1-1-2011

# A Review of the Department of the Army's Decentralized Cost Benefit Analysis Process

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COLLEGE OF MANAGEMENT AND TECHNOLOGY

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Gerard Acosta

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2012

Abstract

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Legislative Studies Graduate Certificate,

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

From 1996 to 2006, the number of Department of Defense (DoD) contract transactions increased, leading to over expenditures and the need for agencies to determine benefit estimation to improve risk management of a project. The purpose of this qualitative case study was to apply a total quality management theory to explore if a standardized versus decentralized benefits framework within the cost benefit analysis process could improve the Department of the Army acquisition selection process. The two central research questions addressed (a) the differences between successful and failed acquisition systems cost benefit analysis, and (b) whether a standardized or decentralized cost benefits framework would best serve contract selection process. Data were collected via interviews with 20 DoD acquisition specialists and analysis of cost benefit analysis cases; NVIVO software was used to examine word frequency and comparative phrases. The data analysis resulted in themes that encompassed how standardization improves product quality, enhances innovation, and accelerates the acquisition procurement process. Other themes included the need to build metrics into the cost benefit assessment to measure risk management controls and cost-reduction initiatives. The DoD might benefit from the results of this study by reviewing and instituting a standardized benefit assessment within its cost benefit analysis framework to protect business stakeholders' from fraud, waste, or abuse. The implications of this doctoral study will promote social change in the form of government spending fiscal stewardship and could serve as a benchmark to improve the budget formulation and management of the American taxpayer's investment in national security.

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## Dedication

I would like to dedicate this doctoral study to the influential people in my life who have given me the drive to achieve my aspirations. First to my son Yani- you are my little angel and purpose in life. To my parents, Gerardo and Ilka Acosta, who have taught me the values to be a humble person and civic leader. To my fiancée and best friend, Paulette, who has been the cornerstone for this achievement. Thank you for your guidance, advice, and love during my journey to accomplish this lifetime goal. A special recognition and thanks goes to all the Soldiers and leaders, with whom I have served with during my 12 years of military service. To the Paratroopers of the 4th Brigade Combat Team (Airborne), 25th Infantry Division and Army Staff, Office of Chief Legislative Liaison- thanks for all your support during this process. To my mentors in OCLL and COL "Mo" Goins, thanks for keeping the standards high, setting a great example, and pushing me to be a better leader.

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# Section 1: Foundation of the Study

In fiscal years 2009 and 2010, the Department of the Army (DA) restructured major acquisition programs to operate within a congressionally imposed fiscal constraint. In fiscal year 2010, the DA eliminated more than 30 acquisition systems that supported its future combat systems manning and equipment strategy because of its cost over-runs, delayed production cycles, and perceived inefficiency. One factor not examined during the acquisition process is the effect of the DA cost-benefit analysis (CBA) and decentralized benefit template model to procure effective acquisition systems. An important review is needed if a CBA's standardized benefit framework can assist Army leaders identify the profits and equities of a given acquisition project.

## Background of the Problem

In the various postmortems written about the collapse of the Future Combat System (FCS), one factor that has not been discussed in any detail is the philosophies that drove the development of FCS (Ellman, 2006). Evolutionary acquisition and spiral development were not entirely new concepts in the defense acquisition community, but FCS represented the largest, most complex program ever to be attempted using these relatively untested development techniques (Ellman, 2006). A broad acquisition system selection process and general cost benefit analysis framework led the United States Army to lose over $25.9 billion from the 2010 president's budget request, which translated to more than 10 major acquisition programs terminations (U.S. Department of the Army, Army Management School, 2010).

The Army acquisition process is designed to procure the products, information systems, service contracts, and major defense systems based on the strategic, operational, and tactical needs derived from the Department of Defense Quadrennial Defense Review and National Military Strategy (U.S. Department of the Army, Army Management School, 2010). The Army acquisition process derived from the federal acquisition regulation practices, a competitive bid acquisition process. The overarching purpose of the acquisition process is to create competition among bidders to select the best equipment or service contract prototype to meet the Department of the Army's strategic objectives, support the Defense Industrial manufacturing base, and improve the Army's knowledge management.

The Army's modernization strategy, because of the global war on terrorism, has relied on its research and development, electronic, and imagery assets, data and communications framework, global network communications, and advanced weapon systems to defeat the new perceived world threats. To select the best product prototypes to meet its new equipment genre, the Army has relied on its cost benefit analysis framework, within its acquisition and procurement process. During a Senate Armed Services Committee hearing, General Casey (2010), Chief of Staff of the Army, stated, "Due to a flawed cost benefit analysis, the Army has not selected the most prevalent and required equipment packages to meet our long-term strategy" (p. 24). General Casey's statement led to Army acquisition and budget policy-makers to review the CBA process of the DA.

More than 30 canceled Future Combat Systems acquisition projects were mandated in the Fiscal Year 2010 Defense Appropriations Bill, Public Law 101-9. These eliminations as dictated by the bill's legislative language were from cost overruns, delayed production lines, and prolonged prototype stages. The lack of a CBA analysis during the contract selection process led to numerous no beneficial military contract awards.

The government CBA's regulatory specifications limit its functionality to decide if a given acquisition project is worth protecting and implementing (Frick, 2010). An Army acquisition project's cost analysis justification includes its price factors, prototype designs, and manufacturing timelines. The benefits framework analysis of the acquisition process depends on the acquisition and contracting specialists' program analysis and research.

Cost benefit analysis is a set of procedures to measure the merit of some public-sector actions in dollar terms, and serves as a counterpart to private-sector profitability accounting. The objective is to determine the alternative for public action that produces the largest net gain to the society. In this case, gain is not in terms of private-sector profit but rather as an estimated surplus of monetized benefits over estimated costs. Based on this criterion, cost-benefit analysis attempts to identify the most economically efficient way of meeting a public objective (Henri, 2006).

J. W. Westphal, Under Secretary of the Army, and General P. W. Chiarelli, Vice Chief of Staff of the Army, provided direct mandates to Army executives to improve

fiscal responsibility through a memorandum of instruction titled, *Cost-Benefit Analysis to Support the Army Enterprise Decision Making* (Financial Management Comptroller Office, 2009). The memorandum directed that a cost benefit analysis accompany each unfunded requirement with any new or expanded proposal submitted to the Secretary of the Army. The Army senior leadership further instructed that the CBA identify the total cost of the proposal, the benefits that would result, and the second and third order effects of the final decision.

## Problem Statement

From 1996 to 2006, the number of Department of Defense contract transactions increased from 600,000 transactions in 1996 to more than 3,600,000 transactions in 2006, a 600% increase (Broomberg, 2007). The increase in contracts during this period has led to acquisition projects' costs over expenditures and the need for agencies to determine a project's benefit estimation and improve risk management (Kwak & Smith, 2009). The general business problem is that a centralized benefits framework within the Department of the Army (DA) cost benefit analysis (CBA) process has not been developed or explored. The specific business problem is that a lack of a centralized benefit framework within the DA CBA process may lead to ineffective, over-costly contract selections.

Of the literature reviewed, there has been no extensive study of the factors that contribute to the current practice of using a decentralized cost benefit analysis and its effect on the acquisition selection system. The lack of a DA centralized CBA framework,

specifically the benefits assessment structure, could be a cause for the continual contract management inefficiencies (Riege, 2005).

## Purpose Statement

This qualitative research study was based on a case study approach, in which data were collected from case studies analysis and interviews with Department of the Army contracting managers. The purpose of this qualitative case study was to determine if a standardized versus decentralized benefits framework within the CBA process could improve the acquisition project's selection process. One component of the doctoral study was to review the required data to explain the shortfalls and failures within the benefit framework of the CBA using a pragmatic worldview and qualitative method design (Creswell, 2008).

A specific modeling sample consisting of professional acquisition personnel underwent a semi structured interview to evaluate the CBA process (Goyal & Pitt, 2007). The specific population group for this proposed case study consisted of semistructured interviews with 20 acquisition contract specialists who have earned a Defense Acquisition University Level II certification (Goyal & Pitt, 2007). The Department of the Army's Office of the Economic Affairs and Defense Acquisition University, Washington, DC; Regional Contracting Office in Forward Operating Base, Salerno, Afghanistan; and the United States Central Command, Tampa, FL, served as the geographic location.

The results may contribute to improving the Department of the Army's business practices and fiscal stewardship and serve as a recommendation to acquisition managers and specialists regarding how to improve the Department of the Army's current contract selection process. The recommendations from this study could further assist the Department of the Army with improving the public's trust regarding budget formulation process.

## Nature of the Study

A qualitative research design provided the most effective research method to determine the current shortfalls in the Department of the Army's cost benefit process (CBA). As opposed to a quantitative method designed to test a theory and employ statistical methods to evaluate an experiment, a qualitative research design was best suited to review business theories reform (Creswell, 2008). A qualitative research design facilitates the ability to collect the views of the participants in a given business and interpret collected data to analyze business phenomena (Cox, 2012).

The qualitative research design consisted of case studies that reviewed Department of the Army acquisition projects CBAs, which contracts have initiated the life cycle production, and 20 semistructured interviews with the Department of the Army acquisition professionals. The research was limited to case studies of acquisition systems procured since Fiscal Year 2000 and interview participants specifically from the Department of the Army acquisition field. The CBAs are currently stored at the Defense Acquisition University in Fort Belvoir, VA.

A case study research design consisting of reviews of case studies and semistructured interviews with Department of the Army contract specialists was selected to collect the necessary data to analyze the problem statement. Through a case study approach, an exploratory approach was provided to analyze an organization's knowledge toward a certain structure within the organization (Barratt, Choi, & Mel, 2011). A case study design served as a research vehicle to analyze a business model and conduct deductive analysis based on qualitative and quantitative data gathered from organizational practices (Siau & Rossi, 2011).

A case study provides the necessary instruments to describe the CBA process and generate the required context to explain the recommended business procedures (Myers, 2009). A case study research design allows the researcher to derive or analyze a business model based on current policies and organizational procedures (Hotho & Champion, 2011). A case study method is a process to derive a business practice recommendation based on the views of the research participants and subjective analysis (Creswell, 2008). The case study design incorporates multiple methods to collect data and ability to develop correlative factors among the data (Miller & Tsang, 2010).

A grounded theory design would not support this doctoral study because a ground theory explores a program or event in depth, over a prolonged period, to develop a scientific theoretical application or managerial principle rather than provide analyze how to improve current business practices (Fendt & Sachs, 2008). Ethnography and phenomenological research would not support this doctoral study because the research

designs concentrate on the study of a cultural group and human experience, respectively (Van Maanen, 2010).

The information collected through the reviews of three acquisition projects' CBA and interviews of the 20 acquisition professionals determined the shortfalls within the CBA's benefit framework. The data collected from the interviews assisted the researcher to analyze the contingents for implementing a standard benefits analysis template based subjective reasoning and experiences of acquisition officers. The research conclusion and recommendations could improve the Department of the Army's fiscal stewardship and contract management efficiency.

## Research Questions

The purpose of this current research study was to determine if a standardized versus decentralized benefits framework within the CBA process could improve the selection process of the acquisition project. The review and analysis from the case study provided the different agencies evaluative methods to complete the acquisition's procurement selection. The central questions sought the assessment of the current CBA's benefits framework and determined if a decentralized versus standardized framework could best support the business practices of the CBA.

The central research questions were designed to determine the viability of instituting a standardized benefits framework within the cost benefit analysis and the business impact of instituting a change in the contract selection process. Two research questions guided the study:

1. What are the differences between the cost benefit analysis framework of the DA's successful and failed major defense acquisition systems?

2. Would the best business practice be to standardize or maintain a decentralized cost benefits framework in the contract selection process?

The case study consisted of comparing three cost benefit analyses of contracts that have initiated the acquisition life cycle system. The review of the three cost benefit analyses determined the agencies' metrics to complete the benefits framework within the analytical process and any disparity among the agencies to quantify the United States Army, agency, and stakeholders' benefits of the given project. The researched disparities among the three benefits assessments served as data points to determine whether the benefits assessment should incorporate a decentralized versus standardized framework.

Through an interview process, 20 acquisition professionals provided an analysis regarding an agency and contract specialists' subjectivity found in the contract selection process, amount of standardization that exists in the benefit procurement process, and the end-users' perspective regarding the viability of standardizing the benefits framework to improve the process. Four interview questions were asked:

1. What are the benefits and constraints in adopting a standardized cost benefit analysis framework that can serve as a general tool?

2. Will a standardized cost benefit tool restrict an agency's innovation?

3. How will a standardized cost benefit analysis affect the procurement decision-making timeline?

4. What metrics could best support a standardized cost benefit analysis?

## Conceptual Framework

I used a case study review of three Department of the Army acquisition contracts to examine the Department of the Army CBA's benefits framework. The three cost benefit analysis case studies represented a service-contract, a $10 million major acquisition system, and a minor contract valued at less than $1 million. A total quality management (TQM) business theory conceptual framework complemented business research of the doctoral study. The end state was to use the TQM theory to examine the shortfalls within the Department of the Army cost benefit analysis' benefits framework.

Deming is associated with developing the total quality management theory in 1980 (Petersen, 1999). Deming introduced the total quality management theory to improve the process control and daily resource management in the manufacturing field. Deming's goal was to reduce costs within a manufacturing process by improving resources efficiencies.

The total quality management theory is based on the premise that organizational behaviors, process analysis, leadership, and manufacturing engineering can consistently be reviewed to improve efficiencies and product quality (Talib, Rahman, & Qureshi, 2011). The total quality management theory best relates to the Department of the Army's cost benefit analysis design to improve the Department of the Army's resource management and contract selection business processes to reduce costs and improve efficiencies. Total quality management determined the criteria required to examine the

benefits of implementing a standardized benefits framework in the DA procurement process.

The principles and organizational theories derived from the total quality management served to evaluate the constraints and opportunities regarding the application of a standardized benefits process. The total quality management organizational theories further served to evaluate the correlative factors derived from the case studies analysis. The organizational theories assisted the researcher to correlate how the results from the interviews and case studies review could translate to improve business processes within the Department of the Army's contract selection.

The Department of the Army's cost benefit analysis is an analytical tool derived from the Department of the Army's military decision making-process (MDMP) conceptual framework. MDMP is a conceptual framework used to assist military executives conduct problems solving and develop plan and estimates (Financial Management Comptroller Office, CBA guide, 2008). The MDMP helps the commander and staffs examine a battlefield situation and reach logical decisions (Financial Management Comptroller Office, CBA guide, 2008). The process helps them apply thoroughness, clarity, sound judgment, logic, and professional knowledge to reach a decision (Financial Management Comptroller Office, CBA guide, 2008).

The Army's Cost Benefit Analysis is a decision support and planning tool consisting of eight major steps:

1. Develop the Problem Statement; Define the Objective and the Scope.

2. Formulate Assumptions and Identify Constraints.
3. Document the Current State (the Status Quo).
4. Define Alternatives with Cost Estimates.
5. Identify Quantifiable and Non-Quantifiable Benefits.
6. Define Alternative Selection Criteria.
7. Compare Alternatives.
8. Report Results and Recommendations. (Financial Management Comptroller Office, Cost Benefit Analysis Guide, 2008, p. 12)

The cost benefit analysis is a structured proposal that organizational decision makers use to assess the viability of a given project or resource (Quinet, 2011). The Department of the Army's cost benefit analysis provides a solution to achieve specific Army and organizational objectives. The cost benefit analysis quantifies the potential financial impacts and business benefits including savings, cost avoidance, revenue enhancements, cash-flow improvements, and performance improvements within a proposed project or fiscal resource (Besley & Persson, 2011).

## Definition of Terms

*Collaborative governance*: The rules and behavior that a collective body follows to achieve strategic objectives (Rasche, 2010).

*Cost benefit analysis (CBA)*: A tool to justify a particular need or requirement, when compared to numerous alternatives (Linn, 2009). Cost benefit analysis serves as a

decision-making application that compares the cost of a proposal to its projected monetized benefits (Ergas, 2009).

*Organizational capabilities*: The ability of an organization to use systems and resources to create value (Grewal & Slotegraaf, 2007).

*Risk management*: A tool to improve an organization's uncertainty by implementing mitigation planning (Kwak & Smith, 2009).

*Total quality management*: The continuous improvement in products and services as a result of organizational efficiencies in performance, quality, and management (Yusuf, Gunasekaran, & Dan, 2007).

*Value*: The result of an organization's resources investment into their respective market (Jhunjhunwala, 2009).

## Assumptions, Limitations, and Delimitations

### Assumptions

Four assumptions were derived when completing the qualitative research design and data collection analysis to support this doctoral study. The first assumption predicates that the case studies an appropriate population sample, derived from its financial value, and adequately represents the majority of DA's procurement projects. The second is that the 20 interviews of acquisition professionals adequately represented how the Department of the Army's agencies implement and maintain the cost benefit analysis process. The third is that the cost benefit analysis framework is a major factor and detriment within the procurement bidding and evaluative process. Finally, the

acquisition workforce interviewed during this doctoral study has extensive experience in the field to provide substantial recommendations.

**Limitations**

Three limitations affected or disrupted the interpretation of case studies, research instrumentation, and subsequent doctoral study recommendations. The first limitation was that the case studies represent two of the six major research, contracting, and procurement commands. The second limitation was that the business case studies have some information-classified designator that prevented its information or capabilities to be published to the public. Finally, a number of acquisition professionals are serving overseas with limited communications, which may prevent the ability to secure more experienced contract specialists.

**Delimitations**

Delimitations are bounds the researcher placed in the beginning of the study to narrow the scope of the study (Creswell, 2008). Three delimitations bound this current research study. The first delimitation was the chosen case studies' contract dollar value spectrum, $1 million to $10 million dollars to analyze the benefits framework within the cost benefit analysis. Human capital versus knowledge management tools are predominantly used in the development of cost benefit analysis for contract within the noted spectrum.

The second delimitation is the 20 participants undergoing the semi structured interviews. The 20 participants provided a limited representation of the number of

Department of the Army agencies that rely on operational contracts and services but represent the spectrum of contracts that agencies formulate to meet operational requirements. The case studies and semi structured interviews did not geographically represent the Department of the Army's global spectrum of contract management practices because the case studies and interviews will focus on the continental United States and Afghanistan's military support operations.

## Significance of the Study

### Reduction of Gaps

The analysis regarding the maintenance of a decentralized benefits framework or instituting a standardized benefits model within the cost benefit analysis provided acquisition professionals with a new baseline to evaluate potential contracts and procurement. Currently, the Department of the Army agencies is using wide-ranging business practices and methods to select contracts and services. The conclusion derived from this doctoral study provided a new decision-making model to assist acquisition professionals improve the Department of the Army's contract selection process. Improving the contract selection process will protect the Department of the Army's mission, vision, and national equities.

### Implications for Social Change

An improved cost benefit analysis and procurement process may protect the Department of Army from fraud, waste, and abuse, which may improve fiscal investments and budget expenditure. An improved cost benefit analysis could reduce the

Department of the Army's president's budget request by streamlining the need to request funding for cost over-run projects. A revised benefits assessment within the cost benefit analysis could lead to revised contract selection standards, which would result in streamline costs and production parameters.

The Department of the Army could institute a social or public interest metric into a revised acquisition process paving the future for welfare economics business practices (Hauer, 2011). A change in the Department of the Army's procurement policy would improve its public obligations and commitment to the public sector. An operational change in the Department of the Army's buying mechanism would optimize taxpayers' resources and reduce tax-payers' investment risks (Asker & Cantillon, 2010; Bendoly, Rosenzweig, & Stratman, 2007).

An improved cost benefit analysis assessment would encourage the need to improve the management of organizational resources and contract requirement's analysis. The research associated with determining if standardized or decentralized benefits assessment within the cost benefit analysis framework and associated costs reductions with any potential procedural changes could lead to other Department of Defense agencies to adopt similar efficiency related provisions in their contract management process. Improvements to the Department of Defense procurement process would improve its public relationship and strategic communication with Congress and the American taxpayer populace (Liu & Horsley, 2007; Phillips & Johnson-Cramer, 2006).

## A Review of the Professional and Academic Literature

The purpose of this qualitative case study was to determine whether a standardized versus decentralized benefits framework within the cost benefit analysis process could improve the acquisition contract selection process. The central research question is whether to maintain a decentralized framework in the cost benefit analysis or standardize the process to improve the current business practice. The literature review to support this doctoral study consisted of finding documents, data, and material to explain the Department of the Army cost benefit analysis framework.

The academic literature review encompasses scholarly perspectives regarding the Department of the Army contracting and total quality management process. The academic literature review further highlighted the Department of the Army president's budget funding allocation shortfalls and impact toward the Army modernization strategy. The academic literature review provided numerous opinions relating to the analysis of standardization versus decentralization management process.

The disadvantage reviewing and analyzing academic literature regarding the cost benefit analysis was that the average peer-reviewed publication concentrated on explaining the Army's acquisition process, life-cycle management, and bidding procedures. The Department of the Army theoretical and application models have concentrated on analyzing the Army capability based-assessment, project cost analysis, and expenditure streamlining operations. Scholarly practitioners have focused on analyzing the integration of technology and automation of testing models to evaluate risk

of project management (Li, Poppa, & Zheng, 2010). Although the collapse of the Department of the Army's future combat system has resulted in peer-reviewed articles that concentrate on the Army cost benefit analysis and the effect on the procurement process, no peer-reviewed articles addressed the relationship that exists within the benefits framework within the cost benefit analysis (Johansson-Stenman, 2005; Livingston, 2010).

Academic literature exists regarding the Department of Army's acquisition process, role of the contract specialist, and cost drivers within the cost benefit analysis framework. The Department of Defense is responsible for decades of successful implementation of systems engineering processes to improve lean engineering and data synthesis. The systems engineering systems have improved the acquisition process models for weapons development and scientific research and development. The lean engineering acquisition models have improved acquisition projects' flexibility, production schedules, contract life cycle, and contract risk management (Brunson, 2010).

Numerous acquisition reform initiatives have improved contract selection and manufacturing schedules. The acquisition reform initiatives were articulated through participatory leadership and initiated at the organizational grass-roots level. Acquisition personnel traditionally have been receptive toward the implementation of new decision-making models to streamline and improve contract operations (Billups, 2002).

The United States Army experienced failures regarding acquisition reform and business processes requiring policy improvements and a need for an automated system to

standardize repetitive processes (Kauderer, 2002). Numerous flaws exist regarding the contract design problem and resource management timeline (Tangen, 2010). Other factors include the Department of the Army's inability to establish a standardized visual data platform to assist contract specialists to process contract transactions (Unlu & Sargin, 2008). Academic research has concentrated most of its efforts toward the improvements of budget formulation and cost-expenditures, rather than the process of creating a contracts benefit's framework to improve the organization.

**Standardization versus Decentralization Processes**

Organizations could increase performance efficiency by instituting standards; meanwhile maintaining decentralization business processes within an organization (Rasche, 2010). Numerous factors must be considered when deciding to institute standardization versus a decentralized systems framework within an organization. These factors include the decision-making time cycle, business innovation strategies, collaborative governance, strategic communication and development process, organizational hierarchy, marketing strategies, supply chain management practices, geographic presence, and the stakeholders' roles and responsibilities (Rasche, 2010).

Standardizing business practices within an organization provides the organization with the ability to institute collaborative governance or the ability to resolve conflicting interests among its entities (Rasche, 2010). Standardizing business processes allows the organization to improve the collaboration, problem solving, and information-sharing among the multiple stakeholders (Rasche, 2010). A direct correlation exists between the

size of an organization's infrastructure and bureaucracy and the need to implement standard operating procedures, standard certifications, reporting, and regulations to maintain efficiency (Rasche, 2010).

Standardization provides an organization with the ability to improve business processes capabilities and competencies (Agarwal, Audretsch, & Sarkar, 2008). Competency refers to the organization's operational ability to expand product or services development within the business realm and platform (Agarwal, Audretsch, & Sarkar, 2008). The capability of an organization refers to the ability to conduct business processes in an efficient manner (Agarwal, Audretsch, & Sarkar, 2008).

Organizations have the unique and rapid ability to standardize its technology framework, operational practices, and human decision-making and strategy development to improve competency and capabilities (Agarwal, Audretsch, & Sarkar, 2008). Standardization provides organizational leaders with the ability to provide a systems-thinking approach to manage change and implement policies and regulations (Skarzauskiene, 2010). Standardization provides business leaders with the opportunity to institute dynamic thinking or intelligence to capture behaviors and emerging business practices in their respective fields (Skarzauskiene, 2010).

Standardization allows a corporation to implement lean engineering principles to reduce its operations time, improve information accuracy, and reduce operational errors (Thomas-Mobley & Khuncumchoo, 2006). Centralization of authority provides managers with an improved venue to receive feedback and accurate evaluation criteria to

assess the performance of an organization (Thomas-Mobley & Khuncumchoo, 2006). Standard regulation and business processes permit corporations or organizations to adhere to specific and regulatory statutes to promote an organization's efficiency and improve fiscal management.

Decentralization business practices within an organization provide the ability to respond to market fluctuation from changes in shareholder value (Mazzeterro & Zanardi, 2008). Managers can implement a decentralization process to become more cognizant of the risk variables found in the decision-making process (Arend, 2009). Leadership styles that implement a decentralized approach provide organizations with the ability to expand operations in the marketplace and accept new competitive business ventures (Smith, 2008).

Entrepreneurs are more adept to succeed in a decentralized business environment, due to their ability to use innovation to overcome market or product development stagnation (Smith, 2008). Successful entrepreneurs have used technology to generalize their knowledge data systems to support business functions (Smith, 2008). Decentralization encourages organizations to implement knowledge management systems to analyze pertinent data and develop strategic objectives (Ley et al., 2008).

Decentralized business processes allow organizations to develop business ventures and initiatives to improve operations and practices (Riege, 2005). Decentralization omits the plausibility of organizations noncomplying with the common business language to increase productivity (Reid, 2010). Decentralization with an

organizational structure can reduce the sense of frustration or complex bureaucracy within an organization, hence improving the business environment of the organization (Reid, 2010). Decentralization simplifies an organization's decision-making process, increases adaptability, and incorporates the task environment into the daily operations (Hollenbeck & Humphrey, 2011).

**Department of Defense Budgetary Representation and Fiscal Stewardship**

In 2001, the United States Army Corps of Engineers convicted three engineers of fraud for manipulating the cost-benefit-analysis data to justify a needed contract (Brown, Potoski & Van Slyke, 2006). Fiscal stewardship entails managing an organizational ecosystem that optimizes the resources and fiscal opportunities found within the organization's global supply chain management system (Chan, Ip, & Chu, 2010). The Department of Defense is among the 78% of global size companies that have not instituted the necessary policies and business practices that correlate the effects of nonfinancial measures with fiscal stewardship (Chan, Ip, & Chu, 2010).

The Department of the Army's average cost per active duty service member increased from $67,000 in 2002 to $113,000 in 2007 (Farley, 2007). In comparison, the Department of Defense annual expenditures exceeds most fortune 500 companies and is equivalent to the 18th largest economy in the world (Farley, 2007). The Department of the Army has instituted information management systems and financial policy initiatives to improve the budgetary budget allocation and expenditure process, but has failed to control financial costs and institute legacy acquisition projects (Farley, 2007). The

department has failed to standardize its transaction costs metrics in order to reduce its investment risks and acquisition projects time overruns (Frank & Francois, 2010).

The Department of the Army will need to improve the economics of war to improve fiscal stewardship and resource management (Solman, 2008) and improve opportunity costs and influence of contractors in the acquisition process to improve resource management and fiscal policy (Brook & Candreva, 2009). Risk management initiatives is one of the most important strategies the Department of Defense can adapt to improve acquisition systems (Kwak & Smith, 2009).

The Department of the Army needs to inject opportunity management principles in the acquisition systems decision-making process. The *Defense Acquisition Guidebook* fails to incorporate costs and acquisition scheduling risk management metrics into guidelines and practices (Kwak & Smith, 2009). Congruently, project managers own the important subjective role to evaluate the sustainability and risk management of an acquisition project.

**Cost Benefit Analysis Framework Assessment**

A cost benefit analysis (CBA) serves an evidence-based model that allows organizations to determine what projects or programs yield the best results to support their mission and business operations (Zedlewski, 2009). A CBA serves a valuation tool that compares and contrasts the costs or risks associated with a given project's forecasted benefits and revenues. The CBA process relies on a practitioner to research the required

data, input the necessary financial measures, determine the required outcomes, and analyze the project's benefits (Zedlewski, 2009).

Challenges exist with the practical application of a CBA assessment in the Department of the Army acquisition process. The valuation theorem of the CBA, derived from measurable financial data analysis, fails to incorporate nonmeasurable standards into its framework (Zedlewski, 2009). The CBA's initiatives construct model does not incorporate social metrics into its assessment analysis. Social program's CBA practitioners are required to monetize the social value of a given social cost or benefit.

Wealth valuation can be a dubious characteristic to evaluate in a CBA assessment (Adler & Posner, 2006). The cost benefit analysis model design does not incorporate benefit valuations, because of the market fluctuations in the monetization of intrinsic value (Adler & Posner, 2006). Incorporating a social benefit to eliminate a risk could impart unto another risk behavior within another project or social program (Farber, 2009).

The original intent of the CBA design was to serve a social welfare assessment tool to protect the consumer, agency, taxpayer, and private investments of government social programs (Niels & Dijk, 2008). The cost and benefits metrics of social programs were monetized and weighted to determine the program's social outcomes benefits to society (Niels & Dijk, 2008). The CBA determined the direct costs of the projects derived from its annual budgetary reports and the market's economic benefits (Niels & Dijk, 2008). The CBA's economic benefits measured the amount of improved

operational efficiencies, innovation, resource management, production costs, consumer protection, and social impacts (Niels & Dijk, 2008; Bateman, Mace, Fezzi, Atkinson, & Turner, 2011).

A social program or service project investment, such as pollution reduction, transport optimization, and specialty metals recycling provide numerous benefits to the national economy, taxpayers, and capital organizations (Linn, 2010). Social outcomes can further lead to improved property values, health-related benefits, total quality management, enterprise resource planning, quality of life, and future capital investment reductions (Cagliano, Caniato, & Spina, 2006). The intrinsic value of a social good serves an economic metric to consider in a CBA assessment (Linn, 2010). Numerous social practitioners believe that the act of a public good is an investment that should be discounted to a risk free rate of return, therefore creating consumption versus investment risk premium (Howarth, 2009).

Social practitioners and analysts have incorporated the distributional weight of the social factor into the monetization of the social good (Johansson-Stenman, 2005). Social distributional weight is predicated on the thought that an investment into social welfare will best serve low income versus high-income stakeholders (Johansson-Stenman, 2005). The benefit yield or dollar investment of social good should increase for low-income stakeholders; conversely decrease for high-income stakeholders (Johansson-Stenman, 2005). The important factor to consider in distributional weights and CBA in general is the determination of the current value of the commodity or social good and its projected

future value (Linn, 2010). The key component of implementing a social outcome-based CBA is to determine the stakeholder who will be receiving the benefit and the stakeholder who will be supporting the costs (Niels & Dijk,; Bateman, Mace, Fezzi, Atkinson, & Turner, 2011). The CBA process serves as a regulatory tool to implement policies, restrict funding, or enforce authorities (Niels & Dijk, 2008; Bateman & Mace, 2011). A CBA can serve as a competition policy to encourage increased participation within a given program or funding process. A CBA can further serve as an evaluation tool to assess the results of a given financial or social investment (Niels & Dijk, 2008).

Scholarly practitioners who oppose the CBA process argued that the CBA could lead to under-regulation because the process relies on analysts who incorporate bias to the valuation of a benefit or overestimate regulatory costs into the system (Adler, 2010). Opponents argue that a CBA provides an under-regulated business practice disguised under a scientific theorem (Farber, 2009). The CBA process relies on industry-led financial data and analysis, compliance costs, and limits innovation (Parkinson, 2009). Because a cost benefit analysis does not assess the value of a public project, the cost benefit analysis serves an inaccurate tool (Ergas, 2009). A financial disagreement exists regarding how reliable a CBA can forecast a project's short-term and long-term savings.

**Army Contracting and CBA Relationship**

The Department of the Army's acquisition process is a vital component of the Army's business processes and national defense strategy (Nissen, 1997). A CBA assessment is among the first steps an Army contracting officer completes to initiate a

contract requirement. The contractor must determine the goals, resources, and compliance objectives (Carden, Leach, & Smith, 2008). The contract specialist assumes an important role to determine the project's savings, benefits, and non-cost factors through a CBA assessment (May, 2005). Generation Y contract specialists who are team-oriented and technologically knowledgeable implementing the standards and procedures, such as new CBA models to improve the Army's complex contracting process (Johanson, 2009).

The CBA serves as a precursor to the management of the contract to ensure quality and compliance (Idoro, 2012). A thorough CBA can assist in the supplier-customer relationship and justify the project's requirement (Virtue, 2010). A debate exists within the contracting profession regarding the standardization of contracts provisions and legal documents (Li, Poppo, & Zheng, 2010). Numerous agencies have automated contract clauses and created templates to increase efficiency (Li, Poppo, & Zheng, 2010). Organizations need to address the limits, such as innovation, ability to change, and quality control that an automated system provides to standardized contract management (Li, Poppo, & Zheng, 2010). A standardized CBA reduces the ambiguity of a contract requirement, prior to initiating an open-source bid, and serves as a labor audit trail (Shavell, 2006; Schieg, 2009).

The Army's performance-based contract has become the premier contract source to maximize cost-savings, product's value, and draw competition. A performance-based contract design, which relies on reducing risks within the acquisition process, requires a

thorough CBA process (Heinrich & Choi, 2007). A detailed CBA assessment serves as the cornerstone to build a statement of work or project requirements (Heinrich & Choi, 2007). A CBA assessment can be futile to address the suppliers profit ratio and materials cost in a cost-plus contract (Schieg, 2009).

Acquisition and contract specialists need to review the successful implementation of the Army's Logistics Modernization Program (LMP) to serve as a guideline for new automation or business processes systems (Coker, 2006). The LMP consisted of integrating numerous Army legacy systems into a single point of entry regarding logistics management. The standardized integrated systems relied on numerous data migrations, new training modules, and new business practices (Coker, 2006). To synchronize the Army logistics agencies and more than 30,000 personnel, the LMP integration team performed a commendable task of communicating the new program benefits, established written protocols, and integrated the agencies' personnel in the program development (Coker, 2006).

**Acquisition Process and CBA Relationship**

The Department of the Army has undergone a Performance-Based Acquisition (PBA) system, which relies on the results of a given project, rather than the process (Livingston, 2010). A PBA system depends on measurements and socialization of all entities associated with the project to evaluate the project's performance (Livingston, 2010). Contracting officers are responsible for assessing the necessary evaluative metrics to support a competitive PBA system (Brown, Potoski & Van Slyke, 2010). Cost,

scheduling, performance, and risk management are among the evaluative criteria that must be considered when procuring a major acquisition program (Cartwright & Schoenburg, 2006).

A trend among Acquisition Category 1 contract projects is the inability of project managers to establish concrete acquisition strategies and proper resource management to budget stewardship and project timelines (Weider, Booth, Matoksy & Ossimitz, 2006). The Department of the Army's future combat system (FCS) project is an illustration of the Army acquisition system's failure. The FCS technology consortium consisted of more than 15 systems, valued at an initial investment of $85 billion and final value of $131.4 billion (Kwak & Smith, 2009). The FCS acquisition technology project consumed more than 40% of the Department of the Army's annual funding (Adler & Cantillon, 2010). The FCS program managers continually failed to illustrate the cost overruns projections, program benefit to the defense of the nation, and technology specifications (Adler & Cantillon, 2010).

In addition to successful budgetary program execution, successful government acquisition programs have relied on a national survey system and data repository to serve as a guideline and organize the selection process (Adler & Cantillon, 2010). An acquisition knowledge management system is imperative to capture key statistics, contract management, and strategies to implement successful acquisition projects (Thomsen, 2009; Riege, 2005). Synchronizing cost accounting standards, risk management policies, and contract selection procedures are imperative to sustain

successful acquisition programs (Lander, Kimball, & Martyn, 2008; Frick, 2010; Luintel, Khan & Arestis, 2008). Electronic forms development and information distribution are fundamental elements to maintain an organization's enterprise content management and acquisition strategy (Allen & Loomis, 2008; Bredillet, 2008).

**Optimizing a Benefits Framework within the CBA Process**

Nonprofit and governmental organizations have an ardent task developing shareholder optimization and performance measures for their investment projects (Kearney, 2010). Government organizations have a difficult time quantifying the monetary benefits and risk management factors regarding their fiscal and acquisition processes (Drews, 2010). Government organizations are not structured to be an advocate for the equity and profitability of a project (Drom, 2007). Government organizations must rely on qualitative factors such as reputation, social responsibility, and fiscal responsibility to defend their capital investments (Drews, 2010; Maijoor, 2010). Successfully transformed organizations rely on analytics to measure value and profitability (Rey-Marstun & Neely, 2010).

Because of the fiscal scrutiny that the Department of the Army experienced with the failed Future Combat Systems acquisition process, the Department of the Army must rely on nonprofit project evaluation criteria to defend future acquisition projects (Drews, 2010). Nonprofit project evaluation criteria consist of the project's profitability, developmental sustainability, innovation, efficacy, efficiency, and sustainability (Drews, 2010). Governmental organizations, predominantly the Department of the Army, must

articulate the economic benefits and metrics regarding acquisition investments (Droom, 2007).

The Department of the Army acquisition economic benefits metrics that relate to its stakeholder might consist of the project's ability to improve maintenance costs, energy development and regulatory compliance (Camen, 2010; Melese, Francile, Angelis, & Dillard, 2007). An acquisition project's investment in intellectual and structural capital and knowledge management serves beneficial to the Army's marketing strategy and creates value to the stakeholder (Dumay, 2009). The Department of the Army contract selection metrics can further assist contract specialists to articulate the need for a specific product or program to support the mission of the agency.

A systematic benefits measurement could improve the acquisition process performance evaluation (Ayra et al., 2005). A systematic benefits reporting framework can improve the information value and time processes (Bouwens & Van Lent, 2006; Dumay, 2009). Organizations whose subdivisions pursue different goals or customized systems have a higher failure rate among its competitors (Meier, Eller, Marchbancks, Robinson, Polinerd, & Wrinkle, 2004). To improve business processes, the Department of the Army must develop human, natural resources, and infrastructure protection (Steen, 2005).

Organizations must develop standard measurements and processes to interoperability and economy of scale (Kim & Park, 2006). Standards assist organizations create innovation, reduce transition costs, reduce information variance, and

create cost-effective processes (Meaks & Swann, 2009). The Department of the Army must develop standard acquisition benefits measurements to improve its social investment awareness and perception among stakeholder (Hausman, 2010). Government social responsibility consists of the direct cost of assets defaults, loss of jobs creation, and environmental hazards implications (Littrell, 2010).

A challenge for the government is how to determine accounting standards among intangible assets, which could account for approximately 80% of an organization's value (Lin & Tang, 2008; McDonald, 2009). The analytic hierarchy process (AHP) is an intangible value model used to determine and weigh the contributions of a nonprofit organization to stakeholders by avoiding financial statements (Hausman & McPherson, 2009; Lin & Tang, 2009). AHP relies on rating the benefit of an acquisition project through discounted future cash flows against the quality, innovation, technology, management, community, environment, technology, and alliances of an organization (Lin & Tang, 2009). The key to measuring the performance of an intangible asset is determining the benefit that the intangible asset provides to the shareholder and improvement to quality service, customer satisfaction, and process efficiency (Jhunjhunwala, 2009; Orlitzky, Siegel, & Waldman, 2011).

## Transition and Summary

Section 1 was an introduction to describe the doctoral study's problem statement, theoretical framework, literature review, and research questions. A qualitative case study approach was used to examine the Department of the Army's the benefits framework of

cost benefit analysis' through the review of case studies and interviews with selected Department of the Army acquisition professionals. Academic literature exists regarding the cost development, risk management, and knowledge management within the cost benefit analysis and the Department of the Army acquisition process. Academic literature to include this doctoral study has evolved to examine the benefits framework and contract requirements within the cost benefit analysis process. The objective of Section 2 is to describe the doctoral study's research design, research instruments, data analysis, participants, and ethical considerations.

## Section 2: The Project

Section 2 served as a medium to describe the research design of this doctoral study, instruments, and data analysis technique to analyze the research problem. The selection criteria for participants, steps taken to acquire the case studies, and interview questions to enhance the doctoral studies validity and reliability are explained in this section of the doctoral study. Finally, the participants and agencies' protective measures are explained in detail to ensure that the research data was collected and analyzed within an ethical premise.

### Purpose Statement

The purpose of this qualitative case study was to determine whether a standardized versus decentralized benefits framework within the CBA process could improve the acquisition project's selection process. The Department of the Army's CBA process serves as a guideline to identify the profits, equities, and benefits of a given acquisition project. One component of this doctoral study was to collect data to explain the current CBA's benefit framework shortfalls using a pragmatic worldview and qualitative method design (Creswell, 2008).

This doctoral study consisted of a qualitative method design (Creswell, 2008). The qualitative research design encompassed a case study approach consisting of case studies reviews and interviews to collect data to analyze the problem in the problem statement. A qualitative research design assisted the researcher to determine whether a standardized benefits framework within the CBA process would improve the acquisition

selection process.

The qualitative research depended on the case study review of three major defense acquisition CBAs to include a service contract, $1 million acquisition contract, and $10 million major acquisition contract. The case studies CBAs represented acquisition systems that have initiated the product's life cycle production. The goal was to derive the different agencies cost benefits analysis framework to determine the shortfalls within the benefits process of the CBA. The research design relied on interviews with more than 25 defense contract analysts to explore the benefits of a standard evaluation framework.

## Role of the Researcher

The task at hand was to construct a data analysis instrument that would capture the research participants and previous acquisition professionals' subjective decision-making processes exercised of cost benefit analyses of past projects. The challenging trait was to build a correlation among the numerous, distinct benefit's frameworks developed in past CBAs to determine whether a centralized versus decentralized benefit framework would be beneficial to the CBA process. I had the further responsibility to build an interview platform proven reliable and valid to substantiate the research conclusions. In addition, I determined the number of acquisition professionals that represent the contracting spectrum to derive a substantial conclusion. I coordinated with the Army's economics office to schedule the interviews.

## Participants

To determine the advantages, disadvantages, threats, and opportunities regarding implementing a centralized benefits framework within a cost benefit assessment, numerous participants representing the practical, theoretical, and private sectors were incorporated into the research design. Research participants were selected using the purposive sampling strategy. The purposive sampling consists of screening and selecting the correct number of participants to provide an analytical review the cost benefit assessment (Chenail, 2010).

Participants had to meet a selection criterion to ensure that their background and profile can assist in supporting the research design and purpose (Chenail, 2010). Selected participants must have earned a Department of Army Level III acquisition certification, completed the Defense Acquisition University quality assurance course, and demonstrated experience in an acquisition or budgetary duty position. The participants' experience and subjective analysis of the cost benefit analysis supported the doctoral study's case study design.

The benchmark criteria ensure that the participants have the experience and are versed in acquisition practices and policies. Participants who have achieved a DA Level III acquisition certification have earned the educational background to prove that they have demonstrated the ability to analyze acquisition policies, procedures, contract proposal selection, and contract execution. Participants must have served in an

acquisition or budgetary position that has oversight of current policies and contract selection decision-making process.

The project research participants consisted of military active-duty acquisition professionals from the major military commands, who conduct the day-to-day cost benefit assessments in support of the contracting missions of their agencies. The research design instruments, theoretical participants, including acquisition instructors from the Defense Acquisition University, provided a doctrinal overview and business-framework shortfall within the cost benefit analysis framework. A unique opportunity is the ability to collaborate with the Defense Acquisition University academic program and request students from the cost benefit assessment class to participate in the interview process.

Defense contractors representing the competitive contracting sphere provided an assessment regarding the construct of the cost benefit analysis and its corresponding business strategy shortfalls. The defense contractors' perspective provided an assessment regarding the balance between implementing a standardized benefits framework template and maintaining a private industry competitive requirement. Finally, political appointees representing the Department of the Army's cost and economics office provided a civil-military perspective regarding the cost benefit analysis.

The research participants underwent interviews to capture subjective evaluation of the current cost benefit analysis framework. Prior to beginning the interviews and research, the participants were informed in writing regarding the scope of the study. The participants signed a statement of consent to participate in the research to meet the

university ethical guidelines. The research participants reside in either the Washington, DC, area, within the researcher's commute distance or were serving in a contracting office in the United States Central Command, Tampa, FL, or in Afghanistan in support of Operation Enduring Freedom rotation 12-13.

The Defense Acquisition University, which serves an institution of higher education within the contract realm, is located in the Fort Belvoir, VA, 45 miles outside of the Washington, DC, area. The participants serving in the Defense Acquisition University underwent video teleconferencing or phone interviews. Face-to-face interviews were conducted at the Forward Operating Base Salerno Regional Contracting Command in Afghanistan, and United States Central Command in Tampa.

The interviews were limited to 30 minutes and scheduled at the convenience of the participants to ease scheduling conflicts. An electronic invitation was distributed via the Walden University e-mail portal to the participants to establish the appointment (see Appendix A). A description of the project study was sent with the consent form attached to the e-mail invitation to assist the participants to prepare for the interview (see Appendix B). An email reminder (see Appendix C) and followed-up via a phone call 48 hours prior to the interview appointment with the participant to confirm the participant's commitment.

Each participant had the option to accept or decline the interview request. If the participant accepted the interview request, then the participant signed the consent form and sent the consent form via email or fax to the researcher's school address. The goal of

the proposed research design was to work around scheduling conflicts and time commitments of participants.

## Research Method and Design

Two important research data points determined the effectiveness of the current decentralized cost benefit analysis framework. First, three approved contracts' cost benefit analysis were reviewed to determine the benefit's framework comparative data among contract proposals reached the contract selection process. Second, the Department of Army acquisition practitioners provided subjective opinions regarding the current decentralized cost benefits analysis through semistructured interviews. The data was collected and analyzed after receiving approval from the University Institutional Review Board (IRB). Using a qualitative study facilitates the discoveries of rationales and a more detailed history or explanation of a certain group (Creswell, 2008). A qualitative design method explores and obtains the in-depth understanding of a phenomena and case study that cannot be determined through specific variables. Qualitative methods facilitate understanding the dynamics behind a phenomenon in which a literature gap exists (Creswell, 2008).

A case study approach was appropriate to explore the current DA acquisition workforce business processes regarding the evaluation of the current decentralized cost benefit analysis (Corbin & Strauss, 2008). The case study research design is composed of research instruments, such as case studies review and interviews questions with 20 acquisition specialists serving among the array of acquisition offices, within the

Department of the Army. The research instruments were designed to gather the necessary data to draw a conclusion based on the interview questions and case studies comparative data results.

The case study approach consisted of reviewing three DA Future Combat Systems' cost benefit analyses that completed its life cycle production. The case study approach facilitated the analysis of the conceptual and procedure shortfalls within the benefits cost benefit analysis framework of the defense acquisition system (Corbin & Strauss, 2008). The case study review determined the feasibility to implement standard benefits analysis and maintained the decentralized template.

**Method**

Qualitative research methods were used to gather the research data, synthesize the information, and determined the recommendations regarding the problem statement. A qualitative study method helped facilitate the discoveries of rationales and provided a more detailed analysis or explanation of a certain group (Creswell, 2008). A qualitative design method was used to explore an in-depth understanding of a business theory and case study that cannot be determined through specific variables. Qualitative methods encourage understanding the dynamics behind a business theory where a literature gap exists (Creswell, 2008).

Given the nature of the problem and the requirement to analyze intangible factors such as norms, beliefs, and opinions, the researcher selected a qualitative research method over a qualitative or mixed-method construct. The goal of using quantitative

research was to determine the relationship between an independent variable and a dependent or outcome variable in a population (Myers, 2009). Quantitative research designs are either descriptive when participants are measured once, or experimental in which participants are measured before and after a treatment. The purpose of this doctoral study was to explore a current predefined set of procedures, in which no associations among variables exist; thus, using a case study design was best.

**Research Design**

A case study research design was applied to support the researcher, data gathering instruments, and data analysis. To explore the problem statement, the research design relied on the understanding and analysis of data collection, and the ability to analyze multiple people perspectives regarding a current process (Aguinus, Pierce, Bosco, & Muslin, 2009). A case study approach was the appropriate research design for this research study that encompassed the review of numerous Department of the Army cost benefit analysis case studies and interviews with a specific population sample.

A case study method was used to explore the current DA acquisition workforce systems thinking regarding the evaluation of the current decentralized cost benefit analysis. The case study research design was composed of research instruments, such as numerous Department of the Army case studies review and interviews with more than 20 Department of the Army acquisition specialists serving among the array of acquisition offices and financial departments. The research design was developed to gather the necessary data to support the doctoral study's conclusion.

The case study approach consisted of reviewing three Department of the Army contracts' cost benefit analysis benefits framework that completed the life cycle production. The research instrument facilitated analyzing the comparative data within the Department of the Army cost benefit analysis framework. The results determined if the Department of the Army would best be served implementing a standard benefits analysis template versus maintaining the current decentralized format.

To facilitate the ability to explore the scope of the problem found in the Department of the Army's cost benefit analysis, the case study method was the best choice. A case study research design provided the ability to collect evidence to explore a focused research subject (Yin, 2012). The evidence based data gathered from the common patterns extrapolated from the cost benefit analysis review and interviews provided valuable insights towards the current Department of the Army contract selection model (Eriksson & Kovalainen, 2008). Using a case study provided a method to collect specific details regarding a research focus enhancing the research rigor, validity, and reliability (Gibbert, Winfried, & Wicki, 2008).

Numerous case studies were reviewed and semistructured in-depth interviews to derive a business process based on the analysis of the data (Zott, Amit, & Massa, 2011). Through the selected case study research design, findings were communicated through detailed narratives rather than data analysis. Using the case study approach provided the ability to recommend a new business practice to the Department of the Army.

The new business practice recommendation is based on the comparison of acquisition evaluative concepts and systems derived from the review of Department of the Army cost benefit analysis case studies and data gathered from interviews with acquisition specialists. The analysis of selected Department of the Army cost benefit analysis case studies provided an outcome based business recommendation to improve the Department of the Army's contract selection process (Dimock, 2004). The recommended business practice is based on the participants' assessments from interviews and efficient correlative factors found among the cost benefit analysis case studies.

## Population and Sampling

A purposive sampling strategy was used to support a qualitative research design and semistructured interviews. The purposive sampling strategy consisted of screening and selecting the correct number of participants who provided an analytical review of the benefits framework within the cost benefit assessment. In addition to selecting the correct number of participants, the purposive sampling strategy supported the ability to select the appropriate participant expertise level to contribute to the doctoral study.

The purposive sampling to support the semistructured interviews consisted of 20 Department of the Army acquisition specialists who represented the Department of the Army's directorate of cost and economics office, the installation's directorate of contracting office, and an operational unit budget office. The 20 research participants were appropriate for this doctoral study, since the 20 specialized participants provided the necessary in-depth, unique expertise regarding the current cost benefit analysis business

process, without saturating the research data. Participants had to have met the selection criteria to ensure their background and profile could assist in supporting the research design and purpose.

The sampling criterion of participants consisted of participants earning a Department of Army Level III acquisition certification, serve as an associate in the Department of the Army Acquisition Corps, completed the Defense Acquisition University quality assurance course, and currently be assigned in a military active duty acquisition or budgetary duty position. The benchmark criteria ensured that the participants had the experience and were versed in acquisition practices and policies. Participants who have earned a DA Level III acquisition certification have demonstrated that they have earned the ability to analyze acquisition policies, procedures, contract proposal selection process, and contract management. Participants must have served in an acquisition or budgetary position, which have oversight of current policies and the contract selection decision-making process.

A convenience sample, based on professional contacts in the Department of the Army acquisition field was used to support the interviews. The project research participants consisted of active acquisition professionals from the major military commands, who conduct the day-to-day cost benefit assessments in support of their agencies' contracting missions. A unique research opportunity was to collaborate with the Defense Acquisition University academic program and use students from the cost benefit assessment class to participate in semistructured interviews. Finally, political

appointees' representing the Department of the Army's Cost and Economics Office provided a civil-military perspective regarding the cost benefit analysis.

## Ethical Guidelines

Permission was requested and approved from the Walden University's Institution Review Board, IRB approval # 02-13-12-0159164, to conduct the doctoral study, before collecting and analyzing data. Research participants voluntarily participated in the doctoral study and were asked to sign an informed consent form to protect their privacy and confidentiality (see Appendix A). I asked the interview participants via written consent to have responses audio-recorded prior to initiating the research.

A research participant had the opportunity to withdraw from the study at any moment without retribution. Research participants' names or organizations' names were not used in the study; instead, they were referred to as Participant 1 through Participant 20. To follow the Department of the Army code of ethics guidelines, no incentives were offered to the research participants to participate in the doctoral study. Participants' data will be stored for 5 years in a secured combination lock safe and will not be publically disseminated to protect the participants' rights.

## Data Collection

### Instruments

A positivist approach was used to determine the organizational research method and data collection technique to support the case study research application (Charmaz, 2006). A review of organizational documents and semistructured interviews were used to

attain the observations of participants regarding the Department of the Army's cost benefit analysis. The research instruments provided a data-gathering vehicle to capture the population sample's general perceptions and specific observations regarding the CBA process.

Semistructured interviews were conducted to collect data from selective participants. A semistructured interview begins with a social conversation or brief activity aimed at creating a relaxed or trusting atmosphere (Bennet & Elman, 2006). A predetermined interview format with prioritized questions to gather the necessary data was used to evaluate the current CBA system. The interview format supports the development of rapport with the participant, allowing the researcher to probe the subject regarding new and related topics (Ryan & Tipu, 2009). A semistructured interview format provided the researcher with the ability to explore any impromptu issues or points of interest related to the problem statements based on the participant's explanations.

Tables, transcripts, and field notes were used to collect and organize the researched data. The collected data cataloging and organization were crucial to create the interview's coding, data interpretation, and information correlation to determine the trends within the benefits framework process of the CBA. An organized data gathering technique assisted the researcher improve the collected information validity, reliability, and generalization. The collected data were published in the study to assist further research in the field.

Data collection and analysis strategies were incorporated to improve the data generalization or transfer of specific qualitative research recommendations to other particular situations (Chenail, 2010). The proposed data gathering instruments and data analysis will ensure the internal validity and reliability in this study. A qualitative research design's validity consists of a pertinent topic, sincerity, credibility, significant contribution, ethics, and meaningful conclusions (Tracey, 2010).

Respect, integrity, and a learning atmosphere were promoted while interacting with the participants and interpreting the data. Researching a problem that can create an immediate impact in the organization increased the validity, credibility, and reliability of this doctoral study. Deriving the correct interview questions that identifies a systematic problem in the cost benefit analysis framework and exhorts experienced participants to comment on the problem increased the validity of the doctoral study.

The interview questions were vetted through S. Bagby, Assistant Secretary of the Army for Cost and Economics, and the Department of the Army's senior level cost benefit analysis manager to determine the correct context to research the problem. The level of managerial oversight toward the construct of the interview questions ceased the need to conduct a pilot study to increase the doctoral study's validity. To follow a methodological process, there was no inclination toward a proposed solution, and the collected data was retrieved from an experienced sample population to recommend a solution to the system.

**Data Collection Technique**

Interview questions and case studies served as instruments to collect the required data. The interviews questions were designed to capture the subject matter expertise and evaluate the current benefits framework. The semistructured interviews consisted of 30 minutes interview sessions with 20 prominent acquisition specialists in the field. A predetermined interview format was followed with the following prioritized questions to gather the necessary data to evaluate the current CBA system.

1. What are the benefits and constraints in adopting a standardized cost benefit analysis framework that can serve as a general evaluative tool?
2. Will a standardized cost-benefit tool restrict an agency's innovation?
3. How will a standardized cost benefit analysis affect the procurement decision making timeline?
4. What metrics could best support a standardized cost benefit analysis?

The case study entailed reviewing the cost benefit analysis of three major defense acquisition systems supporting the Army's Future Combat Systems that completed its life cycle production. The three cost benefit analyses consisted of major defense acquisition contracts worth over $10 million, service contracts, and minor defense contracts worth less than $1 million dollars. Analyzing the case studies' contract dollar values determined if there were any procedural differences, among the Department of the Army agencies given the amount of a financial investment.

A case studies review was used to determine the Department of the Army's agencies shortfalls within the benefits formulation process of the CBA. Access to the DA's Cost and Economics Office secured CBA portal was requested to retrieve the archived CBAs. Similarities and differences among the CBAs were documented in a formatted matrix to derive decision points and business procedures, within CBA benefits framework process.

**Data Organization Techniques**

The qualitative research data were cataloged into two categories, nominal, and interpretative data (Suri, 2011). The nominal data derived from the semi-interviews, and survey data results were recorded in a database. With the permission of the participants, the interviews were transposed into transcripts with key statistics and information transferred to the database. The nominal data were later correlated to determine the current constraints and benefits, within the cost benefit analysis framework.

The data derived from the researcher's case studies review and interpretation of the current DA policies and procedures were transposed unto a research journal. The journal entries highlighted key facts and information regarding the interpretive data recorded from the case studies review. Comparative data among the CBA case studies benefits compared the current systematic issues in the current CBA system.

The nominal and interpretative data were stored in a Microsoft Access database on my personal computer. The information was stored on a memory stick as a secondary storage method. The recorded data was published in the doctoral study to serve as a

guideline for future research opportunities. The researcher will hold the primary and secondary data storage for 5 years to support future researcher requests and later dispose through electronic retrograde.

## Data Analysis Technique

The purpose of the semistructured interviews, surveys, and case studies review was to extrapolate the Army contract specialist and agencies' current trends and comparisons within the CBA process. Descriptive answers derived from the research questions were used to develop extensive and accurate transcripts for detailed analysis. The interview questions responses and case studies review provided pertinent data to describe the current systems-thinking approach during the development of the CBA process.

The nominative and interpretative data derived from the semi-interviews and case studies review were recorded in the Microsoft Access database. The Access database along with the transcripts were organized by the research variables: systems-approach, contract evaluative data, timeline, benefits analysis structure, and risk management filling the columns and research participants filling the database rows. NVivo v.9 was used to develop the correlation analysis among the interview transcripts and case studies data review.

NVivo and the Microsoft Access database provided the opportunity to create data bars, graphs, and visual instruments that represented the collected data analysis. Bars and graphs visually represented the outcome of the research to support the interpretative

validity and reliability of the study, and served as the best vehicle to communicate the data to the audience (Hannes, 2010). The visual data provides key Department of the Army contract management themes and business practices that can serve as a basis for future exploration and efficiencies research studies.

## Reliability and Validity

### Reliability

The reliability encompassed in this study relied on selecting a viable problem that addressed a current Department of the Army's policies and practices shortfall. The intent of the researcher was to recommend a solution that would offer an immediate impact to the Department of the Army's business processes to improve its operational standards. The research's reliability was further achieved by using credible research instruments to collect and assess the research data.

The use of quality research criteria was imperative to establish the rules and regulations of productive qualitative research (Tracey, 2010). The research criteria include selecting credible participants and references to provide substantial data, and creating a conceptual framework that will generate debate among professionals in the acquisition and contracting field. The research was founded upon a code of ethics and values that will protect the research participant character and proposed solution viability.

The reliability surrounding the conclusion and recommendations found in this doctoral study was gained by exhorting trustworthiness and dependency among the data collection and analysis (Suri, 2011). Specific steps were taken before, and during the

personal interviews and case studies review to prove that the recommendations from the study would be found reliable among acquisition specialists serving in the Department of the Army. The first step to increase the legitimacy of recommendations was to have stringent participant selection criteria and acquire case studies that represented the spectrum of contract formulation throughout the Department of the Army.

The second step to increase the recommendations trustworthiness was to develop interview questions based on input from acquisition specialists in the field and later undergo a mock-up interview scenario to best prepare for the interview session. Through a set of thorough interview questions and a coordinated interview format, the conditions were established to best acquire the interview participant's subjective assessments of the Department of the Army's cost benefit analysis. Summarizing selected acquisition specialists input regarding the Department of the Army contract selection process and reviewing specific case studies that denote the shortfalls and best practices in the CBA framework increased the doctoral study's reliability.

**Validity**

Positivist quality criteria for case research must rely on the validity construct, internal validity, and external validity to exemplify the research legitimacy (Beverland & Lindgreen, 2010). Specific validity criteria will substantiate the case study and research quality. Specific steps were implemented to demonstrate internal and external validity of the current research.

The researcher captured and published specific interviewer quotes into the study and encouraged participants to review the research data before publishing the study to enforce internal validity. Additionally, the researcher triangulated the qualitative data collected through interviews and case study reviews to substantiate the research findings. Finally, the results were documented to serve as reference material for further studies.

The research external validity is important to ensure the data's generalization (Chenail, 2010). The goal was to provide an argument and supporting data to influence discussions regarding the military economics model. The selection of participants, degree of professionalism, and ability to foster further debate increased the external validity of the research.

## Transition and Summary

The research design, data collection technique, population size, validity, and reliability that were used in this doctoral study were described in Section 2. The researcher could derive a recommendation to a current business process based on the case study research design, case studies review, and semistructured in-depth interviews. A case study research design best supported a qualitative study, because the researcher could communicate the findings through detailed narratives, rather than data analysis. The researcher ensured that the doctoral study was reliable and valid by analyzing a problem, which study's conclusion could provide an immediate impact toward the Department of the Army's contract management process. The researcher used a purposive sampling strategy and participant's criterion to ensure that the collected data

through interviews best represented the views in the Department of the Army acquisition field.

Conclusions based on the data collected from semistructured interviews and case studies review are detailed in Section 3. The researcher followed a set of interview questions to extract the information required from the selected participants to determine if a standardized versus decentralized benefits framework within the Department of the Army's cost benefit analysis would best support the contract management process. The researcher upheld the doctoral study's ethical compliance by using consent forms and protecting the participant's information as suggested by Walden University.

## Section 3: Application to Professional Practice and Implications for Change

Section 3 includes an overview of the study, presentation of findings, applications to professional practices review, implications for social change, and recommendations for further study. A qualitative research study was conducted to determine the differences between a number of successful and failed major Department of the Army's acquisition systems' cost benefit analysis proposal, and if it would be beneficial for the Department of the Army to standardize or maintain a decentralized cost benefit framework. The conclusion is based on comparing the participant interviews and case studies analysis with current business practices literature to provide the Department of the Army a theoretical and subjective assessment recommendation to improve its current cost benefit analysis framework. The recommendations for further study are based upon the result of a number of themes derived from the participant interviews regarding how to improve the Department of the Army acquisition process.

### Overview of Study

A case study research design was applied in this doctoral study to explore the current business practices of the Department of the Army regarding maintaining a decentralized cost benefit analysis versus a standardized benefits framework. The research concentrated on evaluating the cost benefit analysis selection metrics among three successful and failed acquisition projects to determine if current acquisition business practices best supports select contracts that benefit the Department of the Army and stakeholders' investment. The researcher further interviewed 20 acquisition

professionals with budget formulation experience to gain a subjective assessment of the current decentralized benefits framework within the cost benefit analysis process and the ramifications or benefits of implementing a standardized format.

The central questions explored in this doctoral study determined the differences between the cost benefit analysis of the DA's successful major defense acquisition systems and failed procurement project, and if it would be the best business practice to standardize or maintain a decentralized costs benefit framework within cost benefit analysis construct. Personal interviews with experienced acquisition specialists were used to gain a subjective assessment of the Department of the Army's cost benefit analysis framework. The goal was to provide a recommendation based on total quality management theories to improve the Department of the Army's contract selection bidding process and promote budget formulation efficiencies.

## Presentation of the Findings

The two central research questions for this doctoral study focused on determining the differences between the successful and failed defense acquisition systems' cost benefit analysis and if the best Department of the Army's business practice would be to standardize or maintain a decentralized cost benefits framework in the contract selection process. The emerging themes generated from the case studies comparison and participants' interviews provided the basis for a recommendation to the Department of the Army to standardize the benefits framework, within the cost benefit analysis

construct. The participant interviews and case studies review further provided an assessment to improve the metrics used to develop cost benefit analysis proposals.

The Department of the Army has developed a recommended benefits framework criterion to assist acquisition professionals develop a benefits analysis for a recommended service, policy change, or contract. The benefits analysis framework is based on a quantitative construct that measures the added value of the suggested program or contract when compared to the costs incurred to support the initiative (CBA). The current recommended benefit analysis framework is based on the Department of the Army's Doctrine, Organization, Training, Materiel, Leader, Education, Personnel, and Facility (DOTMLPF) management business paradigm.

The DOTMLPF paradigm provides agencies and acquisition specialists with a model to identify the benefits of the proposed initiative along the major pillars that sustain the Department of the Army's day-to-day operations (Financial Management Comptroller Office, 2008). The benefits framework within the current Department of the Army cost benefit analysis advises acquisition specialists to seek quantitative measures that will provide a cost reduction, savings, revenue, or increase productivity. The benefit framework encourages acquisition specialists to identify resources required to invest in the initiative, alternatives among current practices, and develop a quantitative measure to assess the initiative's benefit.

The decentralized benefits framework within the Department of the Army's cost benefit analysis serves as a decision support matrix designed to promote individual

research, innovation, and delegated responsibility within Department of the Army agencies and acquisition professionals. Before the research was initiated to determine whether a decentralized or standardized benefits framework would best serve the cost benefit analysis framework, conceptual themes were developed to analyze case studies and data from the participant interviews.

- Would a standardization process improve or hinder the time required to complete the cost benefit cycle?
- Would standardizing the cost benefit analysis hinder an agency's ability to promote the proposed initiative?
- How receptive would acquisition specialists be toward changes in the cost benefit analysis framework?
- Would a standardized process, rather than the current decentralized practice improve the CBA time decision cycle?

The first step was to analyze six cost benefit analysis packets that had either failed or succeeded the acquisition proposal selection board process based on the decentralized benefits framework process. A comprehensive CBA case studies themes analysis can be found in Appendix E, Tables E1 and E2. The six agencies selected for the doctoral study represent the scope and magnitude of agencies that provide service to the Department of the Army.

Based on personnel authorizations and infrastructure, Agencies 3 and 4 would represent a small capitalization company in the private industry. Based on funding

allocations and expenditure, Agencies 1, 5, and 6 would represent a large capitalization company in the private industry. Agency 2 best represented a mid-size capitalization company in the private industry. The cost benefits analysis packets were retrieved from the Department of the Army's Cost Benefit intranet portal for purposes to support a formal research project in accordance with the Department of the Defense policy 65, Defense Advance Research Project Agency as depicted in Appendix I.

Table 1

*Themes Derived from the Acquisition Projects Comparative Cost Benefit Analysis*

| Case Study Themes |
| --- |
| 1. There is no direct relationship between a cost benefit analysis' dollar value and its approval rate |
| 2. There is a direct relationship between the cost benefit analysis packages that included benefits metric and a higher ASAFMC approval rating |
| 3. There is a direct relationship between agencies following the Department of the Army cost benefit guide and a higher ASAFMC approval rating |
| 4. There is a direct relationship between agencies that provided an alternative cost metric in their cost benefit analysis proposals and a higher ASAFMC approval rating |

The first central question determined the differences between the successful and failed defense acquisition systems' cost benefit analysis. My cost benefit case studies review analysis provided three themes that distinguished the differences between the approved and disapproved acquisition projects. The three themes corresponded to the insignificance of an initiative's cost benefit analysis dollar value in relation to its approval or disapproval rate. Second, an agency's adherence to the Department of the

Army's recommended cost benefit analysis framework led to a more successful approval rate. Third, the cost benefit analysis, which provided an alternative cost reduction or savings measure led to a more successful ASAFMC approval rate

The initiative's cost benefit analysis dollar value was insignificant toward its approval success rate as demonstrated in Table 2. The notion that the higher an initiative's dollar value equals to a higher probability of disapproval were dispelled in the case studies review, since Agency 5's $1.1 billion (major acquisition project), Agency 2's $9.9 million, and Agency 3's $1.2 million proposed initiatives were approved based on the merit of cost benefit analysis and agency's ability to articulate mission requirements and needs. Congruently, Agency 1's $2.4 billion, Agency 4's $6.1 million, and Agency 6's $1.8 million proposed initiative were disapproved, because of the agency's inability to explain the benefit of the initiative to the agency, Department of the Army, and United States taxpayer.

Table 2

*Themes Derived from Comparing the ASAFMC Approved and Disapproved Cost Benefit Analysis Initiative Dollar Values*

| Agency | Dollar value | Approval |
|---|---|---|
| Agency 1 | $2.4 billion | N |
| Agency 2 | $9.9 million | Y |
| Agency 3 | $1.2 million | Y |
| Agency 4 | $6.1 million | N |
| Agency 5 | $1.1 billion | Y |
| Agency 6 | $1.8 million | N |

The agencies that followed the recommended cost benefit analysis framework found in the CBA guide had a higher approval probability rate than the agencies that depended on their individual research techniques and benefits construct (Table 3). The recommended cost benefit analysis framework found in the CBA guide provides an extensive quantifiable and non-quantifiable criteria list to assist agencies in developing their cost benefit analysis packet. Agency 2, Agency 3, and Agency 5 provided cost reduction figures, cost alternatives, organizational, and nonquantifiable benefit analysis based on the recommended CBA guide cost benefit framework leading to an approved cost benefit analysis. Agency 1, Agency 4, and Agency 6 did not follow the recommended CBA guide cost benefit framework relying on respective benefit analysis,

which each agency excluding pertinent financial and alternative comparative data resulting in disapproved cost benefit analysis packets.

Table 3

*Themes Derived from Comparing the ASAFMC Cost Benefit Analysis that followed the DA CBA Guide and Corresponding Approval Rate*

| Agency | Followed CBA guide | Approval |
|---|---|---|
| Agency 1 | N | N |
| Agency 2 | Y | Y |
| Agency 3 | Y | Y |
| Agency 4 | N | N |
| Agency 5 | Y | Y |
| Agency 6 | N | N |

Agency 5, Agency 2, and Agency 3 had common benefit explanation constructs that provided substantial data, which led to an approved proposed initiative. Agency 1, Agency 4, and Agency 6 exercised a common benefit assessment framework as recommended by the Department of the Army's cost benefit guide data to explain their respective agency's initiative. The successful cost benefit analysis constructs each had a cost reduction plan; recommended funding lines reprogramming, justification regarding expected productivity improvements, and improved readiness plan. Most importantly, the successful cost benefit analysis packets each had alternative cost estimates to provide

the Department of the Army a more robust financial picture regarding investment requirements and the initiative's benefit to the taxpayer.

Table 4

*Themes Derived from comparing the ASAFMC Cost Benefit Analysis that Provided a Benefit's Framework and Alternative Measures and Corresponding Approval Rate*

| Agency | Provided benefits measure | Provided alternative measures | Approval |
|---|---|---|---|
| Agency 1 | N | Y | N |
| Agency 2 | Y | Y | Y |
| Agency 3 | Y | Y | Y |
| Agency 4 | N | Y | N |
| Agency 5 | Y | Y | Y |
| Agency 6 | N | N | N |

Agency 1, Agency 4, and Agency 6 did not provide an accurate financial or non-quantifiable picture regarding the initiative's benefit to the Department of the Army and United States taxpayer. Agency 1 attempted to describe the benefit of their initiative by only describing how software licensing would improve database management and agency-wide information dissemination. Agency 1 failed to describe the initiative's alternative cost estimates, cost reductions, potential budget execution savings, or positive impacts toward the United States taxpayer, therefore leading to a disapproved packet.

Agency 4 provided an elaborate reason for the initiative's need and estimated cost figures to support the requirement, but failed to describe how the initiative would benefit

the Department of the Army and United States taxpayer. Agency 5 provided an elaborate description of the initiative's technical capabilities and how the improvements would assist the United States Army medical research community, but failed to describe how the initiative would benefit a Department of the Army service member and taxpayer. Agencies 4 and 5 failed to describe any cost reduction, cost avoidance, potential revenue, or non-quantifiable benefit to Department of the Army stakeholders as described in the Department of the Army cost benefit guide.

Agencies 1, 4, and 5 relied on innovation and individual best practices to explain and promote their initiatives, instead of following the Department of the Army cost benefit guide framework to organize research and articulate the Department of the Army's benefit. The submitted cost benefit analysis packets failed to provide cost estimates alternatives, fiscal investment plan to support the requirement, or output benefit to the United States taxpayer. The failure to explain how the initiative would benefit the Department of the Army and United States taxpayer to the Assistant Secretary of the Army, Financial Management and Comptroller Office (ASAFMC) led ASAFMC to disapprove the initiative for a lack of confidence in the proposed project.

A semistructured interview research design was used to determine the results of the second central research question: Would the best business practice be to standardize or maintain a decentralized costs benefit framework within cost benefit analysis construct? Twenty Department of the Army acquisition level III certified specialists serving in contract or budgetary positions were interviewed to assess the cost benefits

analysis framework. The interview transcripts were analyzed using NVivo to determine the themes found in Appendix F, Tables F1-F4.

Four major themes were derived from the interview questions to determine if the Department of the Army should maintain a decentralized or adopt a standardized cost benefit framework. The four themes derived from the interview questions included the benefits and constraints of adopting a standardized benefits framework, potential for a standard framework reduce innovation, ability for a standardized tool to improve the procurement timeline, and recommended metrics to include in the cost benefit analysis framework. A qualitative analysis of the participant interviews through NVivo provided a list of expressions (Appendix G) and list of phrases (Appendix H) that assisted in generating the four major themes.

The first interview question focused on the benefits and constraints in adopting a standardized cost benefit analysis framework as depicted in Table 5. Participants 1, 3, 7, 10, 11, 12, 13, 14, 15, 16, 19, and 20 stated that a standardized benefits framework would improve the cost benefit analysis process. Participant 1 stated, "A standard format would improve the confidence in the quality and reliability in the CBA process."

Participants 3 and 7 stated that "a standard CBA would improve the CBA process time and reduce redundancy." Participants 10 stated, "Standard CBA process would improve the research required to develop a tax-subsidized acquisition." Participant 14 provided the most insight regarding adopting a standardized cost benefit format when stating, "Standard format would provide new acquisition officers with an improved

process to assist their agencies make the right acquisition management decisions to reduce the Department of the Army's fraud, waste, and abuse." Participant 19 stated, "a standardized benefits format would improve the processing timeline for time-sensitive contract requirements to meet immediate Commanders' needs."

Table 5

*Interview Question 1 Emerging Themes as Depicted by NVivo 9 Statistical Analysis*

| What are the benefits and constraints in adopting a standardized cost benefit analysis that serves as a general evaluative tool? | |
|---|---|
| Themes | Participants |
| Standardization will improve product quality | 1, 3, 4, 7, 8, 9, 10, 11, 13, 15, 16, 20 |
| Standardization could restrict the number of courses of action | 2, 6, 12, 14 |
| Standardization could improve time-sensitive contract needs | 3, 7, 16, 19, 20 |

Participants 2, 4, 5, 6, 8, 17, and 18 believed that standardizing a benefits framework would be detrimental to the cost benefit process. Participant 2 and 5 stated, "A standard format would slow down the acquisition system. The new system would take longer to gain approval and be subject to more tests." Participant 4 stated, "Standard acquisition format would not be responsive to the shifts to defining policies and political realities." Participant 6 stated "Every decision is different and requires a different CBA model to make it effective." Participants 17 and 18 stated, "Standardizing the acquisition process would hinder agencies from creating tools to improve the acquisition system."

The second interview question focused on how a standard cost benefit tool would restrict and agency's innovation as described in Table 6. Participants 1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19, and 20 conveyed that a standardized cost benefit analysis would not restrict an agency's innovation. Participants 1, 3, 5, and 9, stated "A standard cost benefit analysis could offer review checklists that would generate innovation."

Participant 8 and 12 stated, "A standard tool would improve an agencies and private industries understanding of the CBA process." Participant 10 provided the most in-depth answer stating, "There are very few individuals, who are thrown into a requirement to produce a CBA, who have the knowledge or the background to create an innovative process that would truly revolutionize the overall process." Participant 20 stated, "Standardizing a process can enhance an agency's innovation, since acquisition personnel could the established benchmark to seek improvements."

Table 6

*Interview Question 2 Emerging Themes as Depicted by NVivo 9 Statistical Analysis*

| Will a standardized cost benefit tool restrict and agency's innovation? | |
|---|---|
| Themes | Participants |
| A standardized tool would enhance innovation | 1, 3, 4, 6, 8, 9, 10, 11, 13, 15 |
| A standardized tool could restrict innovation | 7, 12, 14, 17, 18 |

Participants 2 and 7 believed that a standard tool would deprive an agency of its innovative and human intuition resources. Participant 2 stated, "A standard tool would

eliminate any alternatives that an acquisition official could introduce to improve on the initiative's analysis." Participant 7 stated, "A cost benefit analysis could restrict an agency's innovation, due to the unwillingness to enter into a business venture as it would not be beneficial and the return on investment could be in the negative."

The third interview question determined if a standardized cost benefit analysis would affect the procurement decision-making timeline as depicted in Table 7. All of the Participants with the exception of Participant 5 believed that a standardized cost benefit analysis would accelerate the procurement process. Participant 3 stated, "A standardized CBA format would definitely reduce and improve the time it takes to process a requirement package and reward contract by three to six months." Participant 14 stated, "A CBA would speed up the acquisition process, as well as a result in more resource-informed decision making." Participant 17 provided an insightful argument stating, "A standardized format would reduce the innovative realm within the acquisition process, but expedite the timeline."

Table 7

*Interview Question 3 Emerging Themes as Depicted by NVivo 9 Statistical Analysis*

| How will a standardized cost benefit analysis affect the procurement decision timeline? | |
|---|---|
| Themes | Participants |
| Standardization would accelerate procurement process | 1, 2, 3, 4, 6, 7, 8, 9, 10, 11,12 13, 14, 15, 16, 17, 18, 19, 20 |
| Standardization would hinder the procurement timeline | 5 |

Participant 5 was the only participant to dispel the thought that a standardized CBA process would expedite the acquisition process. Participant 5 stated, "With the addition of any formal process, especially requiring documentation and approval, the timeline will extend. It will take longer to make acquisitions." Participant 5 believed that in lieu of standardizing a process, the Department of the Army should reduce the CBA requirements to expedite the process.

The fourth interview question determined what potential metrics could be used to support a standardized cost benefit framework as described in Table 9. All participants stated that cost avoidance metric needed to be added to the current Department of the Army CBA guide. Participant 15 stated, "A proposed project's CBA should include a net present value, with cost listed as a negative number in order to provide fidelity to the process. Participants 19 and 20 stated, "A risk-modeling factor, where an acquisition specialist provides a predictive analysis regarding the potential for cost and scheduling overruns should be included in the CBA process."

Table 8

*Interview Question 4 Emerging Themes as Depicted by NVivo 9 Statistical Analysis*

| What metrics could best support a standardized cost benefit analysis? | |
|---|---|
| Themes | Participants |
| Metrics should include cost-reduction metrics (quantity, frequency, duration) | 1, 2. 3, 6, 7, 8, 9, 10, 11, 13, 16, 18, 19, 20 |
| Metrics should include risk-management functions | 4, 5, 12, 14, 19, 20 |
| Metrics should include a predictive analytical success rate | 12, 19, 20 |

The participants' interviews and case studies review indicate that a systematic change needs to occur in the current Department of the Army cost benefit analysis construct to improve its efficiency and product output. The current Department of the Army cost benefit analysis construct is based on the total quality management a conceptual framework, which dictates that a corporate manufacturing process and budget formulation can improve with resource efficiencies (Peterson, 1999). The Department of the Army instituted a decentralized cost benefits analysis framework to allow agencies and acquisition specialists to integrate their innovation skills, experience, and leadership into the acquisition process (Financial Management Comptroller Office, CBA guide, 2008).

The conceptual framework relies on the acquisition specialists' innovation, training, experience, and judgment to recommend cost-effective initiatives to improve

Department of the Army's operations. Based on the participant interviews and case studies review, I recommend that the Department of the Army change current management theory and decentralization mindset to a standardized format to improve the cost-effective initiative proposals. A standardization format will provide agencies with a common operating picture, predictive analysis tool, and systems-thinking approach to implement more cost-effective alternatives to current operations and policies (Skarzauskiene, 2010).

## Applications to Professional Practice

The doctoral study has many implications within the Department of Defense budget execution realm. The Department of the Army cost benefit analysis framework is integrated into every component of the Department of the Army's business operating system, contract management selection process, and major policy changes. The cost benefit analysis has become a cornerstone for commanders and directors serving in the United States Army to request funding for a project or a change in a policy to support an agency or installation's needs. The cost benefit analysis process has evolved into a decision-making model to be applied to personnel, administrative and logistics functions.

With the decrease in budget defense in the next coming years and the transformation into the Army's new Modernization strategy, Army agencies, offices, and executive agents will be relying on new doctrine and contracts to best support their mission and operational objectives. Cost benefit analysis will become the decision-making template to allow Department of the Army fiscal managers to resource long-term

acquisition plans. I can project that this doctoral study and the results could be cited or an abstract will be published in the *Army Logistician, Army Technology,* and *Army Transformation* journals.

With the expanding influence of the cost benefit analysis process, fiscal managers, acquisition specialists, and commanders routinely will seek methods to improve the CBA process. Projected improvements will include methods to automate the decision-making model, standardization of metrics and regulations, and time standards to improve the acquisition business selection cycle. This doctoral study could serve as a benchmark to assist the Department of the Army to expedite the contract selection process and improve its business innovation practices.

## Implications for Social Change

A lack of organizational structure exists within the benefits framework of the cost benefit analysis. The lack of a structure within the cost benefit analysis indicates that the American taxpayer and other Department of the Army business stakeholders' fiscal investment into the Department of the Army budget formulation process may not be adequately protected and be exposed to fraud, waste, or abuse. The conclusion of this doctoral study was designed to promote social change in the form of fiscal stewardship.

The goal of this researcher is to improve the Department of the Army's acquisition's decision-making process, which allocates tax payer's fiscal investment into projects or programs to support the United States' national security. Recommended changes in the contract selection process will assist the Assistant Secretary of the Army,

Financial Management Comptroller allocate funding to the initiatives that will best serve the interests of the Department of the Army and protect the taxpayer's investments. The goal is to promote social change, in the form of fiscal stewardship among the acquisition realm to ensure that the proper equipment is purchased to meet the Army's demands and vision reducing the possibility of fraud, waste, and abuse.

## Recommendations for Action

The themes derived from the case studies review, and participant interviews suggested that a standardized cost benefit analysis framework would improve the contract selection process and acquisition timeline. Currently, the majority of acquisition officials refer to the CBA benefit guide to develop proposals to increase their agency's ASAFMC office approval success rate. The review from the case study indicated that the agencies that did not follow the CBA guide had an analytical flaw in their proposal, which led to an ASAFMC rejected decision.

Because of anticipated upcoming fiscal constraints in the next Department of Defense President Budget's request and to improve the current acquisition process, the ASAFMC office should immediately mandate that all proposed initiatives, contracts, or acquisitions be accompanied with a cost benefit analysis memorandum, which follows the CBA guide. The current CBA benefits framework guide requires acquisition specialists to develop quantifiable, non-quantifiable, and alternative measures for each proposal. The current CBA construct provides the ASAFMC office the ability to validate

if a given project or initiatives improve resources management and adds a capability to the United States Army.

A second immediate recommendation based on the participants' interviews is to improve the CBA guide's metrics to account for a cost avoidance quantifiable measurement. Adding cost savings metrics in the CBA guide would improve the Department of the Army's oversight of the taxpayer's investment in national security programs and services. Forcing the acquisition specialist to determine innovative and alternative methods to avoid costs and improve organic resources management will improve the Department of the Army's acquisition project's fraud, waste, and abuse.

A final recommendation is that the Assistant Secretary of the Army, Financial Management and Comptroller Office, and Defense Acquisition University research the benefits of implementing a central automated cost benefit analysis benefits framework. An automated cost benefit analysis framework would facilitate acquisition specialists develop their CBA products and organize quantifiable and non-quantifiable measurements. Finally, a central automated database would allow acquisition specialists review products and lessons learned from other agencies to refine proposed initiatives.

## Recommendations for Further Study

The Department of the Army is undergoing a radical change in the budget formulation process and acquisition systems. The Department of Defense has mandated that the Department of the Army reduce its work force allocations, gain over $500 million in budget efficiencies over the next decade, and restructure its global strategy to

support a more cost-effective combat force. Restricted future budget formulations will force the Department of the Army to evaluate current acquisition policies and fiscal operating procedures.

The Department of the Army will need to evaluate its fiscal investments, contract selection process, and funding priorities to meet the national fiscal restraints. The Department of the Army will have to rely on the cost benefit analysis to select the efficient long-term projects from the potential fiscal failures. The Department of the Army will have to incorporate new business processes to standardize current decision-making variables and exploit acquisition professionals' innovation to best support the American stakeholder investments.

Because this doctoral study determined the shortfalls within a decentralized cost benefit analysis, the next step is to determine the quantitative metrics that can support formalizing a benefits assessment within the cost benefits process. Further research should explore the possibility of transforming the current subjective determinants, within the cost benefits analysis to a more technical, general selection format to improve the acquisition project selection process. A subsequent research study could review the Department of the Army's ability to institute an automated process to collect, review, and analyze the cost benefit analysis framework to best gain efficiencies and improve predictive contract analysis.

## Reflections

A qualitative case study was performed to review the Department of the Army's cost benefit analysis used by the Department of the Army, which relies on a decentralized process to develop and substantiate financial initiatives. The interviews from participants and the case studies determined that a standardized versus decentralized benefits framework, within the cost benefit analysis process could improve the acquisition project's selection process. After serving 13 years in the United States Army Officer Corps, I had been trained to seek methods to standardize all programs, routine tasks, and procedures that would lead to a soldier's decision. When I learned that the benefits framework, which followed a decentralized method, was the cornerstone of a flawed decision-making process, my first biased inclination was to seek a systematic process to improve the cost benefit framework.

My biases toward organizational improvements changed after reading numerous scholarly journals, prior to my participant interviews and case studies review. The peer-reviewed journals discussed multiple technical business practices and methods to improve organizational innovations based on decentralization. The new professional insights, prior to my participant interviews, assisted me in developing centric interview questions to evaluate current Department of the Army business practices.

Among the difficulties I had to complete my doctoral studies, the greatest challenge was extracting unbiased participant's opinions during the interview. The challenge was preventing the participants from believing that they were criticizing the

military when provided accurate assessments of the cost benefit analysis framework. My goal was to encourage the participants to provide accurate assessments and reviews to improve the process.

Another challenge was completing this doctoral study while deployed in Afghanistan supporting Operation Enduring Freedom, rotation 12-13. During my 10-month combat deployment, I did not have access to adequate communication platforms to conduct my research or facilitate my participant interviews. I had to rely solely on my family, especially my fiancée, to serve as morale and administrative support to complete my doctoral study.

## Summary and Study Conclusions

Chapter 3 was a summary of the qualitative case study research design that explored the Department of the Army's current business practices regarding maintaining a decentralized cost benefit construct or implementing a standardized benefits framework in their cost benefit analysis process. The data collected were based on a case studies review and interviews with Department of the Army acquisition specialists to answer the research central questions. The case studies review evaluated the cost benefit analysis selection metrics among three successful and failed acquisition projects to determine if the current decentralized benefits framework supports the Department of the Army's acquisition process and stakeholder's investment.

The researcher further interviewed 20 acquisition professionals with budget formulation experience to gain a subjective assessment of the current decentralized

benefits framework within the cost benefit analysis process. The interviews determined that standardized benefits framework would best serve the Department of the Army acquisition and contract selection process. The interviews further assisted the researcher determine if a standardized benefits framework would restrict an agency's innovative CBA formulation process, while developing initiatives. Finally, the interview participants recommended new metrics to be inserted in the Department of the Army's cost benefit analysis guide to improve the cost benefit process.

The two central research questions for this doctoral study focused on determining the differences between the successful and failed defense acquisition systems' cost benefit analysis and if the best business practice of the Department of the Army would be to standardize or maintain a decentralized cost benefits framework in the contract selection process. My intent was to provide a recommendation based on total quality management theories to improve the Department of the Army's acquisition process. The recommendations were based on the comparative analysis among three successful and failed acquisition projects and the subjective cost benefit analysis assessments of acquisition specialists serving in the budgetary positions.

Based on the case studies review and participants interviews, I recommend that the Department of the Army standardizes its cost benefit analysis' benefits framework to assist acquisition specialists develop quality cost effective proposals, generate alternative methods to implement an initiative, and develop initiatives that will reduce the Department of the Army's fraud, waste, and abuse. The case studies review clearly

indicated that the agencies, which followed the Department of the Army's Cost Benefit Analysis Guide, had a higher Department of the Army ASAFMC approval rate than the agencies that relied solely on their respective cost benefit analysis construct. The CBA guide provided a recommended template to assist agencies portray the quantifiable, non-quantifiable, and alternative cost-savings approaches to implement their initiatives. The recommended CBA guide assisted the agencies articulate how their agencies were going to improve the Department of the Army business efficiencies, organizational management, and protect the taxpayer stakeholder's fiscal investment in national security.

The participant interviews coded themes provided a subjective assessment regarding the benefit of implementing a standardized cost benefit analysis framework in the Department of the Army's cost benefit analysis construct. The interviews detailed how a standardized cost benefits framework could potentially reduce the time to complete an acquisition project by up to 3 to 6 months and improve an agency's innovation process implementing an alternative cost methods in proposal's construct. The interview participants further described how a standardized cost benefit analysis would improve the reliability proposals and assist new acquisition specialists organize their research to develop quality cost benefit proposals.

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## Appendix A: E-Mail Invitation

Dear Colleague,

I am Major Gerry Acosta, 4-25 Airborne Brigade Combat Team Brigade S3 Plans Officer. I am currently pursuing a Doctorate of Business Administration through Walden University. My doctoral study project, "Department of the Army Cost Benefit Analysis: Review of a Standardized Benefit Assessment" is my effort to review the current benefits framework within the Army's cost benefit analysis.

Based on your acquisition experience in the Department of the Army's contract management process, I would like to interview you regarding the benefit of continuing a decentralized benefits framework or implementing a standardize process within the Army cost benefit analysis process.

The interview will be limited to 30 minutes and scheduled at your convenience within the next two weeks to meet my doctoral study's timeline. Your participation and information will be protected consistent with Walden University's confidentiality guidelines. Your participation will be instrumental in providing the required data to best analyze the current benefits framework. If you decide to participate, I will send you a consent form via email that dictates your rights during the process and the purpose of the doctoral study.

Please advise if you have any questions or require any additional information. My contact information is 703-336-2163 or Gerard.acosta@waldenu.edu.

## Appendix B: Informed Consent Form

CONSENT FORM

You are invited to participate in a doctoral study analyzing the current benefits assessment framework within the Department of the Army cost benefit analysis. You were chosen to participate in the doctoral study due to your professional achievements and experience level within the Department of the Army acquisition field. This form is called an Informed Consent Form to describe this study, describe how your rights will be protected during the doctoral study process, and your approval to participate in the study. This doctoral study will be conducted by the researcher, MAJ Gerard M. Acosta, an active doctoral student through Walden University. Research collected through this study will examine the practicality of maintaining a decentralized versus standardized benefits framework within the cost benefit analysis process.

**Purpose of the study**: The purpose of this study is to determine if a standardized versus decentralized benefits framework within the CBA process could improve the acquisition project's selection process.

**Procedures**: If you voluntarily agree to participate in the study, you will be asked to conduct a 30-minute audio-recorded interview that will explore your assessment of the benefit's framework within the contract selection process. Your contributions will be kept confidential and secure for 3 years, upon its later destruction. You will have the ability to withdraw at any time during the study with no retribution. If you decide to consent, your

name or agency will be published in the doctoral study. You will keep a signed copy of this consent form.

**Contact information**: At any point in the process or after the doctoral study publication, you can contact the researcher at primary email: Gerard.acosta@waldenu.edu or secondary email: Gerard.acosta@us.army.mil. You have the option to contact a Walden University representative in the Doctor of Business Administration, 1-800-925-3368.

**Statement of Consent:**

I have read the above information and understand the scope of the study and participant's rights to voluntarily participate in the study. By signing below, I am agreeing to the terms described above.

Participant Name:

Participant Signature:

Date of consent:

Signature of Researcher:

## Appendix C: E-Mail Reminder

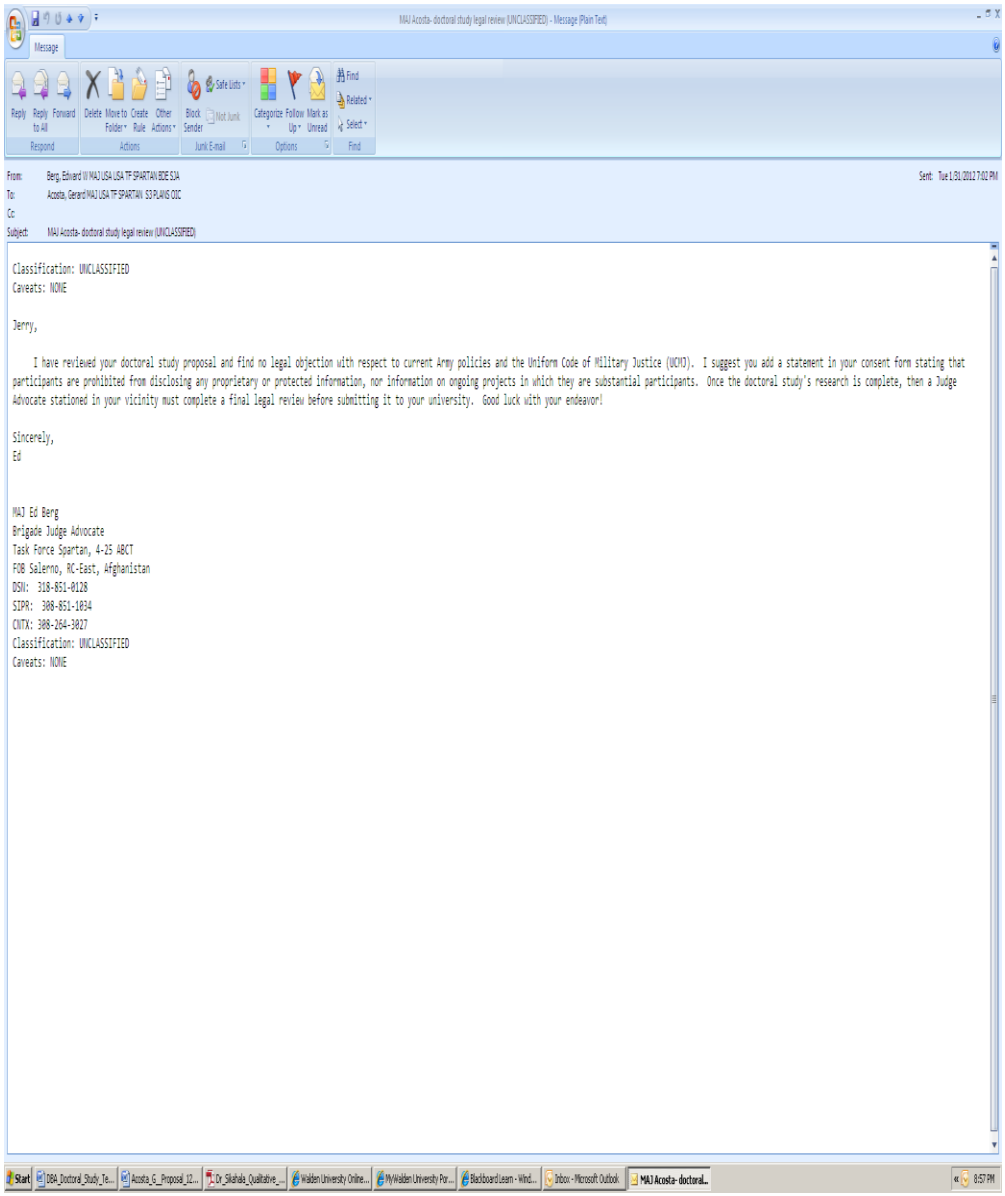
Dear Colleague,

This is to remind you that you are scheduled to be interviewed on ___, _____ at _____ to support Major Jerry Acosta's doctoral study project, *"Department of the Army Cost Benefit Analysis: Review of a Standardized Benefit Assessment*" to analyze the current benefits framework within the Army's cost benefit analysis.

Please advise if you have any questions or require any additional information. My contact information is 703-336-2163 or Gerard.acosta@waldenu.edu.

Signature block

# Appendix D: United States Army Judge Advocate General Legal Review



MAJ Acosta- doctoral study legal review (UNCLASSIFIED) - Message (Plain Text)

Message

Reply | Reply to All | Forward | Delete | Move to Folder | Create Rule | Other Actions | Block Sender | Safe Lists | Not Junk | Categorize | Follow Up | Mark as Unread | Find | Related | Select

Respond | Actions | Junk E-mail | Options | Find

From: Berg, Edward W MAJ USA TF SPARTAN BDE S3A
Sent: Tue 1/31/2012 7:02 PM
To: Acosta, Gerard MAJ USA TF SPARTAN S3 PLANS OIC
Cc:
Subject: MAJ Acosta- doctoral study legal review (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jerry,

I have reviewed your doctoral study proposal and find no legal objection with respect to current Army policies and the Uniform Code of Military Justice (UCMJ). I suggest you add a statement in your consent form stating that participants are prohibited from disclosing any proprietary or protected information, nor information on ongoing projects in which they are substantial participants. Once the doctoral study's research is complete, then a Judge Advocate stationed in your vicinity must complete a final legal review before submitting it to your university. Good luck with your endeavor!

Sincerely,
Ed

MAJ Ed Berg
Brigade Judge Advocate
Task Force Spartan, 4-25 ABCT
FOB Salerno, RC-East, Afghanistan
DSN: 318-851-0128
SIPR: 308-851-1034
CNTX: 308-264-3027
Classification: UNCLASSIFIED
Caveats: NONE

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## Appendix E: Case Studies Review

Table E1

*Characteristics of three ASAFMC approved and three disapproved acquisition projects' cost benefit analysis proposals*

| Cost Benefit Analysis (Case #) | Description | Initiative's Dollar Value | Quantifiable Benefits? | CBA approved by Department of the Army, ASAFMC? |
|---|---|---|---|---|
| 1 | Agency proposed Enterprise Content Management Services software licensing to improve business operations | $2.4B investment over a 10yr acquisition plan | Yes, Agency scored $3.7B savings through cost and personnel reductions | No, ASAFMC could not validate the financial benefits stipulated in the proposed initiative |
| 2 | Agency recommended increasing acquisition professionals personnel authorization | $9.9M annual investment to create 61civilian billets | Yes, Improved contract management, oversight, and execution. Reduce an identified $168M in unnecessary costs, fraud, waste, and abuse | Yes |
| 3 | Agency requested additional security contractors to replace Department of the Army Civilian guards | $1.2M annual investment to hire 18 contractors | Yes, proposed security element reduces over-head costs, entitlement funding, and improves security efficiencies | Yes |
| 4 | Agency requested additional security contractors to replace Department of the Army Civilian guards | $6.1M annual investment to hire 16 DAC security guards | The agency did not provide a benefits package for the initiative | No |

Table E1(continued)

| Cost Benefit Analysis (Case #) | Description | Initiative's Dollar Value | Quantifiable Benefits? | CBA approved by Department of the Army, ASAFMC? |
|---|---|---|---|---|
| 5 | Agency requested a policy change to standardize sustainment force structure to improve unit deployment preparation and timeline | $1.1B investment over a 5-year funding plan to support equipment fielding requirements | Yes, the proposed initiative will reduce the number of sustainment transitions into the combat theatre; reduce $126.M in annual operations and maintenance costs | Yes |
| 6 | Agency requested a research and development project to improve current Brain Traumatic Injury hardware | $1.8M bi-annual investment | Yes, the agency did provided an explanation of how the research could benefit to a Wounded Warriors care, but failed to provide any cost-reduction measures or savings estimates | No |

Table E2

*Characteristics of three ASAFMC approved and three disapproved acquisition projects' cost benefit analysis proposals (CBA guide vs. Alternatives)*

| **Cost Benefit Analysis (Case #)** | **Description** | **CBA guide benefits framework recommended guideline followed?** | **Alternatives provided?** | **CBA approved by Department of the Army, ASAFMC?** |
|---|---|---|---|---|
| 1 | Agency proposed Enterprise Content Management Services software licensing to improve business operations | No, the contractor did not follow the CBA benefits guideline. Furthermore, agency recommended a sole source contract instead of competitive bid. | Yes, agency suggested licensing a software to improve information sharing | No, ASAFMC could not validate the financial benefits stipulated in the proposed initiative |
| 2 | Agency recommended increasing acquisition professionals personnel authorization | Yes, the contractor provided a risk management, sensitivity analysis, and alternatives comparison | Yes, the agency provided different methods to fund the initiative (Defense Acquisition Workforce Development Fund vs. Increased funding lines) | Yes |
| 3 | Agency requested additional security contractors to replace Department of the Army Civilian guards | Yes, the agency followed all of the recommender CBA guide | Yes, agency provided alternatives to manage authorization levels to support additional personnel efficiency | Yes |
| 4 | Agency requested additional security contractors to replace DA guards | No | Yes, three funding line alternatives were provided | No |

Table E2(continued)

| Cost Benefit Analysis (Case #) | Description | CBA guide benefits framework recommended guideline followed? | Alternatives provided? | CBA approved by Department of the Army, ASAFMC? |
|---|---|---|---|---|
| 5 | Agency requested a policy change to standardize sustainment force structure to improve unit deployment preparation and timeline | Yes, the agency followed every step of the CBA guide and provided alternatives funding lines to finance the $1.1B cost | Yes, the agency provided three alternatives to fund the $1.1B cost and standardization sustainment force packages to improve strategic-level efficiencies | Yes |
| 6 | Agency requested a research and development project to improve current Brain Traumatic Injury hardware | No, the agency did not follow the CBA benefits framework or alternative benefits | No | No |

## Appendix F: Interview Participant Themes

Table F1

*Interview Question 1 emerging themes as depicted by NVivo 9 statistical analyses*

What are the benefits and constraints in adopting a standardized cost benefit analysis that serves as a general evaluative tool?

| **Themes** | **Participants** |
|---|---|
| Standardization will improve product quality | 1, 3, 4, 7, 8, 9, 10, 11, 13, 15 |
| Standardization could restrict the number of courses of action | 2, 6, 12, 14 |
| Standardization could improve time-sensitive contract needs | 3, 7, 16, 19, 20 |

Table F2

*Interview Question 2 emerging themes as depicted by NVivo 9 statistical analyses*

Will a standardized cost benefit tool restrict and agency's innovation?

| Themes | Participants |
|---|---|
| A standardized tool would enhance innovation | 1, 3, 4, 6, 8,9,10,11,13,15 |
| A standardized tool could restrict innovation | 7, 12, 14, 17, 18 |

Table F3

*Interview Question 3 emerging themes as depicted by NVivo 9 statistical analyses*

| How will a standardized cost benefit analysis affect the procurement decision timeline? | |
|---|---|
| Themes | Participants |
| Standardization would accelerate procurement process | 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 15, 16, 17, 18, 19, 20 |
| Standardization would hinder the procurement timeline | 5 |

Table F4

*Interview Question 4 emerging themes as depicted by NVivo 9 statistical analyses*

| What metrics could best support a standardized cost benefit analysis? | |
|---|---|
| Themes | Participants |
| Metrics should include cost-reduction metrics (quantity, frequency, duration) | 1, 2. 3, 6, 7, 8, 9, 10, 11, 13 |
| Metrics should include risk-management functions | 4, 5, 12, 14 |
| Metrics should include a predictive analysis tool | 12, 19, 20 |

## Appendix G: Data Presentation Table

Table 11

| Word | Length | Count | Weighted Percentage (%) |
|---|---|---|---|
| Benefit | 7 | 76 | 2.25 |
| standardized | 12 | 65 | 1.93 |
| Analysis | 8 | 64 | 1.90 |
| Decision | 8 | 48 | 1.42 |
| Process | 7 | 39 | 1.16 |
| framework | 9 | 31 | 0.92 |
| procurement | 11 | 28 | 0.83 |
| Benefits | 8 | 26 | 0.77 |
| Innovation | 10 | 26 | 0.77 |
| Decisions | 9 | 22 | 0.65 |
| Agency | 6 | 19 | 0.56 |
| constraints | 11 | 18 | 0.53 |
| Format | 6 | 18 | 0.53 |
| Making | 6 | 18 | 0.53 |
| Timeline | 8 | 18 | 0.53 |
| Metrics | 7 | 17 | 0.50 |
| requirements | 12 | 16 | 0.47 |
| Support | 7 | 15 | 0.44 |
| Affect | 6 | 14 | 0.42 |
| government | 10 | 14 | 0.42 |
| Adopting | 8 | 13 | 0.39 |
| Evaluative | 10 | 13 | 0.39 |

*Horizonalization: Listing of Expressions from Participant Interviews*

## Appendix H: Text Search Query

Figure 1. *Participant Interviews Listing of Phrases*

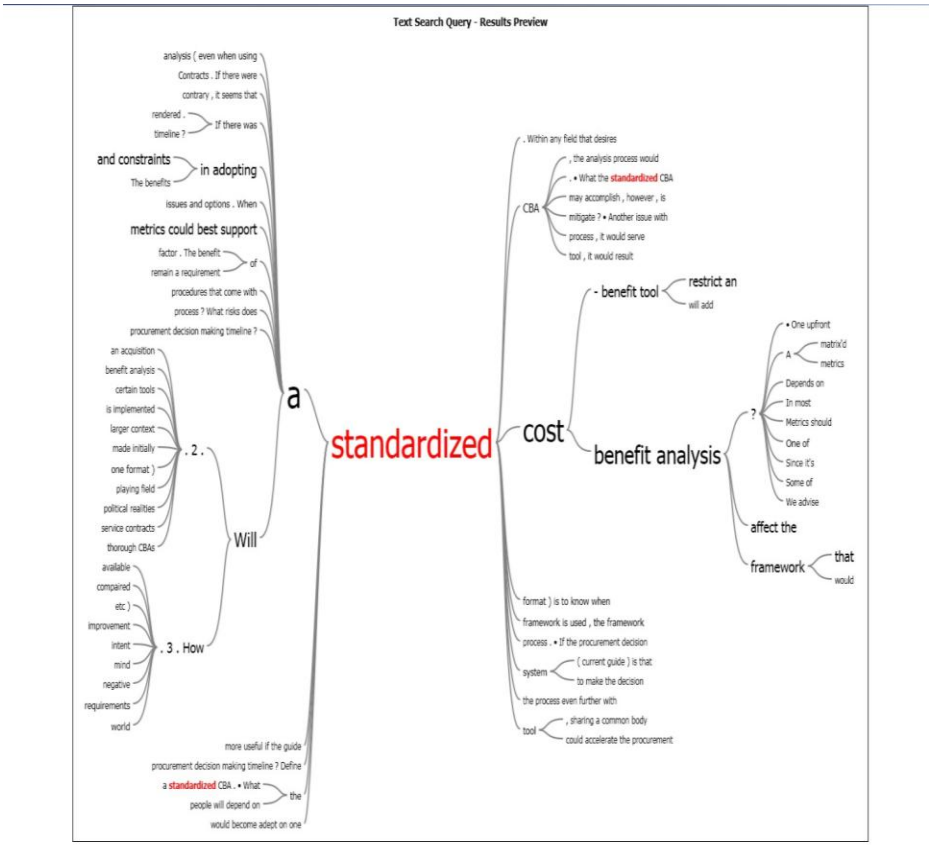


***Figure 1.*** Tree model depicting the NVivo 9 qualitative statistical analysis list of predominately used phrases derived from the participant interviews. The tree model assisted the researcher determine the emerging themes regarding the participants' subjective assessments of the current Department of the Army's cost benefit analysis framework.

## Appendix I: Defense Advance Research Project Agency, Instruction 65

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
3701 NORTH FAIRFAX DRIVE
ARLINGTON, VA 22203-1714

FEB 22 2005

DARPA Instruction No. 65 DIRO

SUBJECT: Clearance of DARPA Information for Public Release

References: (a) DARPA Instruction No. 65, "Clearance of DARPA Information for Public Release," April 19, 2002 (hereby canceled)
(b) "DARPA Security Guide," current edition
(c) DARPA Instruction No. 30, "Processing Freedom of Information Act Requests Within DARPA," current edition
(d) DoD Directive 5230.24. "Distribution Statements on Technical Documents," March 18, 1987
(e) through (s), see enclosure 1

I. PURPOSE

This Instruction rescinds reference (a) and updates policy, responsibilities, and procedures for the clearance of Defense Advanced Research Projects Agency (DARPA) information proposed for public release.

II. APPLICABILITY AND SCOPE

A. This Instruction applies to:

1. DARPA personnel and DARPA contractors.

2. DARPA information considered for release to the public, domestic or foreign, regardless of media. Examples are documents (paper or electronic), videos, pictures, drawings, public speeches, conferences, video teleconferences, articles for publication, the DARPA External Web Site, or other form. This includes DARPA meetings where the public, domestic or foreign, may be in attendance.

B. This Instruction does not apply to:

1. Government-Only Meeting or Conference Material. Information or material presented at meetings or conferences in which the attendees are limited to Government-only or there is a contractual relationship with U.S. citizen attendees. Refer to the DARPA Security Guide (reference (b)) or consult with the Security and Intelligence Directorate (SID) prior to presentations as appropriate when non-U.S. citizens are in

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