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Providing Department of Defense Support Domestically: A Study of Cost Effectiveness

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MARTIN SCHOOL OF PUBLIC POLICY AND ADMINISTRATION

Providing Department of Defense Support Domestically

A Study of Cost Effectiveness

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4/21/2010

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I. Executive Summary

The Department of Defense is one of the highest costs to the United States government at any given time. However, as two foreign wars have been going on for nearly 10 years, the amount of resources needed is significantly higher than usual. This increase in required funds is necessary for military personnel salaries, military equipment, government personnel supporting the Department of Defense, along with support services provided by private military contractors. There have been several recent studies reviewing the effectiveness of contractors on the battlefield, but most overlook those supporting the warfighter at home. While there are many different factors to consider when evaluating the cost effectiveness of private military contractors, this study attempts to find the best use of taxpayer dollars in order to provide the most efficient support for the soldiers in the field. Security is something that everyone values, but is something that is difficult to assign a set value.

This study relies on data gathered regarding annual compensation rates for contractor and government civilian personnel, annual oversight costs, issues regarding fraud and mismanagement of funds, as well as the flexibility of the workforce. An extensive literature review is completed in order to understand some of the benefits that are provided by contractors that are difficult to place a monetary value on. This capstone focuses on contract specialists and system administrators in both government and private industry in order to get a broader analysis of how two different career fields are uniquely affected by outsourcing. The findings suggest significant cost savings with civilian personnel, but the other factors must be considered based on customer requirements, length of project, and type of work to be performed. Overall, the findings suggest that domestic support of the warfighter is most cost efficiently provided by the government civilian personnel. The data also suggest that there needs to be greater funding put into oversight of contractors to ensure that taxpayer dollars are not vulnerable to fraud and abuse. Further analysis of lifetime costs is recommended in order to better understand how private military contractors may be able to provide a more cost efficient service to the federal government.

II. PROBLEM STATEMENT

The size of the National Debt, two foreign wars, and the financial crisis have raised many questions regarding the efficiency of government spending. Outsourcing is one of the many issues often addressed by public leaders in order to increase the efficiency of government spending. During the Reagan administration, there was a desire for a leaner federal work force, which led to a significant increase in private military contractors. President George H.W. Bush continued in the path of Reagan in support of a leaner government by outsourcing positions throughout the federal government. President Clinton was not opposed to outsourcing either, as he saw it as a method of balancing the budget and creating a more efficient government. President George W. Bush more than doubled the expenditures on contracting during his tenure in office, bringing it to over \$400 billion. The Obama administration on the other hand is now pushing for a decrease in contractor personnel with the goal of increasing the opportunities for government civilians (Zwerdling 2009). The Department of Defense has over 19,000 authorizations for new personnel, in an attempt to decrease the reliance on contractors. Many of these positions are focused on the acquisition workforce, which includes all personnel involved in the procurement process. Over 7,000 positions will be conversions directly from contractor positions to civil service employees (Weigelt 2010). This administration is dedicated to increasing the size of the federal workforce by drastically scaling back the size of the private military contractor support.

With a two front war that has been going on for almost ten years, there is more focus on these contractors and the cost to the government and how they are affecting the ability of

the United States military to complete the mission. However, outsourcing does not stop with the Department of Defense. These changes have affected most of the agencies within the federal government (Seidman 1998), and continue to affect them up to the present day. While increasing contractor support creates a leaner government workforce, it does not appear to decrease the size of government expenditures. The question arises, does outsourcing adequately address the issues of large government and high spending? Increased government spending can be viewed as a problem, especially in a time of financial crisis as is currently the case. While increased spending could be justified to stimulate the economy, all taxpayer dollars should be spent in order to obtain the highest quality of services for a given cost, or to obtain a given level of services at the lowest cost. The decision must be made whether quality of service or price is the most important factor. In the end the Department of Defense is concerned about providing security for citizens, and taxpayers hope they are obtaining the most cost effective services available. The research question I address is, while contractors do offer skills and expertise in some fields; do they actually provide a more cost effective option to hiring civilian employees?

The question of the cost-effectiveness of contractors has been brought to the forefront more recently within the Department of Defense as there are many contractors assisting in the mission in Iraq and Afghanistan. The positions filled by contractors range from very technical positions to administrative and everywhere in between. Many of the services provided by the private military contractors could also be provided by government civilian employees. However, many recent studies focus more on the cost-effectiveness of contractors on the battlefield. While this is a very important question in its own right, no one seems to have

touched more than cursorily on the many positions domestically of contractors in the federal government.

In order to adequately address this question, I conduct an extensive literature review. This literature includes academic articles discussing the many different factors affecting what benefits there are to using government civilians compared to contractors. Another important area of literature that I look at includes reports produced by the Government Accountability Office, Congressional Budget office, and other Congressional reports.

As stated previously, cost is not the only factor to be considered when evaluating what is the best bang for the tax-payers dollar. This capstone evaluates the cost factor for both government civilians and contractors. In addition to cost, I look at the flexibility of the workforce, the scope of work possible for each group, as well as total cost for the oversight of contract employees. Contractors offer the opportunity to upsurge very quickly to provide skills necessary to support the mission. After the mission is complete, they are able to down-scope just as easily. There has been much discussion that contractors are more skilled in their areas of expertise, but the quality of output is difficult to measure as there is such a difference of the scope of work that can be performed. Contractors cannot perform “inherently governmental functions” as specified by Circular A-76. This greatly limits the scope of work that private military contractors can perform.

Outsourcing is important in public policy and administration, as it affects almost every government agency and all taxpayers who are hoping their money is being spent as efficiently as possible. While my interests lie within the Department of Defense, the findings from my

study should have universal implications for any federal agency using contractor services. As discussed previously, a large percentage of contractors are used by the Department of Defense, but other agencies such as the Department of Energy use contractors as well. Data on civil service and contractor pay as well as the inherently governmental functions limiting the scope of contractors work will remain steady regardless of the federal agency reviewed for the positions included in this study. The civil service pay scales are the same regardless of agency, therefore the government pay will remain the same. The Government Services Administration allows for contracts from any government agency looking to utilize that service. Inherently governmental functions apply to all contractors as designated in the Circular A-76, so regardless of agency or department, the same limitations will be addressed. I focus on contractor personnel and government civilian personnel. This issue is at the forefront of the current administration's agenda, as President Obama has been pushing for a decrease in contractor personnel within all agencies of the federal government, including defense (Zwerdling 2009). President Obama feels that it is in the best interest of taxpayers to provide better regulations and more control over the procurement process, and one step in this direction is to decrease the number of contractors in positions that could be filled by civilian personnel (Zwerdling 2009). The United States is facing a growing national debt. The Debt Held by the Public is currently at \$8.3 trillion, which is nearly 58% of Gross Domestic Product (US Department of the Treasury 2010; US Debt Clock 2010). This measure, and its expected increase over the next few years, can lead one to believe that the country is currently in a dire situation financially. The annual budget for the Department of Defense is pushing closer to \$700 billion, as one of the

largest budget items, which leads to the question of how important cost savings are to the military and how outsourcing affects a recovery from the current financial crisis.

III. LITERATURE REVIEW

History of Outsourcing

Throughout the history of the United States, there have always been contractor personnel to ensure that all jobs are filled. Contractors within the Department of Defense are brought in for various reasons, including the quality of output, experience provided, and the political access that is often gained through military or civil service experience. This political access is often beneficial in the Department of Defense as retirees have knowledge, connections and strong working relationships with customers that new civil service employees lack. Many military retirees provide the contracting industry with high quality individuals who are highly knowledgeable on the ways of government (Adams 1981). The Department of Defense budget includes \$158.3 billion for contracts (Government Accountability Office 2008). This constitutes over 70% of all federal government contract spending. Not all, but some of this grant money is in turn spent on contractors at the state and local level. Based on these data, DoD is the best agency to look at when considering the overall cost efficiency of contractors due to the high levels of contract spending (Government Accountability Office 2010). While the Department of Defense is unique in that they are responsible for providing security for our country, they still use many of the same contractors used government wide. Many private contractors are not tied directly to one agency. Instead they will work in any branch they are

awarded a contract. This contributes to the ability to draw from research in other organizations and agencies as to the cost efficiency of hiring private contractors.

Some citizens are concerned about the ability of the Department of Defense to utilize contractors to the full extent that it can utilize government civilian personnel. Regulations must be strictly adhered to and neither contractors nor government can work outside of these guidelines. The Circular A-76 that is produced by the Office of Management and Budget establishes federal policy for the competition of commercial activities. This circular's mandate is to "ensure that the American people receive maximum value for their tax dollars, commercial activities should be subject to the forces of competition" (Office of Management and Budget 2003). This policy is believed to encourage competition for both government and contractors in order to have the greatest efficiency by developing new technologies for the production process. According to Circular A-76, all activities can either be performed in-house or they can be outsourced, but it must be the most cost efficient means of producing the good or service necessary.

Also related to outsourcing and competition provided by the contractors and commercial sector, is the idea of "inherently governmental" functions. "An inherently governmental activity is an activity that is so intimately related to the public interest as to mandate performance by government personnel...governmental activities normally fall into two categories: the exercise of sovereign government authority or the establishment of procedures and processes related to the oversight of monetary transactions or entitlement" (Office of Management and Budget 2003). Due to these "inherently governmental" functions, there are

many positions within the Department of Defense in which contractors would be unable to serve in a fully functional capacity. This would include positions such as finance and contracting where there are obligations made on behalf of the government. In order to have support contractors in these roles, there must be government personnel working alongside the support contractors who would serve as signature authority and oversight for those private military contractors. However, a recent GAO study of contractor contract specialists has revealed some problems associated with the Inherently Governmental Functions. This report states that many contractors are not identifying themselves as a private contractor, which could lead some government personnel to believe they have certain authority. These types of actions can often lead to confusion and problems as the line separating contractor from government can get blurry at times. (Government Accountability Office 2008).

The military is often driven to use more contractors than other agencies due to the nature of an all volunteer force. Many contractors are willing to go where they are needed, which leads to a much greater utilization of the private workforce. Camm (1966) addresses privatization from a view prior to the Global War on Terror. According to Camm, there needs to be a focus from the Department of Defense on the “core activities” for government personnel, while contractors could fill in gaps outside of these core capabilities (Camm 1996). These core activities would likely be considered those positions intertwined with inherently governmental functions. According to Camm, these core activities should remain with civil service employees, but others could be outsourced and gain some efficiency. There should be an analysis done to ensure that the positions outsourced are compatible with the Department of Defense goals by ensuring there is little risk involved and that contracting that position is feasible. By decreasing

risk and still striving to reach the goals of the Department of Defense, contracting could increase efficiency.

Privatization of the government is a phenomenon that seems to come in spurts, as stated by Boyne. The Department of Defense is no exception to this rule, as many of the spurts are in concurrence with international conflicts as is currently the situation. According to Boyne, many previous studies have misconstrued data in order to achieve the desired outcome of contractors being the most cost efficient. While this may or may not be the case, he seems to attribute this phenomenon to “management fads” (Boyne 1998). These management fads, as related to private contractors, can be traced back to goals and ideals of the current administration. The Clinton/Gore administration made a massive cut to the federal workforce. The Federal Workforce Restructuring Act of 1994 states there should be no increase in service contracts unless cost comparison demonstrates it would be beneficial to the federal government (Seidman 1998). However, there continues to be increases in contractor personnel, and the percentage of civilian personnel continues to shrink. President Obama is currently focused on a different management fad of bulking up the opportunities available within the federal government, and decreasing the number of positions outsourced. Management fads are the main driving factors in the way outsourcing is handled, starting with the President and his administration. This idea is vital in how management trends arise and how to reverse those trends if necessary.

Is contractor oversight efficient?

A driving factor for the federal government to enter into contracting is to ensure the work is being done to the highest standard and quality possible. The government acts as the oversight agent for all contracts within any department or agency, as all cabinet-level departments have mechanisms for the oversight of contractors. In the case of the Department of Defense, it is the Defense Contract Audit Agency (DCAA) that is responsible for auditing each contract that the federal government has authorized. “The Defense Contract Audit Agency (DCAA) is responsible for providing audit services and financial advice to all Department of Defense (DoD) acquisition officials to assist them in achieving fair and reasonable contract prices and assuring compliance with contractual terms and conditions” (Defense Contract Audit Agency 2009). During this process, they are required to look over all financial information for any project performed by a private military contractor. This includes all payments made by the customer, and the efficiency with which the main contractor executes the requirements of the contract.

However, there has been some concern as to the quality of oversight provided by DCAA. The GAO recently conducted a study to ensure that DCAA is properly reviewing all contracts in a timely manner so that taxpayer money is spent in the most efficient manner possible. A widespread audit of the DCAA led the GAO to discover that there were serious problems that leave billions of taxpayer dollars vulnerable to fraud. “Of the 69 audits and cost-related assignments GAO reviewed, 65 exhibited serious deficiencies that rendered them unreliable for decisions on contract awards, management and oversight” (Government Accountability Office

2009). These deficiencies were a result the following issues: lack of independence, insufficient testing, unsupported opinions, production environment and audit quality issues, and issues of timeliness. Allowing these deficiencies within the contracting process enables contractors to take advantage of the situation through many different ways and means. Recently a US Army Colonel has admitted to accepting over \$50,000 in bribes from a defense contractor in Iraq that offered him/her a job after retirement in return for awarding an \$8.2 million weapons warehousing contract (Millman, 2010). This not only contributes to the fear of mismanagement of funds among contractors, but can lead to corruption among those awarding the contracts. This makes the billions of dollars put into the Department of Defense contracting dependent upon the honesty and integrity of contractors, who may or may not take advantage of poor oversight. These issues bring to light the fact that there are billions of dollars that are not being audited and accounted for in a timely manner. The FY10 Budget projections for DCAA total \$458,316,000 to include all personnel costs and any other cost (Defense Contract Audit Agency 2009).

Also involved in contract oversight is the Defense Contract Management Agency (DCMA). The responsibilities for DCMA include providing contract administration services, acquisition management services, quality assurance, along with ensuring the integrity of Department of Defense contracts (Defense Contract Management Agency 2009). Below is the current layout of the number of civilians employed by DCMA to ensure that the services contracted out to support the warfighter are of the highest quality. The approximately 10,000

civilian employees with DCMA manage over 300,000 prime contracts¹ around the world. This information was not explicitly stated for DCAA, but the organizations are managing the same contracts, so figures should be accurate for both agencies.

DCAA Roles and Responsibilities	DCMA Roles and Responsibilities
Audit Services for DoD	Contract Management Services
Financial Advice to DoD	Life-cycle Acquisition support
Monitor Cost Performance	Ensuring the integrity of the government contracting process
Review and Approve Contract Payments	Quality assurance for shipments received overseas and those sent out from contractors across the world
Review of Forward Pricing Rates: Overhead costs, rates placed on all costs to cover the cost of business.	Contract Administration Services to include reviewing payments and contract closeout.

(Defense Contract Audit Agency 2009) (Defense Contract Management Agency 2009)

<i>DCMA Agency Data (12/31/09)</i>	
Number of Civilians	10,115
Number of Military	514
Number of Districts	6
Number of Field Offices	48
Number of Active Contracts	322,183

¹ “Prime contract” means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind FAR 3.502-1 (United States Government n.d.)

The Inspector General provides oversight for the contracting offices throughout the Department of Defense. The DoD Inspector General provides investigative, audit, and general oversight services for the Department of Defense. They will often act in a similar role as DCMA and DCAA for the government personnel administering these contracts. Based on a recent study of the organization, the IG is requesting new positions due to the increase in requirements including: audit, investigation, policy & oversight, and administration (Department of Defense Inspector General 2008). The DoD IG Growth plan addresses the overarching need for personnel in the current environment. The Department of Defense budget has increased from \$200 Billion to a FY 2011 budget request of \$712.1 billion since the start of the Global War on Terror (Office of the Undersecretary of Defense (Comptroller) 2010). This has put a significant strain on those individuals responsible for ensuring that tax payer dollars are being spent wisely and efficiently.

Utilization of Work Force

There are many factors that affect the readiness of any branch within the Department of Defense. After the Cold War, there was the push to move towards a leaner federal government, which led to massive cuts in the standing military and an increase in outsourcing. This has really increased pressure on the Active Duty and Ready Reserve forces since September 11, 2001. According to the 2007 demographic data for the Department of Defense, since 1990, there has been approximately 33% decrease in troop strength (Department of Defense n.d.). Many of the remaining units have been deployed multiple times which can increase stress not only on the military personnel but on their families as well. Due to this decrease, there has been a greater reliance on contractor personnel.

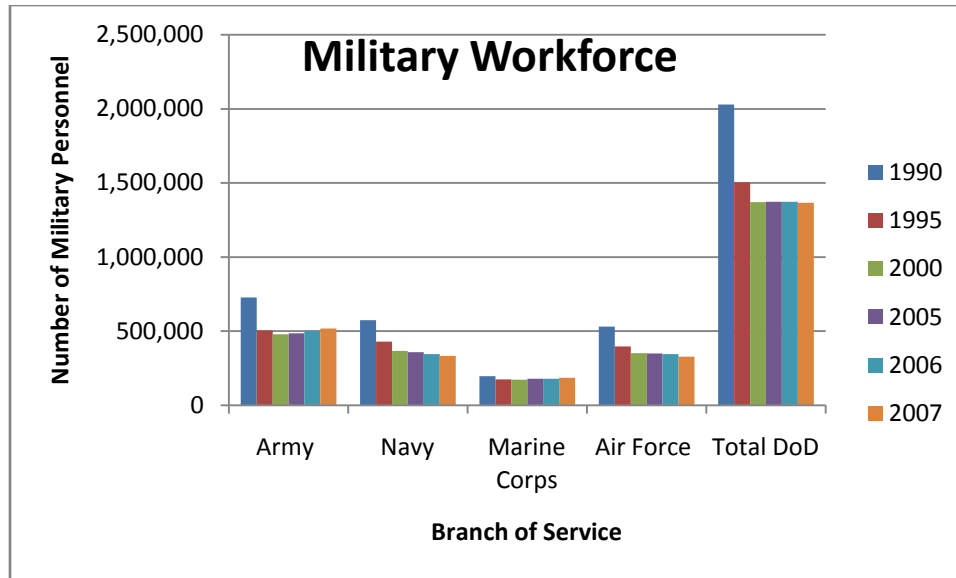


Table 1. DoD Active Duty Trends: 1990-2007

Military Workforce					
Year	Army	Navy	Marine Corps	Air Force	Total DoD
1990	728,345	573,737	196,353	530,865	2,029,300
1995	504,710	429,630	174,561	396,382	1,505,283
2000	479,026	367,371	172,955	351,326	1,370,678
2005	486,483	357,853	179,836	349,362	1,373,534
2006	502,790	345,098	180,252	344,529	1,372,669
2007	517,783	332,269	186,425	329,094	1,365,571

Source: From Military Home Front, "2007 Demographics Report"

2010 DoD Civilian Workforce		
Appropriated	Non-Appropriated Funds	Total Civilian Workforce
759,013	134,570	893,583

Source: DoD Civilian Personnel Management Service

However, the comparable costs have not been altered significantly as one might imagine. There have been significant cuts in personnel but Operations and Maintenance (O&M) funds have increased (Harris 2006). Military personnel funds are used to pay the salaries, benefits, and bonuses for all members of the uniform services. Operations and

Maintenance funds are used for civilian pay as well as day-to-day operating expenses.

Contracts fall under many different funding areas, depending on the requirement. However, any operations support activity provided by a contractor would be considered O&M funds (Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics 2009). This could lead us to question whether this outsourcing is in fact saving the US Government funds as is commonly believed.

There must also be consideration of what type of work can be performed by civilians, or contractors. According to the CBO, “military commanders have less direct authority over the actions of contractor personnel than over their military or civilian government subordinates. Contractors’ duties are set out in their contract, which is managed by a government contracting officer, not the military commander” (Congressional Budget Office 2008). This can cause problems, when there is not a guaranteed cooperation with the needs at the time. Having to work within the bounds of a contract can limit the effectiveness of the contractors, while their government civilian counterparts can work outside the specified job descriptions with all other duties as assigned. This inability to work outside the contract limits the effectiveness that the contractors have in the field and at home.

Flexibility of the Work Force

There has been drastic down scope in the size of the standing military in order to create a leaner, more cost efficient government. Due to this down scope, during times of conflict, there is a need to have a surge force, which is typically seen as the ready reserve forces of the Reserves and National Guard. However, when National Guard and Reserves units are being

deployed multiple times, where are the surge forces to come from? Private military contractors can surge up to as large a force as necessary to support the war fighter. They can provide some security forces, but much of the contingency force includes professionals in fields such as acquisition and information technology that are addressed in this paper. “Perhaps the greatest strength of the private military contractor is the inherent flexibility they offer in form of surge support... In theory, contracted firms do not need a large permanent staff and when a job ends; they can quickly reduce much of their workforce” (Harris 2006). When the war is over, the contractors can drastically decrease in force size if necessary. While they can surge internationally, they can also do the same domestically. When military personnel are deployed, contractors can fill in both at home and abroad. This is beneficial as troop forces have been decreased considerably.

While the surge capability is great, the down-scoping is just as vital. Once the mission is complete, contractors can decrease force as quickly as they surged. This is a huge cost saving mechanism, as there is no commitment on behalf of the government once the job is done. Government civilians cannot be cut back as easily. Due to a surge in funding and contracts awarded, the Defense Acquisition University² states that it can often be vital to use contractors in such situations. However, there should be an appropriate mix of contractors to government personnel even in surge situations (Government Accountability Office 2008). This leads to a greater long term cost for the government, which must be taken into consideration. Due to the nature of war, it is difficult to measure the cost efficiency of contractors at the beginning of a

² The Defense Acquisition University is a corporate university for the Defense Acquisition Workforce. This organization provides training for acquisition personnel in all stages of their career to include formal courses, continuous learning, knowledge sharing assets, and consulting. DAU is the training and certification force for all Defense Acquisition personnel.

conflict. Another issue with the down-scope to consider is the drastic difference between those working overseas and those working domestically. Again, much of the research is based on contractors abroad, which leads me to question if the same is true domestically.

Transaction Cost

In the end, it is important to realize that contractors are corporations that are in the business to make a profit. Without profit, organizations would not be able to survive in a competitive market economy. The government acknowledges that profit is not a bad thing and that those companies that are providing services in the form of contracts should receive a reasonable profit in order to stay in business. When addressing what transaction cost is acceptable there are three levels of analysis to include: the overall structure of the enterprise, the operating parts, and lastly, how the human assets are organized (Williamson 1981).

According to Williamson's theory of transaction costs, people are subject to "bounded rationality" but pursue their self-interest with guile. The government can safeguard against foul play by ensuring that there is adequate competition. Competition will invoke the law of natural selection as those companies looking for profit maximization will lose contracts to companies that are able to provide the same services with a more reasonable profit margin. There is a distinction among those contractors looking for exorbitant profits compared to those seeking sustainability. By adhering to the ideal requirements of obtaining competition, the government will receive the lowest prices.

Another point of interest in transaction cost regards the asset or location specificity (Williamson 1981). If there is a market that requires highly specific investments, it becomes

more of a bilateral agreement between the organizations so that it benefits both to continue the arrangement. This specificity could lead to an alteration in cost in any given market; therefore, that could be taken into consideration when studying cost effectiveness. However, this will not be incorporated into cost effectiveness in this study because contract specialists and system administrators can use their knowledge outside the Department of Defense as well; in other words, their asset specificity is low compared to nuclear weapons engineers, for example.

IV. RESEARCH DESIGN

This research is focused on determining the most cost efficient method of providing support services within the Department of Defense by comparing private military contractors and government civilian personnel. The first issue to address is the annual cost, including annual compensation and all benefits, including healthcare, paid time off, and retirement contributions. In order to get an accurate measure of this, I select two job titles that have a significant number of employees both in the civilian and contractor realm: contract specialists and system administrators. Contract specialists are very important members of the procurement community, and they are prevalent on both the private and government side. Contract specialists' functionality in the private sector is limited due to inherently governmental functions. The effect of the limited functions is discussed below. This research also reviews information technology professionals, specifically system administrators that do not have as many restrictions as to what they can do. The systems administrators are a great occupation to study due to fewer limitations based on inherently governmental functions discussed below.

By using both these fields, I believe there is a good balance to make a fair judgment on costs. In order to get an accurate comparison, I examine contractor's information from the Government Services Administration, including hourly cost to the government (this includes salary, benefits, overhead to include administrative and management positions, profit for contractor) and basic requirements to qualify for such a position. I use several contractor estimates for the Lexington, KY area, and base government personnel salary in Lexington, KY as well. In order to estimate benefits for the government personnel, I use the benefits wizard provided by www.salary.com. The benefits wizard can be used based on industry. Due to the fact that I do not look at a specific organization, this will give an accurate estimate for the benefits received. I use a high and low estimate in order to get a more accurate picture. The high and low estimates are used based on the limitations of www.salary.com. This source provides estimates in the government sector and is the best source to use due to the wide variety of benefits to include pension/thrift savings, healthcare plans, and paid time off based on length of service. There are a broad range of outcomes and using www.salary.com factors in many of those variables to get the most accurate estimate.

Another factor vital to this research is the level of oversight for both private military contractors and government civilian personnel. The Defense Contract Audit Agency and the Defense Contract Management Agency provide oversight for private military contractors. This includes reviewing projects to ensure billing, accounting and inventory systems are properly run. DCMA is available for more quality assurance roles to ensure what is promised to the customer is what is being produced. This area is reviewed more broadly as an overall cost to the Department of Defense to provide these services. According to DOD reports, DCMA and

DCAA are responsible for managing over 324,000 active contracts. There have been a few GAO reports regarding the effectiveness of DCAA and whether taxpayer dollars are being spent properly. The civil service oversight organization that is comparable to these agencies is the DOD Inspector General. Budget information has been gathered for comparison. By comparing annual budgets of DCAA, DCMA and the DOD IG in accordance with the current contract requirements, data are analyzed in regard to cost and efficiency.

Inherently governmental functions, which are actions that cannot be performed by contract personnel, are specified in OMB Circular A-76. This federal government document states what actions would be seen in breach of US Code. One such illegal action would be for contractor personnel to obligate the government to any service or any payment. This legal restriction severely limits contractors in areas such as contracting and finance. Contractor personnel will never be able to perform these functions, which means there must always be government personnel to oversee and sign any required paperwork to get the job done. Inherently governmental functions affect Contract Specialists and Systems Administrators very differently. Contract specialists are limited in their ability to consult with government and contractor personnel. Due to the inability to obligate the government contractually, they cannot task other contractors or government personnel in order to get a contract awarded. Government civilian contract specialists are eligible to receive a warrant, while contractor contracting specialists are not. In essence the private contract specialists assist the government personnel by preparing documents for signature, reviewing proposals for cost reasonableness, and providing assistance in the procurement process without the ability to agree to anything. Without a government counterpart, the contractor contract specialist cannot function fully in

this role. System Administrators on the other hand can fully function as their positions are minimally affected by inherently governmental functions. They again cannot obligate the government, but they can serve in a technical role daily as a fully functioning System Administrator without requiring a government counterpart. In light of these requirements, would a job be more efficiently done in its entirety by government rather than partially by contractor personnel with government oversight?

In my review of the evidence I look at annual cost and DCAA/DCMA costs compared to the DOD Inspector General costs. I also discuss the inherently governmental functions and scope of work based on previous literature. After gathering all this information, I compare costs accumulated and then conclude which personnel type provides the most bang for the governments buck.

V. DATA REVIEW AND ANALYSIS

ANNUAL GOVERNMENT COST

I obtained government civilian pay rates on the website for the Office of Personnel Management. This website provides only the salary rate, not the rate paid for benefits. In order to best estimate the cost of benefits for government employees, I looked at salary.com which allows one to estimate total benefit costs based on salary rate. The benefits included on this website are 401k/403b/Pension, Social Security, Disability, Healthcare, and time off and other.

When estimating benefit coverage in addition to annual compensation, a few assumptions have been made based on OPM standards. With the current retirement system,

there is a thrift savings match of 5%. Therefore I kept 5% standard on both the high and low estimate. I used industry standard costs for the health insurance and disability for the high standard, and decreased them to 0 for the low estimate for those employees that do not take advantage of health care plans. The new retirement system is based in the thrift savings plan, so pension is not considered in the estimate. The Federal Employee Retirement System became mandatory in 1984, which means that everyone entering the federal workforce over the last 26 years (over 70%) is part of this thrift savings based system compared to the previous pension system. Lastly, for the high estimate of paid time off, there is a total of 43 days as that is the maximum that any federal employee can get including sick leave and vacation leave. The minimum to be received by any federal employee is 26 days including sick leave and vacation leave. These figures were used for the high and low estimates respectively.

Contract Specialists: All of the data gathered from GSA required mid-level experience, which has led me to choose the equivalent pay grade in the civilian service as a Grade 12. Grade twelve is considered a mid-career grade within federal service. I looked at the pay rates at www.opm.gov with a locality rate increase for the Kentucky area. According to these data, the annual compensation for a GS-12 employee is \$71,455 (Office of Personnel Management).

Contract Specialist (GS-12) Total Cost Estimate	
Benefit Coverage Estimate	Costs
High Estimate (Full Coverage)	\$97,222.00
Low Estimate (Partial Coverage)	\$87,639.00
Average Costs	\$92,430.50

Source: Salary.com: Benefits Wizard

System Administrators: Data gathered from the Government Services Administration page for system administrator costs for government contractors was based on low/entry-level in their career. Most required an Associate’s degree, if any education was required, and approximately 4-6 years experience in the field. Due to this I compare these systems administrators to a GS-9. After reviewing current openings with the federal government as systems administrators, most fell into the GS-7 to GS-11 range, so I use the GS-9 for my estimate (USAJOBS.com). Annual compensation at the GS-9 level in the Kentucky area is \$49,273.

System Administrator (GS-9) Total Cost Estimate	
Benefit Coverage Estimate	Costs
High Estimate (Full Coverage)	\$70,889.00
Low Estimate (Partial Coverage)	\$60,433.00
Average Costs	\$65,661.00

Source: Salary.com: Benefits Wizard

ANNUAL CONTRACTOR COST

In order to get an accurate cost on contractors in these fields, I gathered data by systematic random sampling based on the specific schedules with GSA for each career field. GSA has the capability to create an excel spreadsheet with the names of all contractors under that schedule. I used a systematic random sample to choose 20 contractors and used their hourly rates for contract specialist or their equivalent. Due to the fact that some companies did not offer a job title of contract/procurement specialist, the numbers were randomly generated until 20 contractor's rates were found. I used a random number generator website (www.random.org) as well as the excel spreadsheets produced by GSA. The GSA schedule for contract specialist equivalencies is 874-6 (Acquisition Management Support). Below is the information for this career field as listed with GSA.

Acquisition Management Support Contractors shall provide professional support services to agencies in conducting federal acquisition management activities. Services covered by this Schedule number are: acquisition planning assistance, including market research and recommending procurement strategy; acquisition document development, including cost/price estimates, quality assurance surveillance plans, statements of work, synopses, solicitations, price negotiation memoranda, etc.: expert assistance in supporting proposal evaluations, including price/cost analysis or technical proposal analysis; contract administration support services, including assistance with reviewing contractor performance, developing contract modifications, and investigating reports of contract discrepancies; contract close-out assistance; Competitive Sourcing support, including OMB Circular A-76 studies, strategic sourcing studies, privatization studies, public-private partnerships, and Federal Activities Inventory Reform (FAIR) Act studies. Inherently Governmental services as identified in FAR 7.503 or by the ordering agency are prohibited under MOBIS. It is the responsibility of the Contracting Officer placing the order to make this determination. Ordering activities must require prospective contractors to identify potential conflicts of interest and address those, prior to task order award. For more information, see www.gsa.gov/mobis.

CONTRACT SPECIALIST CONTRACTOR RATES	
CONTRACTOR NAME	RATE/HOUR
Abacus Technology Corporation	\$80.12
Alliance Consulting Corporation	\$103.03
B3 Solutions, LLC	\$98.43
Business Strategy Consultants	\$89.64
CACI INC Federal	\$86.47
Capstone Corporation	\$69.42
Centre Consulting, INC	\$126.00
CH2M Hill, INC	\$125.74
Comprehensive Enterprise Solutions, LLC	\$148.80
Enterprise Solutions Group, INC.	\$148.80
Federal Acquisition Resources IN	\$86.14
Fox Systems	\$151.05
Government Contract Solutions, INC	\$72.79
Key Management Partners, INC	\$84.87
Martek Global Services, INC	\$73.89
Pangea INC	\$71.71
Phacil, INC	\$95.96
Procurevis, INC	\$62.61
Stratecon LLC	\$136.38
Your Recruiting Company, INC	\$74.73
AVERAGE	\$93.33

Based on the information gathered from GSA, the average hourly rate for a system administrator is \$93.33. These hourly rates include compensation, benefits, profit for the company, general and administrative costs in order to come to a total cost for the government.

I have calculated annual costs based on a forty hour work week, 52 weeks per year. This gives a grand annual total of \$194,126.40.

Also reviewed is the GSA IT Schedule 70 132-51 (Information Technology Professional Services) which listed 3,754 contractors that provide contracts for these types of services.

Below is the GSA description of this career field schedule.

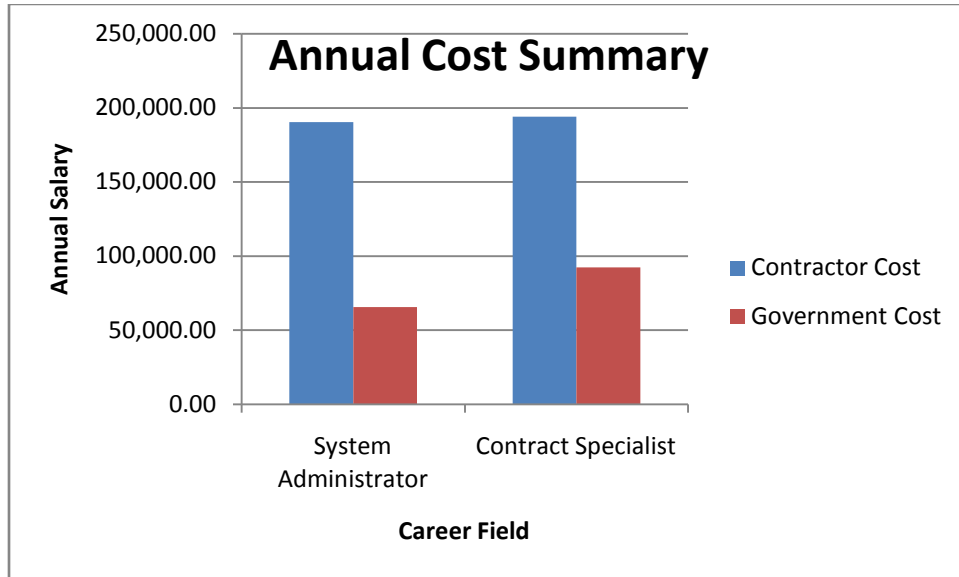
Information Technology Professional Services - SUBJECT TO COOPERATIVE PURCHASING Includes resources and facilities management, database planning and design, systems analysis and design, network services, programming, millennium on version services, conversion and implementation support, network services project management, data/records management, subscriptions/publications (electronic media), and other services.

Information for system administrators was gathered in the same method as that of the contract specialists listed previously. Similar to the contract specialists, there were some contractors that do not offer a system administrator career field. The rates were gathered randomly with the random number generator and the GSA produced spreadsheet until rates for 20 contractors were obtained.

SYSTEMS ADMINISTRATOR CONTRACTOR RATES	
CONTRACTOR NAME	RATE/HOUR
Aligned Development Strategies, Inc	\$93.42
APM, LLC	\$107.70
AVUM, Inc	\$74.02
BNL, Inc	\$90.00
Cambridge Systems Inc	\$60.42
CHAASH, Inc	\$114.00
COACT, Inc	\$119.50
DATAWISE	\$68.40
DSG Systems Inc	\$79.00
MDB Inc	\$116.15
Mind Over Machines, Inc	\$71.30
MYSTICAL SOLUTIONS , LLC	\$72.11
Northrop Grumman Space & Mission	\$81.85
PMG Global Corporation	\$85.00
Provista Software INTL, Inc	\$133.08
Sapphire Technologies, LP	\$87.79
Senior Consultants Inc	\$72.73
Technodyne LLC	\$134.00
V2Soft Inc	\$51.29
Worldwide Technologies, INC	\$118.45
AVERAGE	\$91.51

Based on the information gathered from GSA, the average hourly rate for a system administrator is \$91.51. These hourly rates include compensation, benefits, profit for the company, general and administrative costs in order to come to a total cost for the government.

I have calculated annual costs based on a forty hour work week, 52 weeks per year. This gives a grand annual total of \$190,340.80.



As depicted in the graph above, there are significant cost increases for contractor personnel compared to civil service personnel. However, there are factors that increase the value of contractor personnel for the government. While they are not quantified, they must be considered since there are such drastic cost differences. The factors to be considered are:

- Flexibility of the Workforce: What value does the government receive by having the ability to quickly reduce force when no longer needed? By having the ability to down-scope quickly, it could drastically reduce lifetime costs for the government even if short term costs may be higher. Below is a seven year estimate for contractors and government civilians. Both calculations factor in varying cost of living increases, while the government personnel promotion rate is also varied in order to show just how

complex this calculation is to get an accurate picture of what could happen to lifetime costs.

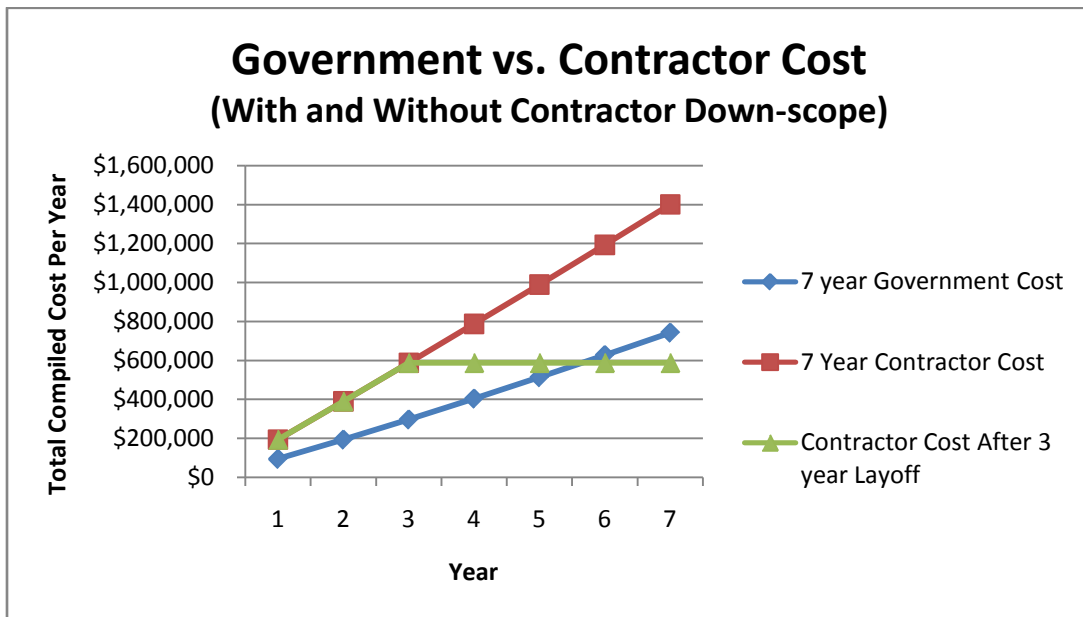
5 Year Estimate of Total Cost (No Promotion/ Low Cost of Living³) Government						
	Pay Grade	Step	Salary	COL Increase	Total Salary with COL Increase	Total Compensation
Year 1	12	1	\$71,455	0	\$71,455	\$95,250
Year 2	12	2	\$73,836	1%	\$74,574	\$99,129
Year 3	12	3	\$76,218	1%	\$77,742	\$103,068
Year 4	12	4	\$78,600	1%	\$80,958	\$107,067
Year 5	12	4	\$78,600	1%	\$81,744	\$109,617
Year 6	12	5	\$80,982	1%	\$85,031	\$113,767
Year 7	12	5	\$80,982	1%	\$85,841	\$114,790
						\$742,688
5 Year Estimate of Total Cost (Promotion/High Cost of Living) Government						
	Pay Grade	Step	Salary	COL Increase	Total Salary with COL Increase	Total Compensation
Year 1	12	1	\$71,455	0	\$71,455	\$95,250
Year 2	12	2	\$73,836	3%	\$76,051	\$100,966
Year 3	13	1	\$84,970	3%	\$90,068	\$118,395
Year 4	13	2	\$87,802	3%	\$95,704	\$125,404
Year 5	14	1	\$100,408	3%	\$112,457	\$148,049
Year 6	14	2	\$103,755	3%	\$119,318	\$156,016
Year 7	14	3	\$107,102	3%	\$126,380	\$164,765
TOTAL						\$908,845

³ Cost of living increases are determined based upon Consumer Prices Index which is a program that produces monthly data on changes in the prices paid by urban consumers for a representative basket of goods and services (United States Department of Labor 2010).

5 Year Contractor Estimate (Low Cost of Living Increase)				
	Hourly Rate	Annual Salary	COL Increase	Total Compensation
Year 1	\$93.33	\$194,126.40	0%	\$194,126
Year 2	\$93.33	\$194,126.40	1%	\$196,068
Year 3	\$93.33	\$194,126.40	1%	\$198,009
Year 4	\$93.33	\$194,126.40	1%	\$199,950
Year 5	\$93.33	\$194,126.40	1%	\$201,891
Year 6	\$93.33	\$194,126.40	1%	\$203,833
Year 7	\$93.33	\$194,126.40	1%	\$207,715
TOTAL				\$1,401,592
5 Year Contractor Estimate (High Cost of Living Increase)				
	Hourly Rate	Annual Salary	COL Increase	Total Compensation
Year 1	\$93.33	\$194,126.40	0%	\$194,126
Year 2	\$93.33	\$194,126.40	3%	\$199,950
Year 3	\$93.33	\$194,126.40	3%	\$205,774
Year 4	\$93.33	\$194,126.40	3%	\$211,598
Year 5	\$93.33	\$194,126.40	3%	\$217,422
Year 6	\$93.33	\$194,126.40	3%	\$223,245
Year 7	\$93.33	\$194,126.40	3%	\$229,069
TOTAL				\$1,481,185

- The tables above are calculations of possible scenarios for contract specialists based on similar assumptions as previously used during the estimate. As shown above, there are many factors that affect the lifetime costs, and it would take more research to get an accurate picture of lifetime costs. The Cost Price Index that controls the annual cost of living increase each year can really make a difference in the total cost. Another thing to factor in is what if the contractors are down-scoped after 3 years? This is where the flexibility of the contractor could be valuable to the government. With so many factors,

it would be interesting to see if there is a true cost savings at some point in the outsourcing process. The chart below demonstrates the cost savings to the government with a contractor down-scope after 3 years of service. The total cost of the civilian employee exceeds that of the contractor in year 6. This chart is based on low cost of living increases (1% annually) and no promotion for both individuals, which is the first estimate for the government and contractor in the above charts. The contractor provides cost savings to the government after a down-scope only if there is no productive purpose for the government civilian beyond the task(s) the contractor performed in the three year period prior to down-scope.



- **Productivity of the Workforce:** If a study was conducted on the productivity of the contractor workforce in comparison to the civilian workforce, there could be higher productivity that would decrease overall costs. According to Houseman (2007), productivity is very difficult to measure. However, based on economic theory,

productivity growth should lead to increased wages for those laborers (Houseman 2007). While Houseman focused on manufacturing, the same principles apply for contractors in the US and working around the world. The idea that increased productivity leads to increased wages could explain such a significant increase in overall costs for contractors. If a private contractor can produce twice the work in the same amount of time as a government civilian, this would increase the cost effectiveness of using contractors. By determining what a productivity gain consists of for each function (e.g. for contract specialists and system technicians), one would be able to determine the productivity gained by using contractors vs. civilian employees. The idea of productivity gains can be used to explain the increased cost for contractors as shown above. It takes six years for a civilian to surpass the three years of contractors salaries. If the contractor was at least twice as productive as the government civilian, for a three-year long task it would always be more efficient to hire the contractor because for the government civilian it would take six years, the total cost of which would be greater than the total cost of the contractor who gets down-scoped at the end of the task.

- Inherently Governmental Functions: Systems Administrators have a greater difference in pay than contract specialists from the private to government role. This could be attributed to the ability of contracted system administrators to fully function in their roles, which would increase their value.
- Skills: While the government requirements are comparable to the contractor requirements for employment in these positions, there could be an increase in the skill level of contractor personnel. As discussed in the literature review, one benefit of

contractors is that many of them are retired military or civil service employees that have extensive experience. While there could be a decrease in skills, this is very uncommon as many contractors are retired military or civil service, especially in the procurement field.

OVERSIGHT COSTS

AGENCY	ANNUAL BUDGET	Cost per Contract
Defense Contract Management Agency	\$1,058,721,000.00	\$3,286.09
Defense Contract Audit Agency	\$458,316,000.00	\$1,422.53
Department of Defense-Inspector General	\$288,100,000.00	\$894.21

Source: DCAA Annual Budget, DCMA Annual Budget, DOD IG Growth Plan

As discussed in the literature review, each agency plays an integral role in Department of Defense Acquisition. The government is currently managing 322,183 active contracts, which not only require the employees in the procurement office, but also the oversight agencies. DCAA and DCMA are both responsible for overseeing contractor’s activities, while the DOD-IG is responsible for the procurement offices issuing the contracts. These contracts include both international and domestic agreements. However, there do not seem to be any accurate data available on the number of contractors currently working with the Department of Defense, therefore I am looking at a per contract cost for each agency. There have been requests from all agencies for additional funding along with additional personnel. This suggests that taxpayer dollars are vulnerable to fraud and mismanagement as previously reported. The GAO report previously reviewed addresses the DCAA issues, and these per contract costs for each agency seem very low. The other oversight agencies may have deficiencies, and this is a subject that could be addressed with future research. There is a drastic increase in the oversight costs for

those agencies looking at contractor's systems compared to those looking over the activities of the civil service employees.

In response to the GAO report that stated that DCAA was putting billions of taxpayer dollars at risk of fraud, waste, and mismanagement, there have been drastic policy changes within the agency. Prior to the new policy, auditors had the option to report deficiencies discovered as inadequate in part. New policy only allows for a pass/fail option, and failure leads to serious repercussions for those organizations. Along with the pass/fail change, there will also be no suggestions in the audit reports to improve any deficiencies (Saccoccia 2008). If these issues are not adequately addressed, at the time of failure DCAA will inform the Contracting Officer to suspend payments on any accounts that may be affected. This could be detrimental to the success of the contractor.

VI. Recommendations/Conclusion

This research set out with the goal of determining cost effectiveness in relation to federal government contracting, specifically within the Department of Defense. After reviewing literature in this field, it is apparent that there are many different factors that impact the effectiveness of contractors in support of the federal government. While this study is not comprehensive due to so many variables, it addresses total cost of employment and looks at the adequacy of oversight for federal contracts. Based on the analysis of data and literature on the topic, recommendations are made.

Based on total employment cost of private military contractors as compared to government civilian personnel, the government personnel are the lowest cost to the

government if each employee is considered a regular employee. Therefore, the best hiring option for the government is to hire civilian personnel to fulfill these organizational needs.

While there is a large difference in cost, hiring decisions should be determined based on the individual needs of the agency as to the efficiency that is gained by using contractors as opposed to government civilians. These determinations would be based on length of service in correlation with the customer requirements. Within the Department of Defense, it is up to the military customers to submit their needs for the contractor to provide services. These requirements can vary in length and complexity. If a short term project is required, it could be beneficial to hire a contractor as opposed to civilian personnel due to the flexibility of their positions. Presidential administrations will often be the deciding authority for the utilization of contractors. Management fads exist with each administration as has been shown the past, and this will continue to be a major factor in the future.

Future research could address lifetime costs for a “permanent” contractor position as compared to a civil service employee. This calculation would involve many factors and many assumptions including the length of service, promotion rate, cost of living increases, discount rate, retirement benefits, healthcare benefits after service. This would require multiple estimates in order to get best case, worst case and likely scenarios. At the current rates, it takes about two years of government pay to catch up to one year of contractor costs. Private military contractors supporting the Department of Defense domestically are less likely than those serving overseas to be down-scoped rapidly. Contractors often serve in more permanent

positions domestically (Government Accountability Office 2008). Based on current trends in the workforce, contractors seem to be the more costly option.

There is a dire need for more efficient oversight of Department of Defense contracts. DCAA, DCMA, and DOD-IG are responsible for serving as the oversight body on contracts currently awarded. However, each agency has requested additional full time employees in order to meet the increasing requirements. Without the increase in personnel as requested, taxpayer dollars will remain vulnerable to fraud, waste and mismanagement. This finding has been the most eye-opening factor in this research. DCAA is striving to improve their oversight, as was shown by the memo issued in 2008 for corrective changes. However, the GAO report discussing fraud, waste and mismanagement previously was released in 2009, over one year later, with continuing issues of risk to taxpayer dollars (Government Accountability Office 2009). While there is an effort to make progress, there is still a long way to go in the oversight arena. If the United States is to continue in the current path of private contracting, it must bulk up its agencies to protect taxpayer dollars. This would include granting the full time employees requested in DCAA, DCMA, and the DOD Inspector General budget requests.

Based on the findings of this research, as a general rule, it is more cost effective to hire government civilian personnel. Decreasing the government personnel and replacing with private military contractors in order to cut government spending is not the best option. Domestically, the roles provided by contractors could often be performed by government civilians. Military and civil service retirees often fill these positions and bring experience and personal connections that greatly benefit the government in ways a new civil service employee

may not be able to. However, every circumstance is different, and based on the customer requirements the decision should be made using cost analysis in order to obtain the most cost efficient results. In the end the Department of Defense is often weighing the immediate needs of the warfighter against taxpayer dollars. While there is no set answer, a general understanding and more efficient government oversight would go a long way to making this process more effective for all users involved.

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