratings in a manner to object or concur (GSA, 2017). Contractor comments ensure that ratings are fair, accurate, and transparent for all parties involved (GSA, 2017).

The completion of evaluations in CPARS is a critical component of the quality assurance program. CPARS makes it possible to manage contractor performance. The following section describes the issues that the DoD has encountered in managing contractor performance due to failures within their quality assurance program.

J. CURRENT ISSUES WITH THE MANAGEMENT OF CONTRACTOR PERFORMANCE

The DoD IG and GAO revealed several flaws in DoD's implementation of contractor surveillance and quality assurance of contractors. The DoD IG considers contractor management and oversight to be one of its top management challenges (DoD IG, 2017b). Furthermore, the GAO concludes that the DoD's contract management, as part of its *High-Risk Series*, could be done more effectively (GAO, 2017b).

In FY2015, the DoD IG identified that challenges still exist in having adequate contractor oversight on service contracts, even though they represent over 50% of contract spend (DoD IG, 2015). Furthermore, they discovered that the DoD's lead agency for contract management, the Defense Contract Management Agency (DCMA), did not have an overarching quality management policy in that same year (DoD IG, 2015b). The DoD IG also discovered that the feedback mechanisms to implement process improvement did not exist at the department head level or in the individual branches of the military (DoD IG, 2015b).

The GAO discovered significant issues in the way CPARS is used across the DoD. GAO discovered that Army leadership failed to use CPARS data to determine the quality and impact contractors delivered to its operational forces (GAO, 2017a). The justification was that the Army's perception was a lack of trust in adequate use of CPARS, or in other words, inaccurate contractor ratings (GAO, 2017a). The DoD IG also discovered that the DoD did a poor job of preparing narratives to support CPARS ratings between 2013 and 2016 (DoD IG, 2017). The DoD was also negligent in rating all required assessment factors and accurately describing contract efforts within CPARS (DoD IG, 2017a). More importantly, the DoD IG discovered that CPARS entries were on average 73 days late, effectively barring source selection officials from having accurate contractor past

performance data (DoD IG, 2017a). One of the main reasons for the aforementioned findings is a lack of effective CPARS training within the workforce (DoD IG, 2017a).

The DoD finds itself struggling with contractor oversight even though it has established COR training and experience standards. One of the most significant deficiencies discovered by the DoD IG was that CORs did not have sufficient training in completing CPARS reports (DoD IG, 2017a). Insufficient training leads to inadequate reporting, which hinders the use of past performance, through CPARS, for source selection. Additional issues are prevalent when monitoring services. For example, operations in U.S. African Command (U.S. AFRICOM) did not adequately account for its contractor personnel, nor did it do a proper job of mitigating operational risks when selecting contractors (GAO, 2015). The GAO also discovered that AFRICOM did not have proper operational contract support (OCS) training, which includes government oversight, and the subordinate command levels (GAO, 2015). Lack of OCS training significantly damages the capability of the COR to plan and perform oversight for service contracts.

The issues the DoD currently experiences with contractor oversight have a significant impact on its ability to manage service contracts in the future. As a result of these issues, the DoD is more vulnerable to contractor fraud waste and abuse due to lack of oversight, as well as the potential for adverse selection of contractors because of untimely and improperly prepared past performance information.

The issues discussed in this section were identified by government agencies. The following section discusses previous studies conducted by the academic sector.

K. PREVIOUS STUDIES

Several studies have been conducted on the DoD's contract management processes. All have had a limited scope due to time and lack of data. Even so, many have yielded positive results.

A Navy-centric study focused on the contract management process provided results demonstrating that there is room for improvement in contract administration and closeout (Rendon, 2015). The research was conducted through qualitative means and involved

surveying process maturity via surveys to 185 Navy contracting officers. Based on the Contract Management Maturity Model (CMMM), contract administration and closeout processes were rated at the low end of process maturity (basic level). In other words, the level of maturity of the process would not necessarily guarantee planned results (Rendon, 2015). Recommendations from this study included institutionalizing processes and increased training for contract administration personnel, including the COR (Rendon, 2015).

An Army-centric study that focused on the contract administration process yielded results that amplified the differences in quality assurance between Contiguous U.S. and Outside Continental U.S. (CONUS and OCONUS) environments (Peel & Acevedo, 2016). The study revealed that most OCONUS CORs focused extensively on quality assurance and technical oversight while CONUS CORs were more focused on completing administrative duties (Peel & Acevedo, 2016). Both technical surveillance and administrative proficiencies are required to produce adequate records of contract performance (Peel & Acevedo, 2016). The study also discovered that COR training and allotment of time for duties was not universal across the Army (Peel & Acevedo, 2016). Recommendations from this study included improving overall COR human capital, training, and communication among staff and contractors. It also concluded that oversight and leadership support is needed to increase both CONUS and OCONUS (Peel & Acevedo, 2016).

Additional research has shown that the titles of individuals tasked with monitoring contractor surveillance is not the same across the board. For example, the Navy places contracting officers in charge of surveillance instead of CORs, while the Army and Air Force used CORs instead of contracting officers (Rendon, Apte, & Apte, 2012). The same study revealed that the Air Force had CORs with less than three years of experience performing surveillance duties, while the Navy had CORs with over three years of experience performing surveillance duties (Rendon, Apte, & Apte, 2012).

Another study, focused on the Navy, was conducted using an interview and survey format to determine the definition of service contract success (Miller, 2012). The study revealed that there was not a uniform definition of success across the three naval

contracting commands (Miller, 2012). The study also concluded that CORs were not significantly involved in the pre-award phase of the acquisition process, yet were expected to be the eyes and ears of the taxpayer to ensure contractor compliance (Miller, 2012). Furthermore, the program managers interviewed in the study placed an emphasis on quality assurance in reporting, yet DoD institutional goals only required the completion of QASPs for contracts over simplified acquisition threshold and CPARS for contracts over $1 million, which was only a little over 20% of the spend analyzed in the study (Miller, 2012). The study revealed that even though quality assurance is important, it is only formally used for a small portion of the total money spent on contracts (Miller, 2012).

Another Army-focused study attempted to determine a relationship between service types, contract types, levels of competition, and recorded contractor performance in CPARS (Hart, 2013). The study revealed that the dollar amounts and levels of competition highly affected ratings in CPARS (Hart, 2013). More importantly, they discovered that failure rates were not high within CPARS (Hart, 2013). The study discovered that using cost reimbursement contracts had a much higher failure rate than others. Furthermore, lack of competition further increased the likelihood of a contract failing (Hart, 2013). Even though this was an extensive study, the study did not find any relationships between quality assurance systems and overall contractor ratings in CPARS (Hart, 2013).

Thus, previous studies have attempted to find a relationship between contract management (to include quality assurance) and CPARS ratings. The remainder of this research discusses the impact of the quality assurance program on contractor performance.

L. SUMMARY

The purpose of this research is to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts contractor performance. This chapter set the foundation for this research by discussing the theoretical basis for analyzing the government's quality assurance program and contractor performance. Furthermore, the chapter discussed the service contracting process. Additionally, this chapter introduced key members of the service contracting team along

with training and experience requirements for CORs. Moreover, this chapter introduced the clauses and guidance that enables the management of contractor performance.

This chapter also discussed how the QASP and included surveillance methods make up the quality assurance program. Additionally, this chapter introduced CPARS, along with current issues the DoD faces in managing contractor performance. Finally, this chapter discussed previous studies conducted in an attempt to define the relationship between the government's quality assurance program and contractor performance.

The following chapter explains the research methodology used to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts contractor performance.

III. RESEARCH METHODOLOGY

A. INTRODUCTION

The purpose of this research is to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts contractor performance. This chapter discusses the sample and sampling method used when data was extracted from recorded U.S. Air Force services contracts. Furthermore, this chapter discusses the operationalization of response, explanatory, and control variables. Figure 2 provides a concept of the proposed research methodology.

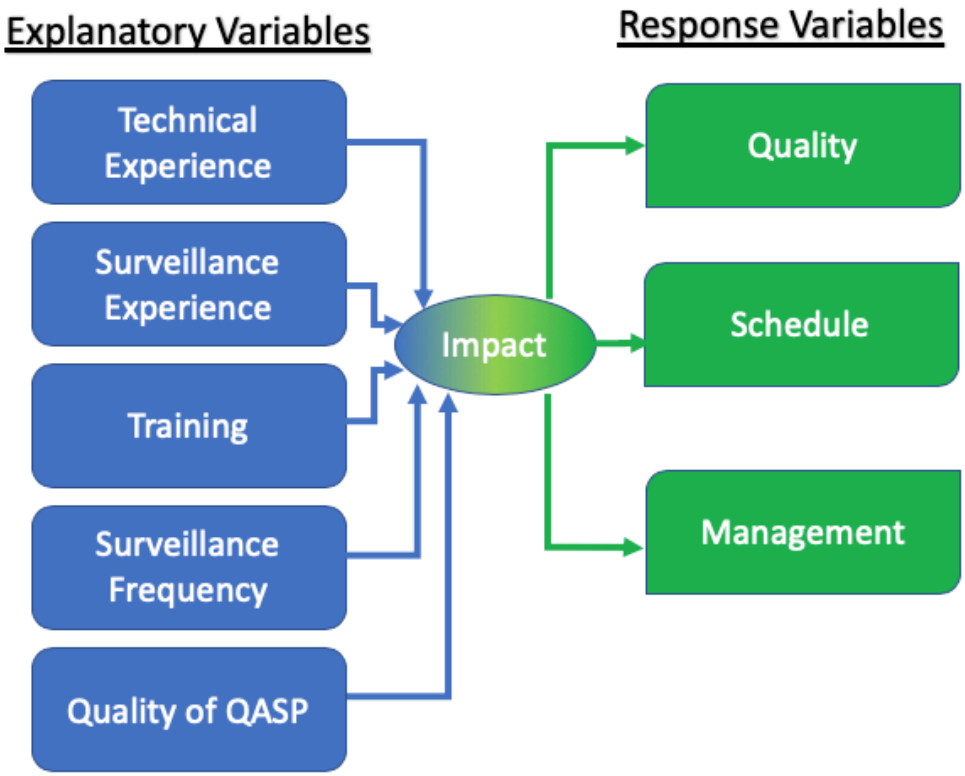


Figure 2. Conceptual Model of Research Methodology

B. SAMPLE

The unit of analysis for this research was the quality assurance program and contractor performance data for installation service contracts. A sample of 30 quality assurance programs and contractor performance data for installation service contracts was taken from the U.S. Air Force contracted installation services portfolio. The sample contains sufficient information about the quality assurance program and contractor performance to conduct research on how a quality assurance program impacts contractor performance.

1. Data Collection

Data collection began by identifying the systems that could provide the data needed to determine the impact of the quality assurance program on contractor performance. The CORTT system provided data for the government's quality assurance system. The CPARS system provided data for contractor performance. Once systems were identified, three military installations were chosen to provide data. Each installation provided 10 service contracts with corresponding CORTT and CPARS data.

The first set of data was collected in person from the Quality Assurance Program Coordinator (QAPC) within a contracting squadron. This was done to validate that the systems and the manager of those systems could provide all necessary data. Additional sets were collected via a data call using an Excel spreadsheet, which is available for review in Appendix 4.

The CORTT system was used to derive information about the COR's surveillance and technical experience, training, and surveillance frequency. Furthermore, CORTT provided access to the QASPs for each contracted service.

The CPARS provided contractor performance data. The data included each service contract's complexity, total dollar value, and respective performance ratings for each of the three main categories listed in CPARS: quality, schedule, and management. Cost was not assessed because the sample only contained firm fixed price. Firm fixed price contracts do not typically have cost as a performance of measure. CPARS also provided a description of each contracted service. Additional categories existed within CPARS, such as small

business and regulatory. They were excluded from the study due to the lack of uniformity across the data set—not all contracts were evaluated in those areas.

Finally, the sample included sensitive source selection information (SSI), which required sanitation. All contractor, COR, and contracting officer names were removed to protect SSI. Furthermore, the military installations from which the data was extracted are not named within this research. This section discussed the methods used to take a sample from the population of installation contracted services. The following section will provide additional details about the sample.

2. Additional Sample Details

This section describes additional details about the sample. This section also includes data means, standard deviations, and correlations.

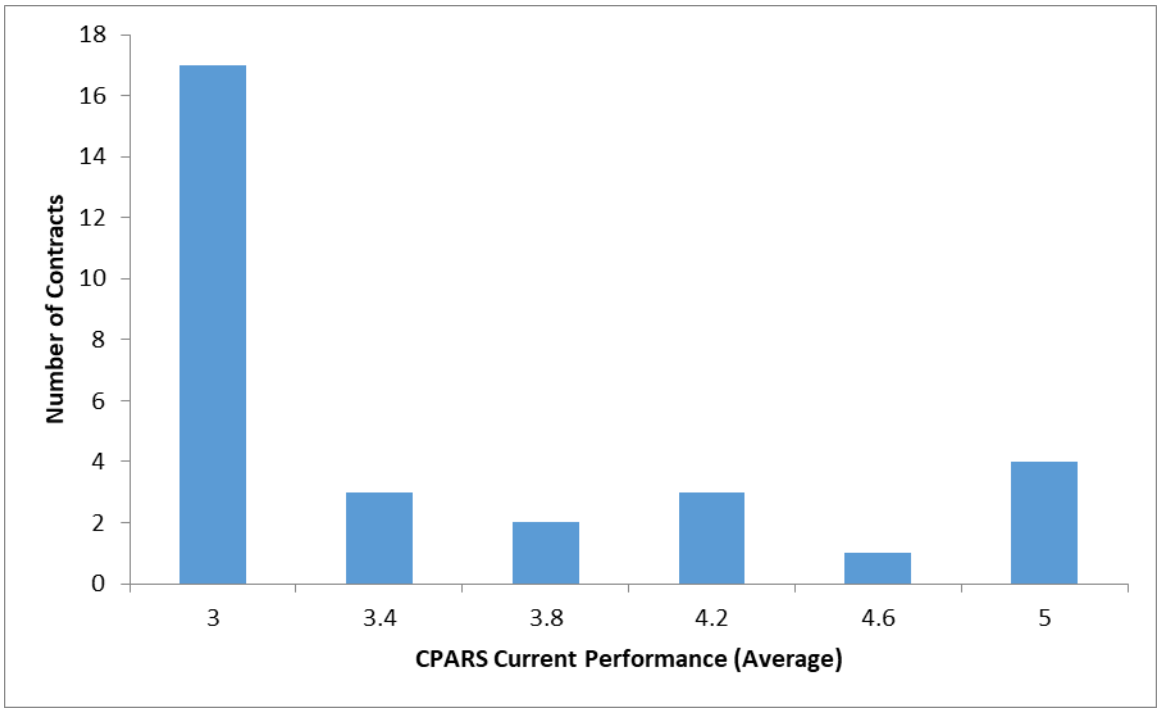
The sample contained a wide variety of installation services in order to avoid bias toward one particular service type. The sample also included common services such as grounds maintenance, custodial, and laundry. The sample also consisted of unique services such as corrosion control, architect and engineering, and demolition services. Additional unique services included courseware development for space operations, teleradiology network, linear accelerator services, and software maintenance.

Despite the DoD's approach to standardization, three grounds maintenance services had different variables. The one grounds maintenance contract that scored a satisfactory in CPARS had the COR with the most surveillance experience (20 years). The remaining two grounds maintenance contracts had CORs with relatively high surveillance experience (9 and 13 years, respectively), yet their contracts were scored as exceptional.

Even though the contract requirements were different, they all held one attribute constant: contract type. The sample only includes firm fixed price contracts. The exclusion of other contract types was a deliberate choice to avoid large variation available in independent variables (Quality Assurance Program attributes). Contracts other than firm fixed price tend to have CORs assigned along with quality assurance personnel that significantly impact their ability to surveil contract performance.

The overall dollar value of services had a wide range with a mean of $20.9 million and a standard deviation of about $60 million.

Another strange distribution for the sample included performance ratings which consisted mostly of very good or exceptional ratings with zero unsatisfactory ratings. Furthermore, every CPARS rating contained the contractor's concurrence, which means that the contractor, although part of a bilateral decision, gave concurrence every time regardless of the rating given. The histogram in Figure 3 displays the current performance averages within the sample.



Note: 3 = Satisfactory, 4 = Very Good, 5 = Exceptional in terms of contractor performance.

Figure 3. CPARS Average Current Performance

Moreover, several CORs performed surveillance on contracts for which they did not have the necessary technical experience (technical experience is described in the following section). Even so, CORs who were performing quality assurance functions had a wide range of surveillance/contracting experience ranging from one year to 20 years.

Additionally, surveillance frequency was listed as monthly. Even so, the quantity of reports in CORTT varied significantly. Some contracts had as few as six surveillance reports, while the max in the sample was 32. The variance in the number of reports was significant because all the contracts had a one-year period of performance with monthly surveillance schedules. This is significant because it demonstrates how well CORs followed their QASPs.

A careful review of QASPs also demonstrated that most contracts had an equally thought-out approach to managing contractor performance. There were zero QASPs that did not meet DoD standards (operationalization described in the following section). Unfortunately, only seven contracts had sufficient detail to demonstrate purposeful planning that aligned with the specific contract.

Finally, the following variables, although likely to influence contractor performance, were excluded from the principal model:

- contract dollar value
- complexity
- acquisition method
- specific surveillance methods
- contract type
- contractor experience

Table 1 includes means, standard deviations, and correlations for all the variables used in determining the impact of the quality assurance program on contractor performance.

Table 1. Descriptive Statistics for Variables in Model

			Correlation														
	Mean	***S.D.***	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*
(1) COR Technical Experience	0.50	0.51	1														
(2) COR Surveillance Experience	5.23	5.36	0.3099	1													
(3) COR Training	0.90	0.31	0.33333	0.33098	1												
(4) Surveillance Frequency	15.60	7.20	0.15059	0.06768	0.16941	1											
(5) QASP Quality	2.23	0.43	-0.0788	0.11015	0.18389	0.03115	1										
(6) Previous Quality	3.64	0.73	0.30389	0.16072	0.06073	0.20381	0.125	1									
(7) Current Quality	3.59	0.82	0.52868	0.19943	0.24578	0.4673	0.0892	0.79405	1								
(8) Previous Schedule	3.71	0.81	0.38585	0.17369	0.16591	0.19546	0.1037	0.79436	0.6997	1							
(9) Current Schedule	3.55	0.78	0.51331	0.22816	0.24355	0.27866	0.2239	0.76113	0.864	0.721	1						
(10) Previous Management	3.32	1.04	0.22338	0.28636	0.51483	0.17483	0.2568	0.70392	0.4635	0.6108	0.50338	1					
(11) Current Management	3.29	0.60	0.24254	0.30024	0.16803	0.39076	0.2801	0.67913	0.6966	0.4816	0.67883	0.61835	1				
(12) Past Performance Average	3.60	0.84	0.37607	0.26118	0.37053	0.20103	0.1129	0.91752	0.7278	0.8912	0.74441	0.90907	0.5886	1			
(13) Current Performance Average	3.47	0.67	0.50594	0.25342	0.2361	0.29952	0.2073	0.80297	0.9478	0.7152	0.94053	0.55934	0.842	0.7662	1		
(14) Dollar Value	$ 20,998,453	$ 59,883,787	-0.0128	-0.1172	-0.412	0.05105	-0.1735	0.30778	0.0797	0.0357	-0.0414	-0.1054	-0.1522	0.0513	-0.023	1	
(15) Listed Complexity	1.57	0.68	-0.0499	-0.1608	-0.0499	-0.361	0.122	0.00905	0.0022	0.1239	0.04149	0.09071	-0.1246	0.158	0.0303	0.153557	1

*Note: n = 30

C. OPERATIONALIZATION OF VARIABLES

Deciphering the impact that the quality assurance program (COR experience, training, surveillance frequency, and QASP) has on contractor performance required establishing response and explanatory variables. Furthermore, it required implementing statistical controls. Model development also required the transformation of qualitative data into quantitative data. This section will describe the applicable variables along with their transformation, statistical controls, and transformation of data.

1. Response Variables

The purpose of this research is to determine how explanatory variables impact contractor performance. Contractor performance is gained from determining overall ratings in CPARS. The variables used for this research include contractor performance regarding quality, schedule, and management. These variables were transformed into quantitative data by assigning a numerical value (one through five) based on the rating recorded within CPARS. One was assigned for unsatisfactory performance, two for marginal, three for satisfactory, four for very good, and five for exceptional. Furthermore, in order to facilitate linear regression, the response variables are combined into one average of the recorded performance areas.

2. Explanatory Variables

Explanatory variables that represent the quality assurance system and contribute to contractor performance included COR technical experience, surveillance/contracting experience, training, surveillance frequency, and the quality of the QASP.

COR regulations and policy listed in the literature review identify the need for CORs to have technical experience. Even so, it is not always likely that a technically savvy COR will be assigned to a corresponding contract. Data collected from CORTT revealed the Air Force Specialty Code (AFSC) of the respective COR. If the AFSC was closely associated with the service description, a one was assigned to the variable. If not, a zero was assigned.

Another factor that was taken into play was the number of years of experience a COR had in fulfilling contracting and surveillance related actions. This was determined based on overall nomination and renewals in CORTT, along with short phone conversations validating the information in the system. The variable was assigned a corresponding integer based on the total years they had performed COR duties. Additionally, the frequency of surveillances completed for the contract were extracted from CORTT and tallied numerically.

The final COR variable extracted from CORTT was whether they had completed the required training; the majority of the CORs within the sample had completed training. This was because it is not likely a COR will be assigned without training. Even so, three observations within the sample had CORs with no training.

The remaining variable from CORTT, the quality of the QASP, underwent additional consideration before converting into qualitative data. Based on the discussion within the literature review, a one, two, or three was awarded to the QASP. If the QASP outlined the minimum surveillance requirements to address specific risks areas, it was awarded a one. If the document demonstrated additional considerations for the contract, such as a specific surveillance schedule, or exclusion or emphasis on a certain surveillance method, clear list of responsible parties, it was awarded a two. If the QASP demonstrated meticulous and specific examples of how surveillance would be conducted, it was awarded a three.

3. Controls

One of the most notable controls in the model is contractor concurrence and comments against ratings. The CPARS system currently allows for a bilateral exchange to happen prior to ratings being finalized. Although highly unlikely, the contractor may not concur with ratings. To control for this, all of the samples used in this study included contractor concurrence of the CPARS report.

D. MODEL SPECIFICATION

The following is the model specified for the purpose of this research:

$$Y_{KT\_PRFMC} = \beta_0 + \beta_1 X_{CORSE} + \beta_2 X_{CORTE} + \beta_3 X_{CORTRNG} + \beta_4 X_{SF} + \beta_5 X_{QASP\_Q}$$

KT_PRFMC = Contractor Performance

CORSE = COR Surveillance Experience

CORTE = COR Technical Experience

CORTRNG = COR Training

SF = Surveillance Frequency

QASP_Q = QASP Quality

E. SUMMARY

The purpose of this research is to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts contractor performance. This chapter discussed the data collection methods used to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts overall contractor performance. This chapter also discussed additional sample details that give clarity to the scope of the study. The chapter also discussed the methods used to operationalize variables, such as the quality of a QASP. Furthermore, it discussed the proposed model for analysis. The following chapter presents and analyzes the results of the operationalization of the data.

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IV. ANALYSIS

A. INTRODUCTION

This chapter presents and analyzes the sample collected in order to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts contractor performance. It discusses an overview of results from a statistical perspective and presents answers to the research questions. Finally, the chapter provides some implications based on the research.

B. OVERVIEW OF RESULTS

The sample of quality assurance programs and contractor performance ratings consisted of 30 unique contracts. The *R*-Squared value shows that 36.85% of variation within the line are explained by the explanatory variables. The majority of explanatory variables had significantly high P>|t| value results, which are explained in the following sections. Figure 4 displays the summary of the linear regression.

Source	SS	df	MS	Number of obs =	30
				F(5, 24) =	2.80
Model	4.79849908	5	.959699815	Prob > F =	0.0395
Residual	8.22372314	24	.342655131	R-squared =	0.3685
				Adj R-squared =	0.2369
Total	13.0222222	29	.449042146	Root MSE =	.58537

CurrentPer~e	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
corte	.6296351	.2372261	2.65	0.014	.1400244	1.119246
corse	.0092328	.0221426	0.42	0.680	-.0364673	.0549328
cortrng	-.0617983	.4013232	-0.15	0.879	-.8900887	.7664922
sf	.020463	.0153914	1.33	0.196	-.0113033	.0522293
QASPQ	.3663538	.2611607	1.40	0.173	-.1726555	.9053631
_cons	2.021736	.6464898	3.13	0.005	.6874466	3.356026

Figure 4. Regression Analysis

C. ANALYSIS OF FINDINGS

The purpose of this research is to determine how the government quality assurance program (experience, training, surveillance frequency, and quality plan) impacts contractor performance. The regression analysis displayed above led to the following findings.

1. Impact of COR Experience on Contractor Performance

The regression conducted above shows a statistically significant relationship, within the sample, between COR technical experience on contractor performance. The *p*-value was .014, which is less than the typically accepted .05 for statistically significant information. The regression further reveals that average contractor performance increases .629 if the COR has technical experience in the requirement compared to no experience within the sample.

COR surveillance experience, although varied, resulted in a *p*-value of .680. The value demonstrates that surveillance experience does not represent a statistically significant impact on contractor performance within the sample. The high *p*-value demonstrates that there is no conclusive evidence on how COR surveillance experience affects contractor performance.

2. Impact of COR Training on Contractor Performance

The regression analysis conducted revealed a *p*-value of .879 for the sample. The results indicate that there is no statistically significant evidence that COR training directly impacts contractor performance within the sample. The high *p*-value does not provide sufficient information to determine the impact that COR training has on contractor performance within the sample or the population.

3. Impact of Surveillance Frequency on Contractor Performance

The regression analysis conducted revealed a *p*-value of .196 for the sample. The results indicate that there is no statistically significant evidence that surveillance frequency directly impacts contractor performance within the sample. Furthermore, the results are

inconclusive as to whether surveillance frequency negatively or positively impacts contractor performance within the population.

4. Impact of Quality of Surveillance Plan on Contractor Performance

The regression analysis conducted revealed a *p*-value of .173 for the sample. The results indicate that there is no statistically significant evidence that surveillance frequency directly impacts contractor performance within the sample. The high *p*-value does not allow for conclusions to be made about how the quality assurance surveillance plan impacts contractor performance.

Based on the high *p*-values associated with most variables, it is difficult to determine how the factors listed above impact contractor performance. Even so, the research has pertinent implications that are discussed in the next section.

D. IMPLICATIONS OF FINDINGS

The statistical significance discovered in COR technical experience reveals important factors to consider when assigning CORs to post award functions, such as managing contractor performance. Perhaps selecting CORs with technical experience could result in the identification and correction of issues prior to the reporting period for CPARS. A COR with technical experience is more likely to understand the mechanics with performing a contract requirement alongside the actual performance objective. For example, if a contractor is asked to maintain a readiness level of 95% for vehicles, a technically experienced COR may understand that doing so requires rotation of vehicles, and a diverse skill set among mechanics (electrical, fuel systems, mechanical, etc.). This could assist the COR in validating performance by focusing on observing the labor force makeup and knowledge base more so than paper records of performed maintenance. In a perfect world, the COR would be able to physically validate a maintenance task due to their technical experience.

Another critical implication, although outside of this model, is how COR technical experience can impact multiple phases of the contracting cycle. A COR's technical experience can have significant benefit during the pre-award phase. The COR's technical

experience could lead to developing Performance Work Statements (PWS) and QASPs that enable contract success. Technical experience could ensure that product, exchange, and governance rules are adequately incorporated for a specific contract. For example, a technically experienced COR could outline specific methods for completing grounds maintenance tasks. A COR would also be able to select the appropriate surveillance method to validate contractor performance, such as in process inspections vs. random sampling.

A COR's technical experience can also result in benefits during the award phase. Technical experience could aid in technical evaluations of offeror proposals. Their technical expertise could help the procurement team avoid adverse selection by having the COR critically analyze technical solutions proposed by the offeror. The COR's technical expertise could also assist in discussions by being able to translate technical information into language that contracting can use to create a negotiation position.

Speculation can be made about the remaining variables even though the regression did not demonstrate statistically significant results. For example, QASP quality and surveillance frequency did not result in a low enough *p*-value; even so, agency theory states that well-defined governance rules tend to reduce discretionary behavior. A reduction in discretionary behavior makes it possible for both the principal and agent to reach a win-win outcome after contract completion. QASP quality and surveillance frequency are both products of governance rules. On the other hand, QASP quality and surveillance frequency could arguably lead to the identification of more issues with contractors, which would lower contractor performance, as recorded in CPARS.

Similar speculations can be made about COR surveillance experience and training. Even though both explanatory variables did not result in a p-value $< .05$, they are still likely to impact contractor performance. Their impact on contractor performance can be discerned from the fact that adequate training and experience by personnel form part of the auditability triangle (Rendon, 2015). The auditability triangle makes it possible for organizations to perform procurement-related activities such as contract administration, which includes management of contractor performance. Furthermore, surveillance experience could lead a COR to be assigned to higher risk contracts, which would leave lower risk installation level contracts with CORs who have less surveillance experience. A

COR with less surveillance experience may miss particular contractor performance issues. On the other hand, a COR with additional surveillance experience is more likely to catch errors in contractor performance, which could lead to a lower observed contractor performance. This may have been the cause of a high *p*-value within the model.

Additionally, training could result in a change in contractor performance due to a COR leveraging institutional and procedural knowledge while performing contractor surveillance. A COR without the requisite training may not understand how to adequately fill out CPARS, which can give a contractor room to rebut negative ratings and achieve higher contract performance. Similarly, a COR with training is more likely to understand how to structure a CPARS narrative, which could lead to a sustained low rating of a contractor in CPARS.

The *r*-squared value of the model also indicates that additional explanatory variables may exist that have an impact on contractor performance. One of the variables includes previous contractor performance. The correlation matrix listed in Chapter III demonstrated that previous and current performance were highly correlated within the sample. It is likely that a contractor that does well in one period will do so in another.

A key implication is also that CPARS inputs may not be the most accurate measure of contractor performance. As discussed in the previous studies section within Chapter II, the government has been criticized for failing to complete CPARS and for the lack of detail contained within the narratives (GAO, 2017a; DoD IG, 2017). This is demonstrated within the sample, which did not contain much variance within contractor performance averages—most of the contractors were rated as satisfactory.

The results of this research reveal that COR technical experience within the sample had an impact on contractor performance. The results also lead to a multitude of implications and speculations deduced from the data and linear regression. The following section will summarize this chapter.

E. SUMMARY

This chapter discussed and analyzed the sample collected in order to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts contractor performance. The chapter also presented an overview of results from a statistical perspective. Furthermore, the chapter discussed an analysis of the findings. Finally, this chapter discussed implications of the findings. The following chapter summarizes the research, presenting a conclusion and recommendations for future research.

V. SUMMARY, CONCLUSIONS, AND AREAS FOR FURTHER RESEARCH

A. SUMMARY

The purpose of this research was to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts contractor performance. The research began with a problem statement and purpose. It presented research questions surrounding the purpose of this research and continued by introducing the methodology, benefits, limitations, and organization of the report.

This research continued with a thorough literature review on the subject of quality assurance programs and contractor performance, including a discussion of agency and auditability theory to set the theoretical framework. Literature surrounding the service contracting process and key personnel was also presented to set the foundation for the research. Furthermore, quality assurance methods and systems of record were discussed to demonstrate how the DoD implements quality assurance programs. Moreover, issues with the management of contractor performance were presented to demonstrate the need to understand the impact of the quality assurance systems on contractor performance. Finally, the literature review discussed previous studies surrounding the purpose of this research.

This research continued by discussing the methodology used to determine the impact of the quality assurance program on contractor performance. The chapter on methodology explained how the sample was taken from the population and then described the 30 samples collected from three installations. It also described the sample in detail to include descriptive statistics, a histogram of contractor performance, and prevalent sample details. Additionally, the research methodology presented the operationalization of response (contractor performance) and control variables (quality assurance program). Finally, the methodology section described the model used to perform regression analysis on the sample.

This research continued by presenting an analysis of the linear regression. The analysis included an overview of the linear regression outcomes to include a review of *r*-

squared of the regression, *p*-values of explanatory variables, and coefficients for statistically significant variables. The *r*-squared for the overall model was .3685, which demonstrated that over 60% of variables outside of the model may explain CPARS values. Furthermore, only COR technical experience demonstrated statistically significant information, showing that if a COR has technical experience (instead of no experience) the contractor performance is likely to increase by .629. The remaining explanatory variables demonstrated no statistical significance due to high *p*-values within the model.

The analysis concluded by discussing implications of the research results, including the importance of assigning technically experienced CORs to contract requirements. Technical experience could support proper quality assurance of processes and technical performance. Furthermore, a COR's technical experience could assist in developing PWSs, QASPs, and other acquisition documents that set up the contractor for success. The paper also discussed how theory still suggests that the other explanatory variables may be relevant.

The analysis also included additional information explaining high *p*-values. Discussion included potential impacts on contractor performance if other explanatory variables were high or low and how either value may have been cause for statistically inconclusive results within the sample. Finally, the analysis concluded with an explanation of how CPARS may not be the best measurement of contractor performance because it incorporates contractor concurrence and issues brought up by the GAO in 2017.

In summary, the purpose of this research was to determine how the quality assurance program (COR experience, training, surveillance frequency, and QASPs) impacts contractor performance. The following section discusses conclusions of this research.

B. CONCLUSIONS

The purpose of this research was to determine how the government quality assurance program (experience, training, surveillance frequency, and quality plan) impacts contractor performance. This research revealed a multitude of findings that answer the questions proposed in Chapter I. The research also resulted in significant implications that

may assist in improving the quality assurance system and contractor performance. The answers to the research questions, along with additional findings and implications, are discussed in this section.

- What is the relationship between the government monitor experience and contractor performance? Government monitor; the COR, technical experience has a positive effect on contractor performance. The results from the model are inconclusive as to the impact of surveillance experience on contractor performance.

- What is the relationship between government monitor training and contractor performance? The results from the model are inconclusive as to the impact of government monitor training; the COR, on contractor performance.

- What is the relationship between the surveillance frequency, quality plan and contractor performance? The results from the model are inconclusive as to the impact of surveillance frequency, quality plans, and contractor performance.

The sample collected demonstrated that the proposed model shows that only COR technical experience has a statistically significant impact on contractor performance within the sample. The statistically significant impact demonstrates that technical experience may produce benefits across pre-award, award, and post-award phases of the contracting cycle.

Higher COR technical experience in pre-award include the likelihood of stronger performance work statements and quality assurance surveillance plans which can be structured to enable higher contractor performance. Pre-award benefits derived from COR technical experience can also lead to well-structured product, exchange, and governance rules that reduce room for discretionary behavior, which ultimately leads to higher contractor performance.

A COR with higher technical experience during the award phase can help the government avoid adverse selection. Higher COR technical experience could result in

successful technical evaluations, which can lead to selecting a contractor who is more likely to perform well. Higher COR technical experience can also result in productive discussions, leading to the contracting activity being more prepared to negotiate and award a contract.

Additionally, a COR with higher technical experience can have a significant benefit to the post award phase of the contracting cycle. Technical experience can lead to more thorough surveillance of contractors and the ability to adequately capture performance issues.

Moreover, even though the remaining explanatory variables did not produce statistically significant results, it is still likely that they impact the population based on theories discussed within this research. For example, surveillance experience and COR training are concepts used in the auditability triangle, which assesses an organization's ability to perform procurement-related activities. The explanatory variables may yield statistically significant results if a larger sample is taken.

This section summarizes the findings of this research. The following section discusses areas for further research.

C. AREAS FOR FURTHER RESEARCH

One of the most critical recommendations for further research is to conduct an in-depth analysis of why CPARS contains mostly positive ratings. This research could include a comparison between departments in the federal government along with an analysis of ratings over several years.

Another recommendation for further research is to see how training, experience, and contract type affect the narratives placed in CPARS. The study of narrative detail could reveal why poor ratings may fail to be recorded once a contractor's input is given to the contracting officer. For example, a lack of narrative for poor performance may give the contractor room to articulate why they deserve very good or exceptional ratings.

Furthermore, research could be conducted with the same model with a significantly larger sample size. The larger sample can begin by capturing all Air Force installation

contracts. An additional sample can be taken from other DoD entities. Finally, a sample of the entire DoD population could also further this research. The results of a regression on a larger sample may reveal a stronger relationship between explanatory and response variables.

Other research could include determining different ways in which the government can record contractor performance, such as the score card system discussed in the literature review chapter. A unilateral system such as a score card may lend itself to a more accurate representation of perceived performance versus the bilateral nature of CPARS.

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APPENDIX. COR TRAINING REQUIREMENTS

Table 2. DoD Standard for Certification of CORs—Type A. Source: DoD (2015).

NATURE OF TYPE A: WORK OR REQUIREMENT	REQUIRED COMPETENCY TOPICS	REQUIRED COMPETENCIES	EXPERIENCE AND TRAINING REQUIREMENTS

Fixed-price contracts without incentives and low performance risk.
 	
Attributes of such requirements might include:
• Lack of technical or administrative complexity
• No identifiable risk factors
• Limited requirement for technical expertise
• Low likelihood of modification
• Effort is a follow-on to an existing contract
 	
COR responsibilities are generally limited to minimal technical and administrative contract surveillance.
	General:
	• Attention to detail
	• Decision making
	• Flexibility
	• Oral and written communication
	• Problem solving and reasoning
	• Self-management and initiative
	• Teamwork
	
	Technical:
	• Business ethics
	• Effective communication of contract requirements
	• Effective contract performance management
	• Effective COR performance
		On completion of mandatory training, the COR should be able to perform at least these competencies in a manner consistent with the nature of Type A work or requirements:
		
		• Assist in acquisition planning.
		• Assist in contract award process.
		• Establish and maintain a COR file with all required documentation.
		• Identify and prevent unethical conduct and instances of fraud, waste and abuse.
		• Perform technical and administrative contract surveillance and reporting responsibilities in accordance with the letter of designation and surveillance plan.
		• Recommend contract changes when necessary and monitor contract performance as modified.
		• Monitor contract expenditures and payments.
		• Monitor contract schedule compliance.
		• Perform liaison responsibilities between the contracting officer, the requiring activity, and the contractor for management of the contract.
		• Inspect and accept or reject deliverables during contract performance and at close-out in conformance with contract terms and conditions.
		• Monitor the control and disposition of U.S. Government furnished assets.
		• Perform surveillance in a contingency environment, when applicable.
			Experience:
			• Agency experience: Minimum of 6 months unless waived. The waiver must be addressed in the nomination package.
			• Relevant technical experience: As determined by the requiring activity and COR Management for the contracting officer's consideration.
			• General competencies: As determined by the nominating supervisor for the contracting officer's consideration.
			
			Training:
			• DAU course, "Contracting Officer's Representative with a Mission Focus" (online).
			• DAU course, "COR in a Contingency Environment," when applicable (classroom or online).
			• WAWF training (online).
			• DoD Component provided ethics (designated OGE Form 450 filers only) & CTIP training.
			• Additional training mandated by the contracting activity or agency (e.g., security, etc.).
			
			Refresher Training:
			• Minimum of 8 hours COR specific training:
			  ○ Every 3 years, **OR**
			  ○ Before assuming COR responsibilities, if the individual has not served as a COR within the previous 24 months.
			• Annual DoD Component provided ethics (designated OGE Form 450 filers only) & CTIP training.
			• Any additional training mandated by the contracting activity or agency.

Table 3. DoD Standard for Certification of CORs—Type B. Source: DoD (2015).

NATURE OF TYPE B: WORK OR REQUIREMENT	REQUIRED COMPETENCY TOPICS	REQUIRED COMPETENCIES	EXPERIENCE AND TRAINING REQUIREMENTS

Fixed-price contracts with incentives; fixed-price contracts with other than low performance risk; and other than fixed-price contracts. This includes everything other than Types A and C.
 	
Attributes of such requirements might include:
• Contract complexity or performance risk
• Effort will be performed in multiple regions or remote geographic locations
• The need for increased surveillance
• Magnitude of the requirement
• The contract contains incentive arrangements or cost sharing provisions
• The contract is cost-type of T&M or LH type, or FP LOE
 	
COR responsibilities are of increased complexity.
	General:
	• Attention to detail
	• Decision making
	• Flexibility
	• Influencing and persuasive interpersonal skills
	• Oral and written communication
	• Planning and evaluating
	• Problem solving
	• Reasoning
	• Self-management and initiative
	• Teamwork
	
	Technical:
	• Business ethics
	• Defining government requirements
	• Understanding and knowledge of contract type
	• Effective analytic skills
	• Effective communication of contract requirements
	• Effective contract performance management
	• Effective COR performance
	• Project management
	• Strategic planning
	• Understanding the marketplace
		On completion of mandatory training, the COR should be able to perform at least these competencies in a manner consistent with the nature of Type B work or requirements:
		• Assist in acquisition planning.
		• Assist in contract award process.
		• Establish and maintain COR file with all required documentation.
		• Identify and prevent unethical conduct and instances of fraud, waste and abuse.
		• Review technical deliverables and ensure compliance with Statement of Work or Statement of Objectives (e.g., perform technical monitoring and reporting in accordance with a quality assurance surveillance plan or other quality surveillance plan).
		• Perform administrative monitoring and reporting responsibilities (e.g., handle security issues, attend meetings, etc.).
		• Recommend contract changes when necessary and monitor contract performance as modified.
		• Monitor contract expenditures and payments.
		• Monitor contract schedule compliance.
		• Perform liaison responsibilities between the contracting officer and the contractor for management of the contract.
		• Inspect, and accept or reject deliverables during contract performance and at close-out in conformance with contract terms and conditions.
		• Review and validate that contractor payment requests are commensurate with performance.
		• Monitor control and disposition of U.S Government furnished assets.
		• Perform surveillance in a contingency environment, when applicable.
			Experience:
			• Agency experience: Minimum of 12 months unless waived. The waiver must be addressed in the nomination package.
			• Relevant technical experience: As determined by the requiring activity or COR management for the contracting officer's consideration.
			• General competencies: As determined by the nominating supervisor for the contracting officer's consideration.
			
			Training:
			• DAU course, "Contracting Officer's Representative" (classroom or on-line) or ALU-CL or equivalent course.
			• DAU course, "COR in a Contingency Environment," when applicable (classroom or online).
			• WAWF training (online).
			• DoD Component provided ethics (designated OGE Form 450 filers only) & CTIP training.
			• Additional training mandated by the contracting activity or agency (e.g., security, etc.).
			
			Refresher Training:
			• Minimum of 16 hours COR specific training:
			  ○ Every 3 years, **OR**
			  ○ Before assuming COR responsibilities, if the individual has not served as a COR within the previous 24 months.
			• Annual DoD Component provided ethics (designated OGE Form 450 filers only) & CTIP training.
			• Any additional training mandated by the contracting activity or agency.

Table 4. DoD Standard for Certification of CORs—Type C. Source: DoD (2015).

NATURE OF TYPE C: WORK OR REQUIREMENT	REQUIRED COMPETENCY TOPICS	REQUIRED COMPETENCIES	EXPERIENCE AND TRAINING REQUIREMENTS

Unique contract requirements that necessitate the COR have a higher education or specialized training beyond the Type B requirements.
 	
Attributes of such requirements might include:
• Environmental remediation
• Major weapons systems
• Medical or dental or veterinarian services, etc.
 	
COR responsibilities are of increased complexity.
	General:
	• Attention to detail
	• Decision making
	• Flexibility
	• Influencing and persuasive Interpersonal skills
	• Oral and written communication
	• Planning and evaluating
	• Problem solving
	• Reasoning
	• Self-management and initiative
	• Teamwork
	
	Technical:
	• Business ethics
	• Defining government requirements
	• Understanding and knowledge of contract type
	• Effective analytic skills
	• Effective communication of contract requirements
	• Effective contract performance management
	• Effective COR performance
	• Project management
	• Strategic planning
	• Understanding the marketplace
		On completion of mandatory training, COR should be able to perform at least these competencies in a manner consistent with the nature of Type C work or requirements:
		• Assist in acquisition planning.
		• Assist in contract award process.
		• Establish and maintain COR file with all required documentation.
		• Identify and prevent unethical conduct and instances of fraud, waste and abuse.
		• Review technical deliverables and ensure compliance with Statement of Work or Statement of Objectives (e.g., perform technical monitoring and reporting in accordance with a quality assurance surveillance plan or other quality surveillance plan).
		• Perform administrative monitoring and reporting responsibilities (e.g., handle security issues, attend meetings, etc.).
		• Recommend contract changes when necessary and monitor contract performance as modified.
		• Monitor contract expenditures.
		• Monitor contract schedule compliance.
		• Perform liaison responsibilities between the contracting officer and the contractor for management of the contract.
		• Inspect, accept or reject deliverables during contract performance and at close-out in conformance with contract terms and conditions.
		• Review and validate that contractor payment requests are commensurate with performance.
		• Monitor and control disposition of government furnished assets.
		• Perform surveillance in a contingency environment, when applicable.
		• Other specific functions consistent with the objectives of the activity's mandatory specialized or technical training.
			Experience:
			• Agency experience: Minimum of 12 months unless waived. The waiver must be addressed in nomination package.
			• Relevant technical experience: As determined by the requiring activity or COR management for the contracting officer's consideration.
			• General competencies: As determined by the nominating supervisor for the contracting officer's consideration.
			
			Training:
			• DAU course, "Contracting Officer's Representative" (classroom or on-line) or ALU-CL or equivalent course.
			• DAU course "COR in a Contingency Environment," when applicable (classroom or online).
			• WAWF training (online).
			• DoD Component provided ethics (designated OGE Form 450 filers only) & CTIP training.
			• Additional training mandated by the contracting activity or agency (e.g., security, etc.).
			
			Refresher Training:
			• Minimum of 16 hours COR specific training:
			  ○ Every 3 years, **OR**
			  ○ Before assuming COR responsibilities, if the individual has not served as a COR within the previous 24 months.
			• Annual DoD Component provided ethics (designated OGE Form 450 filers only) & CTIP training.
			• Any additional training mandated by the contracting activity or agency.
			• Any necessary for maintenance of license or certification, etc.

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1. Defense Technical Information Center
   Ft. Belvoir, Virginia

2. Dudley Knox Library
   Naval Postgraduate School
   Monterey, California