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THESIS

IDENTIFICATION OF RELEVANT COSTS IN THE DECISION TO CONSOLIDATE OR MAINTAIN TWO MARINE CORPS RECRUIT TRAINING DEPOTS

by

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June 2015

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IDENTIFICATION OF RELEVANT COSTS IN THE DECISION TO CONSOLIDATE OR MAINTAIN TWO MARINE CORPS RECRUIT TRAINING DEPOTS

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Submitted in partial fulfillment of the
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ABSTRACT

This thesis establishes the framework for determining the feasibility of consolidating the two current Marine Corps recruiting depots into one location. The drawdown in manpower and growing fiscal constraints is forcing all services to analyze their expenses. Through the analysis of costs to consolidate depots at one of the existing locations or establish a new facility, the researcher makes recommendations on which costs are relevant to the Marine Corps in this process. The final product provides a framework for identifying relevant costs and benefits applicable to making decisions for the consolidation of depots.

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LIST OF ACRONYMS AND ABBREVIATIONS

AC/S G3	Assistant Chief of Staff G3
AC/S G6	Assistant Chief of Staff G6
BRAC	Base Realignment and Closure
CBA	cost benefit analysis
CE	collateral equipment
CG	Commanding General
COBRA	Cost of Base Realignment Actions
DDR	Drug Demand Reduction
DI	drill instructor
DIOP	drill instructor organizational property
DOD	Department of Defense
EPA	Environmental Protection Agency
FSRM	facilities, sustainment, restoration and modernization
GAO	General Accounting Office
HQMC	Headquarters Marine Corps
ICE	individual combat equipment
IPAC	Installation Personnel Administrative Office
MARR	minimum attractive rate of return
MCAS	Marine Corps Air Station
MCCS	Marine Corps Community Services
MCMAP	Marine Corps Martial Arts Program
MCRD	Marine Corps Recruit Depot
PCO	Property Control Office
PSC	permanent change of station
PSE	personnel support equipment
RTR	Recruit Training Regiment
TAD	temporary additional duty

UFM	Uniform Funding and Management
USMC	United States Marine Corps
USN	United States Navy
WFTBn	Weapons Field Training Battalion

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I. INTRODUCTION

The United States Marine Corps (USMC) is in the process of drawing down its force size from 202,000 active duty Marines to approximately 182,000 Marines (Feickart, 2014, p. 9). As this drawdown occurs, questions are raised as to the necessity of facilities and bases, and where efficiency or economy of force can be gained through consolidation. The whispers of another iteration of base closures and planned consolidations in 2017 forces the USMC to take a close look at the requirements and services that each facility provides. To analyze the benefit of the consolidation and closure of facilities accurately, the ability to identify relevant costs becomes a necessity. The USMC currently operates two recruit depots. With increased scrutiny over spending, the Marine Corps will be faced with a decision and a justification for the future of USMC recruit training. To ensure the decision makers have the most accurate information on which to base their decision, the decision-making process should be as well defined as possible.

Fiscal constraints and competing interests create a dynamic decision-making process in the Department of Defense (DOD) and in the USMC. The decisions are based on both a financial and political factors. The best financial decision for an organization might not always be the option selected. If the decision is the best financially but could have a relatively large impact on jobs or a community, the second choice might win. Another aspect of the decision-making process is the qualitative facet. Along with the political side, the history, tradition, and culture of the organization plays a role in the environment in which the decision is made.

A. THE ENVIRONMENT

The wars in Iraq and Afghanistan changed the landscape of the military. The ability of the United States to conduct offensive operations in two locations placed significant financial and personnel requirements on all branches of the military. The services rapidly increased their force strengths to meet the increased demand by combatant commanders. The requirements forced training facilities to operate at

maximum capacity to meet the demands of the war effort. With the changing environment and the resulting reduction in demand, the focus turns back to DOD spending and efficiency.

The military temporal environment is cyclic in nature. Over the last 60 years, the United States has been involved in military conflict for roughly every 18 to 20 years (Office of the Under Secretary of Defense [Comptroller]/CFO), 2015). The services have experienced cyclic periods of growth and contraction. As the country enters into a new conflict, military services and facilities are being expanded to provide capabilities. The communities that support the military experience an influx of jobs and spending during conflicts due to increases in equipment requirements. Once the conflicts are over, spending decreases and the job market starts to contract.

The ability to make decisions on the facilities to meet the training requirements has been an ongoing concern. The DOD and Congress have made attempts to improve the process for closing and realigning facilities. The Base Closure and Realignment Commission (BRAC) was the most recent attempt to ensure uniformity in the process. The first iteration of BRAC occurred in 1988, and four rounds have been conducted since that time with the last being in 2005 (Sorenson, 2007, p. 32). The BRAC process was endorsed by Secretary Carlucci in 1988 (p. 32). Secretary Carlucci appointed the first BRAC commission. This process has evolved with each iteration in an attempt to create a level playing field for closures and realignments, as well as a more uniform process.

As a result of the 1993 BRAC, the United States Navy (USN) transitioned from three recruit training facilities to one located in Great Lakes, Illinois. The United States Navy had recruit depots in Florida, California, and Illinois prior to the realignment. This realignment allowed the USN to focus all recruit training under one commander at one location. The realignment allows for efficiencies through an economy of force. Instead of having three locations that serve the same function, the Navy was able to consolidate and increase the uniformity of training. The USN total force is more than 325,000 sailors (United States Navy, 2015).

The Marine Corps Recruit Depots (MCRD) are located on each coast. One depot is located in San Diego, California, and is a male recruit-only facility. The second depot is located in Parris Island, South Carolina, and trains both male and female recruits. Both recruit depots have been around since the early 1900s. MCRD Parris Island has been a recruit training location for Marines since 1915 (USMC, n.d.).

Parris Island has been a focal point of USMC culture for generations of Marines. Although the Marines who step on the yellow footprints are eager to graduate and leave the island, they are eternally proud to say that they are a Parris Island Marine. MCRD San Diego saw its first recruits in 1924 (Marine Corps Recruit Depot San Diego, n.d.). Both depots play an integral role in the training, history, and culture of the Marine Corps. Much of the value of the depots is not quantifiable. The depots are a symbol of USMC tradition. Any decision to realign or consolidate the two facilities must be made with the understanding of how this factor weighs in.

B. PURPOSE

This thesis identifies the relevant costs associated with the USMC's decision for the future of recruit training sites. One of four distinct courses of action can be chosen. Those options are to maintain the two existing MCRD, to consolidate at one of the existing facilities either Parris Island or San Diego, or to consolidate both facilities at a new location. To provide the decision makers with the best depiction of the options, costs must be identified and classified. Once classified, the costs can be utilized in a cost-benefit analysis to determine the best path. However, with the previous iterations of the BRAC, the proposed costs have been over budget and the savings are not being realized as soon as predicted.

C. RESEARCH SIGNIFICANCE

This research utilizes the identified issues from the previous BRAC to frame the problem. The issues that arose from the previous iterations were largely centered on the inaccurate cost inputs into the Cost of Base Realignment Actions (COBRA). This thesis provides the USMC with the foundation on which to base a future cost benefit analysis (CBA). The use of relevant costs or the incremental cost concept should provide the

decision makers with an accurate picture of which option is financially best for the interests of the USMC.

D. THESIS STRUCTURE

This thesis is composed of five chapters. Chapter I is the introduction to the research. The chapter describes the environment in which the thesis is operating, the purpose of the research, as well as the significance of the thesis. The literature review makes up Chapter II. The literature review is divided into three main areas of focus. Managerial texts and tutorials on relevant costs make up the first part. The second part consists of governmental reports and manuals. The third part is focused around academic writings pertaining to the quantitative and qualitative aspects to business decisions. Chapter III details the methodology utilized in this thesis. This chapter describes the research philosophy and research approach employed. The chapter also discusses the collection and analysis of the data, as well as the reliability of the data. The limitations of this thesis are also discussed in Chapter III. Chapter IV encompasses the findings of the research and provides the groundwork for a future cost-benefit analysis. Chapter V summarizes the literature review, as well as the methodology used. The chapter also contains a recapitulation of the results and implications for further research.

II. LITERATURE REVIEW

A. OVERVIEW

This chapter reviews prior research and methods used in the identification of relevant costs and why those costs are integral in the analysis of alternatives. This literature review focused on two main areas. The first area consists of managerial accounting texts utilized in Master of Business Administration programs, scholarly articles, and tutorials. These establish the definition of relevant costs, as well as identify synonymous terms utilized in relevant cost analysis. The theory that cost relevance is situationally dependent is also introduced and established in this section. The first area of focus is government manuals and reports. The second area of focus provides the framework for similar lessons learned from prior iterations of the BRAC process. The review of these two areas provides lessons learned based on a similar, but not identical, example in the BRAC process. Within the BRAC process, a model is utilized to determine the best economic option. The COBRA model was utilized in the previous iterations of BRAC to provide quantitative data for the decision makers. The understanding of the definition of relevant costs and how it relates to the decision-making process, as well as the qualitative factors, are the focus of this review.

Research was done to identify the types of expenses associated with the relevant cost or incremental cost method of decision making. The USMC needs to have the ability to define what costs are relevant to the decision to maintain recruit facilities or to combine those facilities. These identified relevant costs are utilized as tools for decision making in the comparison of alternative courses of action. The identification of these costs is also done under the understanding that qualitative factors play a substantial role in the final decision. This thesis is meant to lay the groundwork for follow-on data collection and analysis to identify the best course of action for the future of the MCRD.

B. DEFINING AND USE OF RELEVANT COSTS

In *Managerial Accounting for Managers*, the authors describe relevant costs as being the difference in cost between two or more alternatives (Noreen, Brewer, &

Garrison, 2011). The text explains the costs associated with relevant costs. Multiple terms are used to describe relevant costs, such as incremental costs or avoidable costs (Noreen et al., 2011). Regardless of the term used, the idea remains the same. The choice between alternatives is based on the costs that would not be incurred if the other option were taken (Noreen et al., 2011). The authors define sunk cost state, "A sunk cost is a cost that has already been incurred and that cannot be changed by any decision make now or in the future" (p. 54). Understanding that the cost is based on a previous decision and cannot be altered is an important fact in the decision making process. The authors provide the definition of relevant costs, which is the cornerstone for this research. The authors also establish the premise that relevant costs and incremental costs are synonymous with one another. This premise holds for this research.

In his textbook, *Management Accounting: Concepts and Techniques*, Dennis Caplan (2010) defines relevant costs in a similar manner to Noreen and his co-authors. Caplan (2010) describes relevant costs as those different from alternative to alternative. The author introduces the theory that costs incurred for all options are irrelevant (Caplan, 2010). The relevant costs are those that differ between the alternatives. Caplan (2006) reinforces the basis of the definition of relevant cost. The author also discusses the idea that the costs associated with relevant costs differ from situation to situation (Caplan, 2010). The same cost, depending on the situation, can be relevant or irrelevant. In one circumstance, the cost for wages could be fixed, and in other circumstances, the same cost could be variable and, thus, change its relevance. This research employs this perspective in the identification of relevant costs.

In their managerial accounting text, *Cost Accounting: A Managerial Emphasis*, Horngren, Datar, Foster, Rajan, and Ittner (2009) describe relevant cost stating, "Relevant costs are expected future costs and relevant revenues are expected future revenues that differ among the alternative courses of action being considered" (p. 388). The authors discuss the idea that two viewpoints are proffered, which they refer to as factors (Horngren, Datar, Foster, Rajan, & Ittner, 2009). The financial aspect is one viewpoint and the non-financial aspect is the other (Horngren et al., 2009). The benefits of a course

of action that do not have direct financial numbers tied directly to them are what authors refer to as qualitative factors (Horngren et al., 2009).

In the managerial accounting text, *Managerial Accounting: Information for Decisions*, Albright, Ingram, and Hill (2006) define relevant costs stating, "Relevant costs are costs that change under two or more decision alternatives" (p. M164). The authors also discuss the behavioral aspect of the decision process in regards to the method of identifying costs (Albright, Ingram, & Hall, 2006). The authors argue that managers are taking a risk classifying costs by their behavior (Albright et al., 2006). The authors discouraged the idea of assigning costs as relevant or irrelevant by its title, like wages for example (Albright et al., 2006). Wages as seen in this context can be either fixed or variable, which thus changes their relevance designation (Albright et al., 2006).

These four basic textbook definitions are used to help define the costs determined to be relevant in this study. The definitions and the supporting theories assist in the determining of what costs need to be included and the missteps that some managers make in regard to those costs in the decision-making process. The theory that costs do not remain relevant in all situations provides a key building block in the approach to this research.

In 1988, Aaron Rose published *Tutorial: Incremental Analysis in Capital Budgeting*. The tutorial discusses the need for the understanding of incremental analysis to make decisions on investments. The capital budgeting process in any organization experiences competing interests. Based on that premise, Rose (1988) discusses the idea that no organization has the ability financially to pay for all proposals; therefore, a way must be created to distinguish between alternatives (p. 13). Incremental analysis allows the business to compare the numbers and then bring in the other factors or biases. Rose (1988) argues that decision makers can come to the wrong conclusion if they simply look at net present value or rate of return (p. 13). Simply looking at the returns without analyzing the incremental costs and their impact on the outcome, does not paint an accurate picture. Understanding from where the costs are originating and to what the costs are tied provides a more accurate picture. Although the investment appears to have a positive outcome, use of the funds for a different investment or alternative could

provide a better alternative (Rose, 1988). Rose (1988) describes the process, which focuses on the minimum attractive rate of return (MARR) stating:

> The methodology for an incremental analysis is to arrange alternatives in order of increasing cost. The rate of return is then calculated for the least-cost alternative. If that rate of return exceeds the MARR, then the incremental analysis is started. If that rate of return is less than the MARR, the lowest-cost alternative is not acceptable, and the next higher cost alternative is tested. (p. 14)

This methodology ensures that the lowest costing option that meets the requirements set by the decision maker is being used.

The Rose tutorial illustrates the necessity to understand and utilize incremental costs. The circumstances that Rose (1988) used are similar to those that the USMC would face. The USMC has a limited budget with competing interests for budget allocations. Therefore, a determining factor must exist to separate the purposed alternatives. This study shares the argument that to make the best decision for an organization, the inclusion of incremental costs is necessary.

The two viewpoints discussed above apply to this research due to the nature of the business. The USMC's output or product from its recruit depot cannot be measured in financial terms. The USMC will evaluate both the quantitative and qualitative factors in its decision process.

C. WHAT COSTS ARE RELEVANT

The 1961 article in the *Journal of Accountancy* by William L. Ferrara discusses the relationship between different types of cost. Ferrara's (1961) article reviews the mistakes that some decision makers make in not understanding the difference between costs and relevant costs (p. 61). All costs must be analyzed in making the determination of relevant, irrelevant, or sunk costs. Ferrara (1961), describing the incremental costs, writes, "Incremental, however, must be interpreted in the broadest possible sense because most business decisions have long run implications, which demand considerations of fixed cost factors" (p. 62). To make the best decision, the decision makers must utilize the right information and criteria. The notion that the relevance of a cost can be attributed

to whether it is fixed or variable, controllable or not under the control of management, has no bearing on the relevance of the cost (p. 62). Ferrara (1961) argues that the relevance is situational. The costs that could be identified as relevant could also be identified as fixed or variable costs. The change is dependent on whether the decision maker is looking at the long-run or short-run time frame (Ferrara, 1961). Fixed costs in the short run could ultimately be variable in the long run. Labor is a good example of a cost that can change depending on time. For some projects, a firm might have the wages fixed at an hourly rate, and for other batches or projects, the labor could be per item. The type of cost differs between the two examples. In one case, the cost is fixed, and the other cost is variable based on production.

The USMC will be required to make decisions based on the current economic, political, and threat situation. Each item has a cost associated with it. No single method of response can be used for every decision. Thus, the costs determined to be relevant are situational. They may be relevant for one decision and irrelevant for the next.

Relevant cost analysis is done in both the public and private sectors. Once the relevant costs are identified, organizations use the data to conduct a cost-benefit analysis to determine what is in the best interests of their particular organization. In the civilian sector, the analysis can be used for a variety of reasons. Examples range from whether to add a new product line or whether to outsource the manufacturing of a product or component. The underlying goal of the analysis on the private side is profit. In the public sector, the goal is to choose the option that provides the best outcome for the organization. As budgets are very limited, the stakes for selecting the best course of action are very high. An abundance of competing interest makes it all the more imperative to make the right decision.

D. DEPARTMENT OF DEFENSE

The purpose of the DOD is to provide security and other humanitarian services for the population, not to make money. However, relevant cost analysis is just as crucial in the public sector, as it is in the private sector. The public sector utilizes the cost benefit tool to spend the appropriate amount to achieve the requirement. In the public sector, the

benefit associated with each requirement is difficult to identify based on the complexity of the services provided.

BRAC is an example of when relevant cost analysis plays an integral role in the decision-making process for the DOD. BRAC is just one of many situations in which options are analyzed to identify the best action for the department as a whole. The COBRA model is a tool used to take the personalities out of the data. It provides a financial determination between alternatives (Richardson, 2004). The COBRA model is the closest applied example consistent with the goal of this research that the researcher was able to identify. The end state of the COBRA model is to give a non-biased decision point on the best course of action for the DOD.

1. Final Selection Criteria

In a January 2005 memorandum, Base Realignment Selection Criteria, Michael W. Wynne, Acting USD (Acquisition, Technology & Logistics) Chairman, Infrastructure Steering Group, provided the criteria to be used for the selection of bases for closure or realignment. Wynne (2005) divided the criteria into two categories, military value and other considerations. The military value considerations were focused on both the ability to maintain the current mission across the DOD, as well as the condition of the facilities. For example, are the current and possible consolidation locations able to support the increases in personnel and activity (Wynne, 2005)? Wynne (2005) also focused on the ability to deal with contingency operations at both the current and recommended consolidation sites, and the costs associated with the operating and manning the sites. Wynne (2005) discussed other considerations including cost savings and the length of time it would take to reach the savings phase. The projected savings from the BRAC were not immediate and would take time to surpass the cost of the closure or realignment. Wynne (2005) also discusses the financial impact on the local community, as well as the infrastructure's ability to support an increase in requirements. The consolidation of personnel and operations places increased requirements on the location that would be on the receiving end of the action. The last consideration that Wynne (2005) identified is the environmental impact on both sides of the realignment or closure. Impacts are associated

with an increase in forces and operations at one location, as well as the cleanup requirements associated with closing a facility (Wynne, 2005).

The Wynne (2005) memorandum provided a reference point for identifying costs associated with the four options. Each of the considerations that Wynne listed have multiple costs associated with them. Wynne (2005) also provides focus by identifying that a change of capacity not only has an impact of the military at the new station, but on the existing infrastructure around that facility. The understanding and the ability to identify the costs associated with specific elements are key to providing an accurate assessment of the relevant costs. An example is the environmental cleanup if a base is closed or environmental maintenance if the base remains open.

2. BRAC Manual

The 2006 *Base Redevelopment and Realignment Manual* was published by the Office of the Deputy Under Secretary of Defense (Installations and Environment) to define the redevelopment and realignment process for the DOD. The manual was issued in March 2006 to replace the 1997 *Base Reuse Implementation Manual* Office of the (Deputy Under Secretary of Defense (Installations and Environment), 2006). The BRAC Manual covers the entire BRAC process including the selection of the facilities to be closed, working with the local communities, and the environmental actions that must be taken in accordance with environmental laws pertaining to hazardous material disposal (Deputy Under Secretary of Defense (Installations and Environment), 2006). Environmental requirements vary depending on the utilization of the facility throughout its lifecycle. In many cases, the environmental upkeep or cleanup is the most expensive aspect. The installations being considered for realignment or closure are generally the older installations. The facilities are not utilized as much; therefore, they are not a priority for funding. The BRAC Manual establishes phases in the base closure process and what needs to be planned for and accomplished during each phase (Deputy Under Secretary of Defense (Installations and Environment), 2006). The manual provides a diagram depicting the process, as seen in Figure 1.

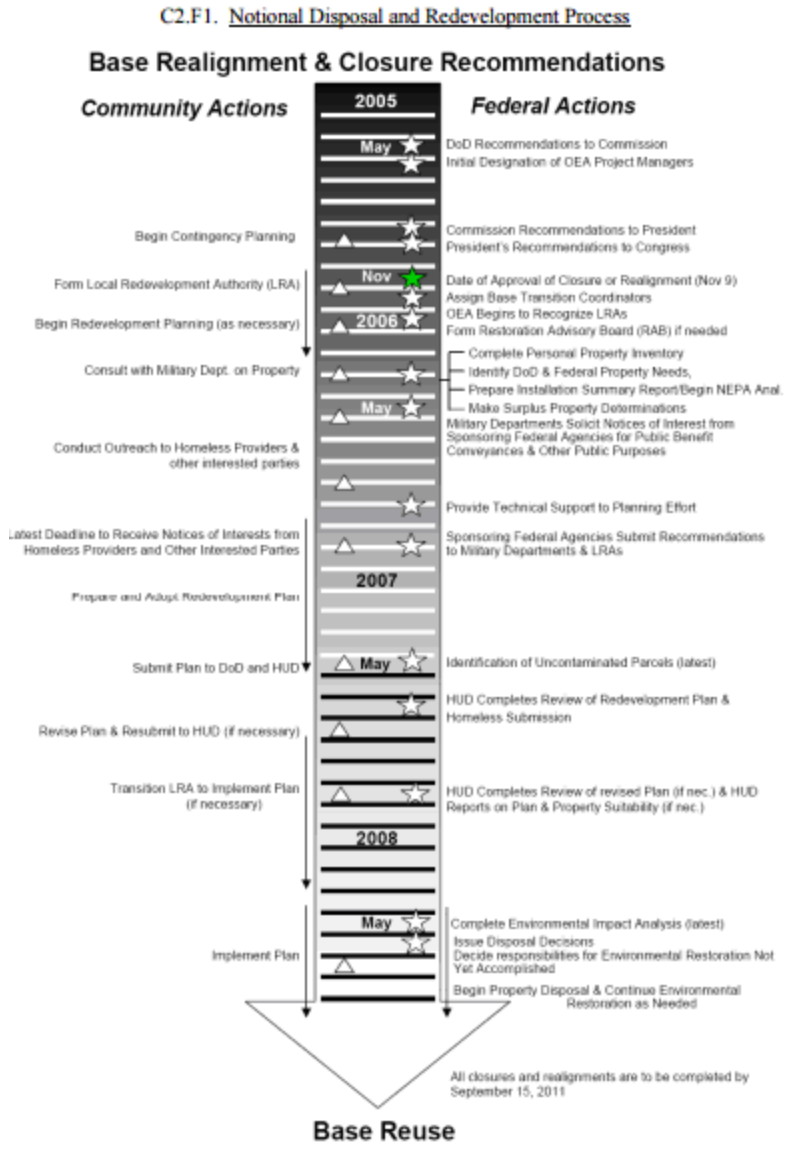


Figure 1. Notional Disposal and Redevelopment Process (from Deputy Under Secretary of Defense (Installations and Environment), 2006, p. 25)

Figure 1 depicts the timeline of the actions by both the federal parties involved, as well as the community parties involved. The figure begins with the initial recommendation for closure to the reuse of the base by the local community or state. The number of parties involved with the process is also depicted in the figure. Base realignment and closure is a team effort. Coordination occurred to ensure that all the applicable laws are followed. One of the last parts of the process is the environmental cleanup or restoration, as well as

the disposal method associated with this process. This part of BRAC can be one of the most expensive and time consuming of the whole procedure. The figure provides a timeline to enable those involved to understand the magnitude of the endeavor, as well as the connection between actions at the federal and local levels (Deputy Under Secretary of Defense (Installations and Environment), 2006).

The BRAC Manual provides an explanation of the requirements necessary once the decision is made to close an installation (Deputy Under Secretary of Defense (Installations and Environment), 2006). The requirements encompass items, such as the base redevelopment and disposal plan, working with the local community to repurpose the land, and any required environmental actions that must be undertaken (Deputy Under Secretary of Defense (Installations and Environment), 2006). Each requirement associated with the decision to close an installation has costs tied to it, thus making the costs essential for this research.

3. COBRA

The COBRA model user's manual and program were updated in 2003 prior to the 2005 iteration of BRAC. The manual states that the model was updated to handle areas of concern from previous BRACs, such as military construction and costs associated with military personnel (Richardson, 2004). The manual states, "The model output can be used to compare the relative cost benefits of alternative BRAC actions" (p. 4). The manual also states that the numbers are not meant to be used for budgets (p. 4). The results are meant to be accurate generalizations of the costs and benefits incurred by the decision. Budget level numbers require more detail and precision. The model looks at the costs to move personnel, buy new land, build new facilities, and costs associated with closing a military installation (p. 4). While these are not all the inputs to the model, an example of the types of cost estimates included in the model is provided.

The COBRA system is not an exact match for this research. It is, however, a good example application to what this research provides. The model takes the inputs and conducts a cost-benefit analysis to present decision makers with the best financial course

of action. The model provides a reference for identifying required costs when making an unbiased decision among the USMC's four alternatives.

4. COBRA Analysis

In his 1993 master's thesis entitled "An Analysis of the Cost of Base Realignment Actions (COBRA) Model," Vernon P. Kemper discusses the deficiencies with the COBRA model. Kemper's (1993) focus was to determine if the COBRA model was a sufficient tool on which to base significant economic decisions (p. 13). Kemper's (1993) research identifies three main areas of focus for the model: the discount rate utilized, construction costs, and the overhead rate used. Kemper (1993) conveys that although improvements have been made, the model still needs refinement to identify the best course of action properly (p. 52).

Kemper's (1993) thesis provides insight into the limitations of the COBRA model. Through Kemper's research, he identified three main areas said to be deficient: the non-DOD costs that were not included, how the discount rate was selected, and the lack of the model's ability to deal with industrial activities (Kemper, 1993, p. 87) The COBRA model lacks the ability to ensure the proper relevant costs are considered. When costs are excluded from the analysis process, it provides an incomplete analysis of the options. Many of the issues that Kemper (1993) identified in his research have been improved upon through the subsequent iterations of BRAC. Some of the issues, however, did remain in the subsequent iterations of the BRAC.

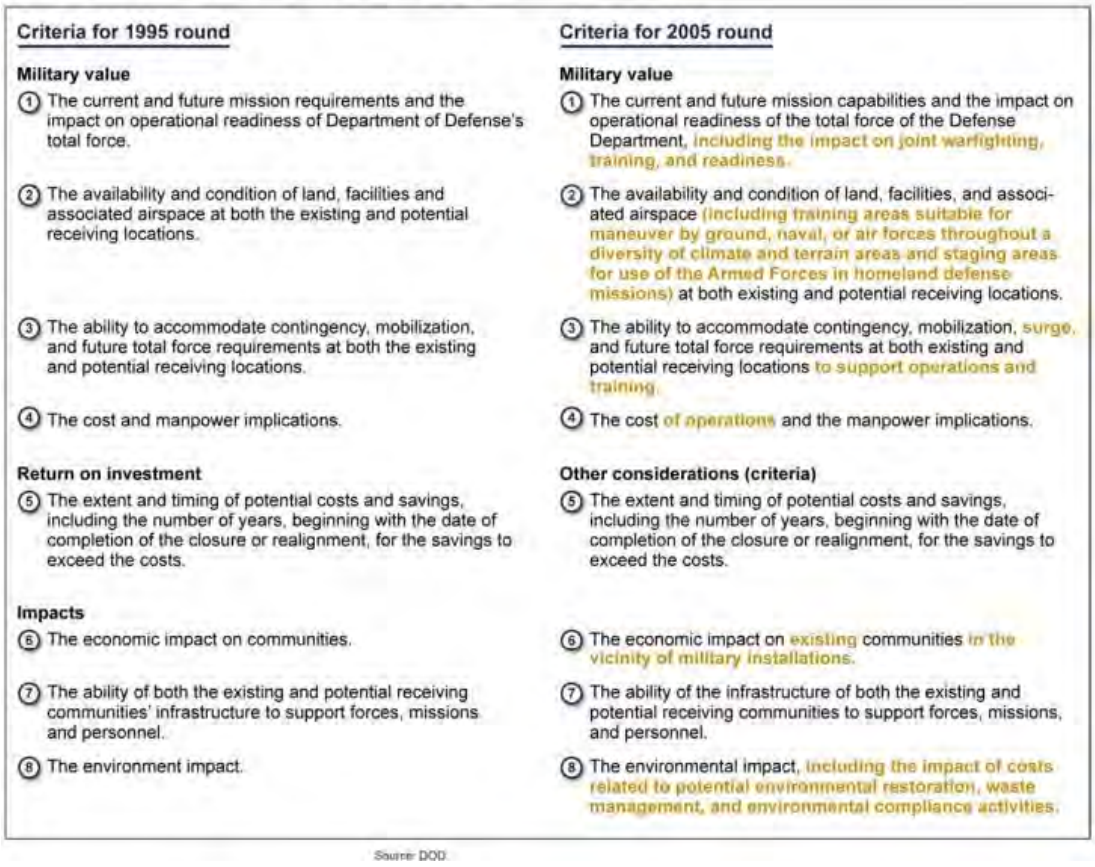
5. COBRA and GAO

The 2005 BRAC was an improvement in comparison to the 1993 iteration; however, cost overrun issues were still a problem (General Accounting Office [GAO], 2013). The Government Accountability Office (GAO) has conducted a review of the program to determine the best course of action for future iterations of BRAC. In the March 2013 report GAO-13-149, *Military Bases: Opportunities Exist to Improve Future Base Realignment and Closure Rounds*, GAO (2013) found multiple issues with the current method of BRAC. The main issues with BRAC that apply to this research are its findings regarding COBRA. The COBRA model was designed to place objectivity into

the process of identifying which bases or stations should be closed or remain open (p. 13). The report identifies the implementation costs, net annual recurring savings, and net present value as the critical financial measures generated by the model (GAO, 2013). The report discusses the lack of quality or accurate inputs into the COBRA system, which, in turn, provided inaccurate results (GAO, 2013). GAO (2013) cites a deficiency in input data reliability due to inaccurate cost estimates. The report also discusses the criteria that the system uses to estimate costs; therefore, the financial numbers generated are not representative of actual values (GAO, 2013). The decision to close or realign installations is being made based on the outputs of COBRA, but the results cannot be used to determine the cost required to close or realign the facility. GAO (2013) identified that the model does not require the user to create a narrative associated with the input to enable others to understand the methodology used (GAO, 2013). A narrative would allow for the analysis of the data at a later time and provide the decision maker a better understanding of the data. The GAO report (2013) discusses the initial criteria provided by the Under Secretary of Defense for Acquisition, Technology and Logistics for selection to be appropriate, but still has room for improvement (p. 10).

Figure 2 illustrates the criteria for the last two iterations of BRAC. The 2005 criteria takes the baseline established in 1995 and then refines each criterion with additional guidance (GAO, 2013). The key points of the 1995 considerations remained the same; however, the Under Secretary of Defense added more focus to each in 2005. Emphasis on training and readiness under the Military considerations aspect was increased. The Under Secretary provided more detailed direction under the environmental consideration segment. Each additional piece of guidance has costs associated with it and becomes a factor in the decision-making process.

Figure 2: DOD Criteria for the 1995 and 2005 BRAC Rounds



Criteria for 1995 round	Criteria for 2005 round
Military value	**Military value**
1. The current and future mission requirements and the impact on operational readiness of Department of Defense's total force.	1. The current and future mission capabilities and the impact on operational readiness of the total force of the Defense Department, including the impact on joint warfighting, training, and readiness.
2. The availability and condition of land, facilities and associated airspace at both the existing and potential receiving locations.	2. The availability and condition of land, facilities, and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.
3. The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.	3. The ability to accommodate contingency, mobilization, surge, and future total force requirements at both existing and potential receiving locations to support operations and training.
4. The cost and manpower implications.	4. The cost of operations and the manpower implications.
Return on investment	**Other considerations (criteria)**
5. The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.	5. The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.
Impacts	
6. The economic impact on communities.	6. The economic impact on existing communities in the vicinity of military installations.
7. The ability of both the existing and potential receiving communities' infrastructure to support forces, missions and personnel.	7. The ability of the infrastructure of both the existing and potential receiving communities to support forces, missions, and personnel.
8. The environment impact.	8. The environmental impact, including the impact of costs related to potential environmental restoration, waste management, and environmental compliance activities.

Source: DOD

Figure 2. DOD Criteria for the 1995 and 2005 BRAC Rounds (from GAO, 2013, p. 11)

The GAO (2013) report identifies the key issues with the COBRA model and BRAC as a whole. This report provides a debrief of the lessons learned from the last iteration of BRAC. Reviewing the issues identified, enables the mitigation of the same issues. The COBRA model provides a reference point of an existing system utilized for very similar analysis of the alternatives that the USMC will face for its recruit depots. The GAO (2013) report highlights the importance of the inputs into the system. A model can only work with the data entered. The information entered was found to be less than accurate and not all the data collection was done in the same manner (GAO, 2013). The report also identified the criteria that Congress found acceptable and was valid on which to base the decision for consolidation, realignment, or leaving alone. The figure provides this thesis with a tool to

assist further in the identification of possible parameters for future analysis. The report findings are a basis for developing the framework for this research.

E. QUANTITATIVE AND QUALITATIVE

In the 2012 article in the *Australian Journal of Business and Management Research*, Dr. O. Ishmael and I. P. Osamor describe the relevant cost concept. They discuss the concept in broad terms based on a similar definition as previously discussed in this review. They emphasize that the inputs to the decision-making process for management are those costs or benefits that differ from one course of action to the next (Ishmael & Osamor, 2012). Ishmael and Osamor (2012) argue that in the decision-making process, qualitative and quantitative aspects must be considered. The numbers are not the only element involved in the decision-making process. The majority of the time the manager or decision maker needs consider the qualitative aspect of the decision as well. Not every part of the decision is easy to evaluate monetarily; however, it is still significant to the process.

As discussed previously, the ability to determine which costs are relevant is essential in the decision-making process. Qualitative factors must also be considered (Ishmael & Osamor, 2012). In many cases, the qualitative factors are considered first, and the quantitative factors follow. Qualitative factors are likely to play a large role in the decision on the future of MCRD Parris Island or MCRD San Diego, which are both at the root of Marine esprit de corps. Enlisted Marines identify themselves by which boot camp they attended. Based on the researcher's experience, a tremendous amount of pride stems from being a product of one facility or the other. This research takes the qualitative aspect into account in the identification of relevant costs.

F. CONCLUSION

This literature review provided examples of the definition of relevant costs. The importance of the theory of situational relevance or irrelevance is also highlighted. Both the definition and the theory of situational relevance establish the reference point for this research. The literature provides a point of departure of the criteria utilized in this research as it pertains to the USMC decision-making process that has been vetted through

the GAO. The review addresses the importance of the use of incremental costing in decision making, through the example of capital budgeting, and how its exclusion can lead to the wrong decision. The BRAC and the COBRA models provide a detailed analysis of lessons learned in the conduct of base closure or realignment. Although the focus of this research is not base closure, it does have multiple similarities to the decision to be made on the future of USMC recruit training depots. The following chapters examine and identify the relevant costs associated with the various courses of action for this decision.

III. METHODOLOGY

The purpose of this thesis is to identify and classify costs that would be relevant to the decision-making process for the future of USMC recruit training depots. The purpose of this thesis is not to recommend the closure or realignment of any installation. The aim is to enable decision makers to have an accurate picture on which to base their future decisions. The focus is on the decision-making process, which is accomplished by ensuring that all costs are identified and classified as relevant, irrelevant, and sunk costs. This research is not concerned with the actual monetary value of each cost. This thesis is strictly focused on the behavior and classification of the identified costs.

This chapter has two primary sections. The first section describes the three-phased approach utilized to determine cost relevance for alternatives for the future of the USMC recruit training facilities. This section provides the step–by-step process utilized to identify and classify the costs.

The second section discusses the reliability and validity of the research, as well as the scope and limitations of this thesis. The reliability section discusses the origin of the data and how it was used in this thesis. This section also covers why this line of research is valid under the current circumstances as it pertains to the future of USMC recruit training.

Figure 3 is a flow chart that depicts the process utilized in this thesis. This process consists of three distinct phases. Phase 1 is the identification of four alternatives. Phase 2 is the identification of known costs pertaining to Alternative 1 (Status Quo). Phase 3 has two stages. Stage 1 is the projection and synthesis stage. Stage 2 is the classification stage of Phase 3. The process will be explained in further detail in this chapter.

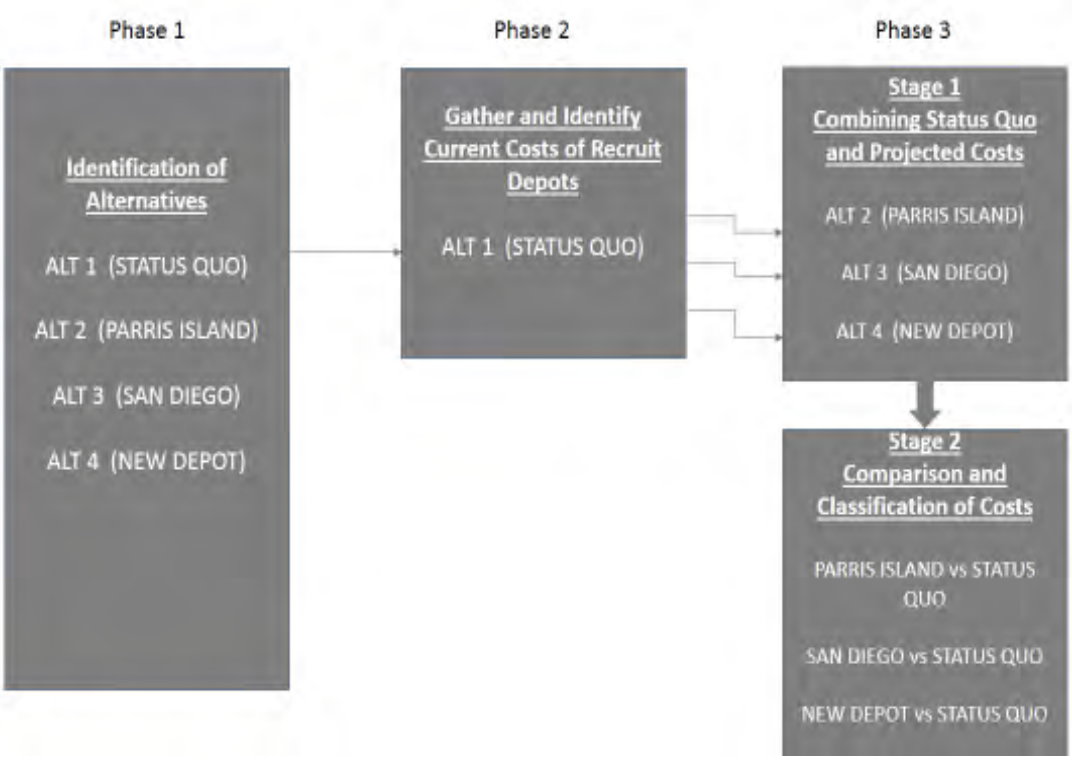


Figure 3. Process Flow Diagram

A. RESEARCH APPROACH

As stated previously, the research process is divided into three main phases as depicted in Figure 3. The process flows from left to right with Phase 1 on the left and Phase 3 on the right. Each phase has outputs that feed into the next phase. The first phase of the process is the identification of four alternatives. The second phase is the gathering and identification of the costs based on the current layout of recruit training. The third phase is split into two stages. The first stage projects costs incurred by each of the three alternatives (Parris Island, San Diego, and New Location). The second stage involves the analysis and classification of the identified costs through a comparison to Alternative 1, the Status Quo.

1. Phase 1

The first phase in this research process is the identification of possible alternatives for the future layout of USMC recruit training. This thesis looks at four core alternatives. It is understood that other alternatives may be available, such as the Army model of

having the recruit depots reside on one of their operational bases. The alternatives were determined by looking at historical examples with maximum use of existing infrastructure. The first of the alternatives is the current layout or the "do nothing" alternative. This alternative is also referred to as the "Status Quo" alternative. In addition to the Status Quo alternative, three additional alternatives were identified. Alternative 2 is defined as the consolidation of both facilities at the MCRD Parris Island, SC location. Alternative 3 is defined as the consolidation of both facilities at the MCRD San Diego, CA location. Alternative 4 is defined as consolidation of both facilities at a location in the central part of the United States. The output of this phase is the identification and description of each alternative.

a. Alternative 1

The first alternative is to maintain the current layout for recruit training. Currently, males from west of the Mississippi attend basic training at MCRD San Diego. Males from east of the Mississippi attend recruit training at Parris Island, SC. Female recruits all proceed to MCRD Parris Island for their recruit training. Members of the western recruiting region are also based at MCRD San Diego. This alternative makes no alterations to the current layout. Alternative 1 establishes the baseline for the Phase 3 comparison.

b. Alternative 2

The second alternative is to consolidate the current two facilities at MCRD Parris Island. In this alternative, all recruits regardless of geographic origin would complete training in South Carolina. This alternative requires the closing of MCRD San Diego and relocation of the recruiting regional personnel who also occupy the depot. Construction of additional facilities at Parris Island would also be required to accommodate the increase in recruits. This alternative analyzes all costs associated with the closing of a military installation, as well as costs incurred by the consolidation at the Parris Island location.

c. Alternative 3

The third alternative is to consolidate the current two facilities at MCRD San Diego. This alternative involves the addition of female recruits to MCRD San Diego, which is currently an all-male training facility. Additional accommodations are required to support the addition of female recruits. This alternative, like Alternative 2, includes all male recruits regardless of their geographic origin, who will complete recruit training at one location, MCRD San Diego. This alternative analyzes all costs associated with the closing of a military installation and the costs incurred due to the consolidation at the San Diego location.

d. Alternative 4

The fourth alternative is to consolidate all recruit training at a location in the central part of the United States. This alternative will require the construction of a new facility, built to accommodate the current throughput, as well as a surge potential. This alternative also involves the inclusion of the closure costs for both East and West coast facilities, as well as all the costs associated with turning the properties back over to the local governments. This alternative will also include the costs associated with moving all units that currently occupy the Alternative 1 facilities.

2. Phase 2

The second phase in this research approach consisted of the collection and gathering of the data associated with the operation and upkeep of Alternative 1 (Status Quo). It was necessary to collect the cost data from both existing depots. The collection of the current cost data was accomplished through multiple phone contacts. The phone contacts were conducted with both MCRD Parris Island and MRCD San Diego Budget offices to obtain the name and description of the costs incurred in the training of Marine recruits. These costs are not limited to the direct costs associated with the recruits. Also included are all the costs traceable to the support personnel and resource requirements. Upon completion of the phone contacts, both depots provided PowerPoint presentations that depicted the funding and what it buys for the fiscal year. The data was then analyzed to ensure that the named costs were able to be compared with the other depot's data. The

identified costs had to encompass the same elements for the comparison to be accurate. Each cost was analyzed further to gain an understanding of what components comprised the cost. The output of this phase was the identified named costs and the components that make up those costs for Alternative 1.

3. Phase 3

The third phase of the process, as depicted in Figure 3, was divided into two stages. The first stage took the output from Phase 2 and projected all additional costs associated with Alternatives 2, 3, and 4. To accomplish this task, this thesis utilized analysis of the previous iterations of the BRAC, the Base Redevelopment and Realignment Manual, and the DOD Base Realignment and Closure Executive Summary to identify possible costs associated with the maintenance, realignment, or consolidation of military installations. The use of the *Base Redevelopment and Realignment Manual* provides identified costs associated with the relocation of military members or DOD civilians. Additional cost considerations encompass items, such as environmental cleanup, severance packages for no longer required civilian labor, and real property disposal. The costs identified as current costs from Alternative 1 were combined with the realignment costs identified through the historical analysis and BRAC requirements. The compiled costs were then organized so that they could be mapped out and classified in the next stage. Once all the identified possible costs had been identified and organized, the process moved to the next stage.

The second stage took all the identified costs from stage one, and organized and analyzed them. The analysis took the costs from each alternative and compared them to Alternative 1. The first comparison was Alternative 1 (Status Quo) compared to Alternative 2 (Parris Island). The second comparison conducted was between Alternative 1 (Status Quo) and Alternative 3 (San Diego). The final comparison conducted was between Alternative 1 (Status Quo) and Alternative 4 (New Depot). The costs were classified into one of three categories as relevant, irrelevant, and sunk costs. The classification was done through a comparison of the costs behavior between the alternatives and the Status Quo. Each identified cost behavior was analyzed to see if it

remained the same, grew, declined, or no longer existed. If the cost was different between the alternatives, meaning it grew or declined or no longer existed, it would be labeled as a relevant cost. If the cost behaved the same between the two alternatives, meaning no change occurred, it became an irrelevant cost. If the cost occurred regardless of the alternative since it was based on a previous decision, it was labeled as a sunk cost. Once all costs were identified and classified, the data was consolidated and prepared for a cost-benefit analysis to be conducted in the future.

B. RELIABILITY, VALIDITY, LIMITATIONS, AND SCOPE

The cost information contained in this research project was obtained from the MCRD's comptroller's offices. The offices provided the name of the costs, as well as a description of the components of the costs. The information to the best of the researcher's knowledge is as accurate and reliable as possible. The additional costs identified are based on historical examples of base closures and realignments derived from the review of government manuals and reports. The Base Redevelopment and Realignment Manual was also used as a reference for this thesis.

This thesis was limited by multiple factors. The first factor was resources. The cost identification topic has many dimensions that have the potential to increase the scope, which would impact the resource requirements. An example would be manpower limitation. Given that this problem consists of several facets, the manpower requirement needed to give attention to every aspect was not available. The opportunities for further research section covers the facets in greater detail.

The data limitations are mainly attributed to Alternative 4. The costs were able to be classified as relevant or irrelevant with the understanding that the construction costs vary from location to location. Additionally, the acquisition of the land is also a complex process that is not easily specified. The difference in travel costs and the ability to predict the difference accurately was also a limitation due to the lack of an actual new site for Alternative 4.

The scope of this thesis was restricted to the identification and classification of the costs that apply to MRCD alternatives. Due to the constraints previously mentioned, this

thesis focused on the first phase of a much larger project. Options for expansion or complimentary research could include a transportation optimization model to assist in determining the location for Alternative 4 or a cost-benefit analysis based on the identified relevant costs. The possible continuation of this thesis is discussed in Chapter V.

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IV. FINDINGS

This chapter discusses the results of the analysis of each identified alternative and classification of the costs associated with each alternative in comparison with Alternative 1 (Status Quo). The costs are divided into five categories. The first three categories are derived from the Status Quo alternative, while the other two categories come from the construction and closure costs (Department of Defense, 2014). The five categories discussed are: (1) facilities, sustainment, restoration and modernization (FSRM), (2) base operations, (3) recruit training, (4) construction, and (5) closure costs (F. Gaston, personal communication, May 13, 2015; A. Smelko, personal communication, April 27, 2015). This chapter provides the findings for those comparisons and a description of the behavior associated with each cost.

A. ALTERNATIVE 1 RESULTS

The costs associated with Alternative 1 represent the costs as they currently exist for the Parris Island and San Diego depots. By definition, no relevant or irrelevant costs for this alternative are considered because they are not being compared to another alternative. The costs for both MCRD Parris Island and MCRD San Diego are divided into three main categories. The first category is FSRM. The second category is made up of the base operations elements. The third category is composed of the recruit training funds. While many of the costs are shared between the two depots, some costs are unique to each. The importance of identifying the costs that apply to each depot was paramount. This alternative establishes the baseline for the comparison to Alternatives 2, 3, and 4. The costs are described in this alternative and those characteristics hold true for the other three alternatives. The description of each cost in Alternative 1 was derived from personal correspondence with MCRD San Diego and MCRD Parris Island.

1. Parris Island

MCRD Parris Island as an entity encompasses recruit training and the active duty and civilian members that support the training.[1] The costs, types of costs, and an explanation of the costs are described in the following paragraphs. See Appendix A for a more detailed list of costs.

FSRM costs are composed of four kinds of costs. The first type is civilian labor. Civilian labor under FRSM involves all those non-active duty personnel who provide services that directly pertain to the physical facilities or those that support the personnel directly involved with those facilities. It includes, but is not limited to, financial managers, information technology specialists, facilities managers, administrative assistants, and structural assessment specialists (F. Gaston, personal communication, May 13, 2015 and May 27, 2015).

Base operations costs pertain to those costs that support but that are not in direct support of the training of recruits. The base operations category contains multiple subcategories. Civilian labor includes the following: command and staff personnel, environmental engineers, information management, food services, and family health personnel. Base operations also include the utilities required to service the depot. Those utilities include gas, steam, water, electric, and sewage. Information management involves facets like web hosting and cyber security. Information management also includes such categories as information technology, infrastructure support, and telephone support. Environmental costs for the depot are included in base operations. Environmental costs can be divided into three distinct categories: (1) hazardous material waste disposal, supplies, (2) materials required for all environmental related activities, lab analysis, water testing, permits and fees, and (3) training personnel involved with environmental related activities. Financial and personnel resource management services include the comptroller's office, finance office, human resources office, and Installation

[1] The information contained in this chapter came from personal correspondence with Felix Gaston from the Budget Office at MCRD Parris Island and Andy Smelko from the MCRD San Diego Budget Office. The office provided the types of costs and examples of what those costs included. The correspondence occurred from April 2015 to May 2015. The information was provided for this thesis and is unpublished.

Personnel Administrative Office (IPAC). Garrison transportation and management, supply operations, unaccompanied personnel housing, and the regional contracting office are also included in base operations (F. Gaston, personal communication, May 13, 2015 and May 27, 2015). Appendix A also has a detailed list of costs.

Costs directly tied to recruit training or those support personnel who conduct the training are the next category. The civilian labor for this category includes personnel, such as the physical fitness advisor, transportation assistant, supervisory training specialist, and the recruit's administrative branch. Weapons Field Training Battalion (WFTBn) is another cost within the recruit training costs category. WFTBn includes costs like field training books, ordnance, and weapons maintenance. Range company is another example of this category of cost. Uniform alterations are another cost under the recruit training costs category. Recruit training administration also has a non-labor cost for materials required to conduct administrative business for the recruits. Recruit Training Regiment (RTR) is a cost that includes items, such as barracks gear, gym equipment, training equipment, and organization equipment. Personnel support equipment (PSE) is a cost that includes the maintaining of the 782 gear (i.e., canteens, ammunition pouch, poncho) and other PSE that the recruits utilize daily. Religious ministries are another cost in direct support of recruit training. Armory operations fall under the direct support category. Organizational clothing is another subcategory of costs that fall under the recruit training category. The costs discussed are the subcategories that fall under the recruit training category (F. Gaston, personal communication, May 13, 2015 and May 27, 2015). For a detailed list, see Appendix A.

2. MCRD San Diego

MCRD San Diego also has three main categories of costs. The three categories are FSRM, base operations, and recruit training. San Diego has many of the same subcategories of costs that MCRD Parris Island has with some additional costs. MCRD San Diego also has tenant commands that reside on the depot. The costs tied to those commands were not broken down; however, the requirement to relocate would make their associated moving costs relevant.

FSRM are divided into four main subcategories. Civilian labor is the largest of the four subcategories. Examples of civilian labor are financial technicians, locksmiths, pipe fitters, structural assessment specialists, and engineer draftsman. Sustainment is another subcategory of FSRM. This subcategory contains costs like consumable supplies, emergency services, tools and safety items, fire suppression, grease traps, and inspections. Restoration and modernization is the third subcategory under the FSRM costs. Restoration and modernization costs include items, such as the construction or alteration of facilities to meet higher standards, as well as replacement work to restore facilities. The fourth cost subcategory under FSRM is the Headquarters Marine Corps (HQMC) projects. These cost are generated by projects dictated by HQMC to be completed at the depot (A. Smelko, personal communication, April 27, 2015 and May 12, 2015).

Base operations is comprised of a number of different costs. MCRD San Diego has additional costs under the base operations category that MCRD Parris Island does not. The proximity to Marine Corps Air Station (MCAS) Beaufort to Parris Island allows for the use of Marine Corps Community Services (MCCS) versus having to fund its own. MCRD San Diego has its own MCCS. Therefore, it has all the costs associated with it. MCCS costs includes MCCS Uniform Funding and Management (UFM), which funds events, such as air shows. MCCS costs also contain civilian labor, management fees, and indirect support. These costs give MCCS the ability to provide services, such as family care, behavioral health, Semper Fit, and other community type services (A. Smelko, personal communication, April 27, 2015 and May 12, 2015). For a more detailed list of costs, see Appendix B.

Civilian labor is another component of base operations. Examples of civilian labor in this subcategory are religious ministries, financial and personnel resource management personnel, information management personnel, physical security personnel, and freight operations personnel who assist with relocations. Utilities are another cost that falls under the base operations umbrella. Utilities consist of gas, steam, electric, water, and sewage. The comptroller building is another subcategory cost of base operations. Some examples of the various types of activities that fall under this cost line item are the comptroller,

headquarters staff for the Commanding General, community planner and liaison, IPAC, and USMC non-appropriated funds audit service. The cost associated with the Assistant Chief of Staff's G6 (AC/S 6) are included in the base operations subcategory. The AC/S G6 office encompasses items, such as wireless services, data center, repairs and subscriptions, data domain, and base telephone (A. Smelko, personal communication, April 27, 2015 and May 12, 2015).

Environmental civilian labor is a component of the base operations costs category. The environmental program cost is separate from the labor cost. Hazardous material disposal, supply and materials, lab analysis, and water testing are examples of costs that fall under the environmental program subcategory. Grounds maintenance, refuse collection, pest control, and tree trimming are also costs that fall under the base operations subcategory (A. Smelko, personal communication, April 27, 2015 and May 12, 2015).

The cost associated with the Assistant Chief of Staff G3 (AC/S G3) are included in the base operations subcategory. The AC/S G3 office consists of costs, such as combat camera production and support, depot band supplies and instruments, and the office supplies and materials required for the operations office to function. The Property Control Office (PCO) is another cost under the base operations subcategory. PCO supports the Marines with non-deployable equipment. PCO Garrison Property, PSE, collateral equipment (CE) and food preparation are other costs included in the base operations subcategory. Temporary additional duty costs fall under the base operations category. The Drug Demand Reduction (DDR) program assists in education of DOD and military personnel in the risks of both prescription and illicit drug use (Office of the Under Secretary for Personnel and Readiness, 2015). DDR is a cost considered part of the base operations costs subcategory (A. Smelko, personal communication, April 27, 2015 and May 15, 2015).

Recruit training is the next category of costs for MCRD San Diego. Civilian labor in direct support of the recruits or those responsible for training of recruits falls under this category. Like Parris Island, civilian labor in this category includes personnel, such as the transportation assistant, human resources assistants, physical fitness advisors, and

administrative assistants. WFTBn is another cost in this category that includes recruit laundry, individual combat equipment (ICE), ordnance and weapons maintenance, and fuel. As a part of this category, uniform alterations includes those alterations required for the recruits' initial uniform issue. Recruit laundry and linen replacement is another cost that falls under the recruit training category. Recruit administrative branch, as a part of the recruit training category, consists of the costs of materials and supplies to support the office. PSE and armory costs are included in the recruit training category. RTR like Parris Island is in this category and includes items, such as barracks gear, Marine Corps Martial Arts Program (MCMAP) gear, gym equipment, and uniform items. Athletic trainer is another cost that is included in recruit training. Athletic trainer costs includes equipment and durable supplies. Chaplain cost is also included in the recruit training category (A. Smelko, personal communication, April 27, 2015 and May 15, 2015).

Other costs included in the recruit training category are: Assistant Chief of Staff G6 (AC/S G6) includes costs for multifunction devices for the RTR and WFTBn, and the combat camera reproduction device. AC/S G3 includes combat camera support, printing and reproduction support for the RTR, WFTBn, and Drill Instructor (DI) School. Drill instructor organizational property (DIOP) and supply is included. An additional cost to the normal transportation category is the vehicle support cost. The vehicle support cost supports WFTBn vehicles and the movement of recruits to Camp Pendleton for training. Temporary additional duty costs as, well as custodial services costs, are also included (A. Smelko, personal communication, April 27, 2015 and May 15, 2015).

MCRD San Diego and MCRD Parris Island have costs parallel between the two depots, but not all costs are parallel. MCRD Parris Island does not incur the same MCCS expenses that MCRD San Diego does. MCRD San Diego also has the additional transportation expense for the transportation of the recruits to Camp Pendleton for their second run training. MCRD San Diego does not have a rifle range or a facility to conduct the Crucible on site. For that reason, the recruits are transported to and from Camp Pendleton two times during their basic training. Although both depots experience many of the same named costs, there are some differences.

B. ALTERNATIVE 2 RESULTS

Alternative 2 includes the consolidation of all UMSC recruit training at MCRD Parris Island, and the closure of MCRD San Diego. The comparison of costs between the Status Quo and Alternative 2 provided the ability to classify each cost as relevant, irrelevant, or sunk costs. Although sunk costs are irrelevant, the distinction enables researchers that follow a better understanding of each cost. This action has all five categories of costs tied to it: closure, construction, FSRM, base operations, and recruit training. Those costs consist of the three identified by the Status Quo plus closure and construction costs.

1. Relevant Costs

Closure costs for MCRD San Diego are all relevant. Environmental cleanup is one cost included in the closure costs. This cost includes labor, as well as the materials required to bring the facility up to the Environmental Protection Agency's (EPA) standards. Compliance with the EPA's guidelines is required before the facility can be sold or turned over to the local government. Civilian severance packages are another cost included in the base closure category. This cost is for those civilian jobs no longer needed due to the base closure or the civilians who do not desire to move to another DOD job. Permanent change of station (PSC) costs are also included. These costs include the movement of military supplies, furniture, equipment, and other military items that need to be transported to the consolidation location. Real property maintenance is the improvement or maintenance done to a property to bring it up to a usable condition. This cost is also part of the closure costs. The closing of a base also requires a staff to oversee the transition process and to ensure all the laws and guidelines are being met throughout the multi-year process. This cost is also a part of the closure costs. The movement of all military personnel and their families is included in the closure costs category. All the costs in this category are relevant for this decision. None of the costs existed prior to the consideration of Alternative 2 and are therefore relevant (Department of Defense, 2014).

This alternative also requires the relocation of the Western Recruiting Region's Commanding General (CG) and his staff. The costs associated with this movement are

relevant. As was the case with the relocation of the military personnel from MCRD San Diego to MCRD Parris Island, all PCS costs and costs associated with movement of office equipment and other military equipment are relevant.

All construction costs associated with Alternative 2 are relevant. The construction costs are tied to the need for an increase recruit capacity. The construction costs would consist of items like labor, materials, and permits (Department of Defense, 2014). This action could also require the acquisition of additional land. The cost did not exist prior in the Status Quo; therefore, they are incremental or relevant.

The majority of FSRM for MCRD San Diego are relevant. Those relevant FSRM costs include the majority of the civilian labor, sustainment activities, restoration, and modernization. These costs all begin the process as a fixed cost during the transition process because some of the facilities on the depot will be required to be improved to a better working condition for turnover or sale. As the transition process continues, the jobs that fall under this category will become obsolete, which makes them variable in the long run. This long-run behavior makes them relevant in the decision-making process.

MCRD San Diego and MCRD Parris Island base operations costs are relevant. The MCRD San Diego base operations costs will be relevant because as the depot begins the transition process, the costs will no longer be required. The civilian labor and all the required support staff will be moved or terminated, which causes a change in the costs that makes all the costs associated with them relevant. The utilities costs are relevant to the decision-making process because they will no longer be needed at MCRD San Diego and they will likely increase at MCRD Parris Island due to the increase in personnel. The Building 31 requirements as a whole are relevant. Examples of relevant Building 31 costs are centralized material and supply support, the finance office, and the vehicle accident repair entity. AC/S G3 and AC/S G6 costs at the whole level behave as a relevant costs. The environmental civilian labor and the environmental program costs are both relevant costs under this subcategory. Both environmental costs will remain throughout the closure process, but in the long run. will go away. Based on the long-run behavior for both environmental cost categories are relevant. The grounds maintenance costs will be eliminated with the closure of MCRD San Diego. The grounds maintenance costs for

MCRD Parris Island will likely increase with the additional infrastructure; therefore, increasing the grounds makes them both relevant. The Property Control Office is a cost that would not exist with the closure of the depot in San Diego and is thus a relevant cost. The four categories of MCCS costs would no longer be required with the closing of MCRD San Diego and are relevant costs in this decision process. The base operations costs for MCRD Parris Island are all affected by the decision, which also causes an increase in requirements. The increase in recruits trained at the depot causes the base operations requirements to change. Thus, those costs under the Status Quo that would behave as a fixed cost would now behave in a variable cost manner with the influx. This incremental change in costs defines it as relevant for this decision. For a more detailed list, see Appendix C.

The recruit training cost category for both MCRD San Diego and MCRD Parris Island will be relevant as a whole category. Civilian labor for both depots would change. The MCRD San Diego civilian labor would be eliminated as the facility ceases training recruits. MCRD Parris Island would have an anticipated increase with the increase of recruits trained at the depot; thus, increasing support requirements of both the recruits and the active duty personnel directly involved in their training. WFTBn at both depots would see the same change in costs, as seen with the civilian labor costs. Uniform alterations, recruit laundry and linen replacement, and the recruit administrative branch would also follow the changes of the two previous examples. Vehicle support costs would change for this alternative. The need to move recruits from MCRD San Diego to Camp Pendleton no longer would exist, which makes the vehicle support cost relevant. Both AC/S G6 and AC/S G3 costs, which are part of the recruit training category, meet the relevant costs definition. The consolidation of recruits at Parris Island would cause the support costs to shift from the Western Recruiting Region to the Eastern Recruiting Region. The combination of these two requirements provides an economy of effort that changes the overall requirement, which makes it relevant. Custodial services for MCRD San Diego are relevant based on the fact that these services will no longer be needed. The recruit training cost category for both depots are relevant as a whole. The number of recruits being trained at MCRD Parris Island would increase with the consolidation. This increase

causes the majority of the recruit training costs to change, which makes the category of costs as a whole relevant to the decision process.

Costs from all five categories are represented under the relevant cost definition for Alternative 2. Although not every cost under each category is relevant, the changes that did occur between the two alternatives made each category relevant to the decision.

2. Irrelevant Costs

The irrelevant costs associated with Alternative 2 come from the three cost categories seen in the Status Quo alternative. Although the FSRM, base operations, and recruit training categories all as a whole behaved in a manner that classified them as relevant; they all have irrelevant elements.

The base operations category encompasses very few costs irrelevant to the decision between the two alternatives. The base operations costs directly linked to the support of the Western Recruiting Region and not shared with the recruit training costs are irrelevant. The recruiting region will still be required to continue its mission from a different location. The costs associated with the CG and his staff in support of the recruiting region are not relevant to the decision between these two alternatives.

The recruit training cost category, although it changes as a whole, still has elements within the category that do not change between the two alternatives. The RTR costs for both depots would see the same requirements as whole with the augmentation from MCRD San Diego to MCRD Parris Island. The projected behavior is that the cost would remain the same. The total throughput of recruits is not expected to change, which makes the cost irrelevant. The PCO 782 gear and personnel support equipment costs would behave in a similar manner. The costs would remain the same based on the stable throughput levels of recruits. DIOP and supply is still a necessity with the consolidation of the two facilities, which makes the cost irrelevant. Temporary additional duty (TAD) costs are still going to exist with the consolidation, as well as the athletic trainer costs, which makes them both irrelevant for this decision. The USMC as whole will still be training the same number of recruits annually. Thus, the requirements for the direct

support supplies will remain fixed, which therefore makes them irrelevant. For a more detailed list see Appendix C.

3. Sunk Costs

The sunk costs attributed to Alterative 2 are those attributed to a previous decision. Projects that went through the acquisition process and have signed contracts are sunk costs. The decision was made prior to the decision between the two alternatives, which makes it a sunk cost, and therefore, irrelevant. The demolition of an old barracks to make way for the construction of a new barracks would be an example of this type of project. Due to the time that it takes such projects to go through the bidding process, it is possible that the decision will still require the work to be completed. The decision is not in the decision maker's scope of influence and is a sunk cost at this point.

C. ALTERNATIVE 3 RESULTS

1. Relevant Costs

The relevant costs attributed to Alternative 3 include costs from the five categories: closure, construction, FSRM, base operations, and recruit training. Alternative 3 includes the consolidation of all recruit training at MCRD San Diego. This alternative also includes closing MCRD Parris Island and relocating any non-recruit training activities to either MCAS Beaufort or Camp Lejeune.

The closure cost category elements are relevant to this decision. The PCS moves for all active duty members and their families are included in this category. The additional environmental costs to restore MCRD Parris Island in accordance with the EPA's guidelines are also relevant. Severance packages and the transport of government property from MCRD Parris Island to MCRD San Diego are also included in this cost category (Department of Defense, 2014).

The construction category costs are all relevant for this alternative. The infrastructure requirements increase would require new facilities to be constructed. The construction would not be limited to the depot but would also include base housing, as

well. Construction costs include plans, permits, engineers, labor, and materials (Department of Defense, 2014).

The FSRM costs relevant to this decision for this alternative include civilian labor for both depots, sustainment for both depots, and restoration and modernization for MCRD Parris Island. The change in costs for civilian labor is attributed to the requirements for an increase for infrastructure at MCRD San Diego and the requirement loss at MCRD Parris Island. The sustainment cost will change at both facilities based on the same reason.

Base operations costs behave similarly to the base operations costs in Alternative 2 in reverse. The civilian labor, utilities, Building 31, garrison property, PSE, CE, and FPSE costs will all vary with the increased number of personnel on the depot and the termination of the requirement at Parris Island. All these costs vary based on the number of personnel supported, which makes them all relevant to this decision. AC/S G3 and G6 would behave in the same manner as the utilities. MCCS UFM, civilian labor, management fees, and indirect support would all vary at MCRD San Diego with the increased number of support personnel and their families who would be consolidated with this alternative.

Recruit training costs for this alternative behave in a variable manner. Civilian labor, recruit administrative branch, vehicle support, custodial services, and Chaplain support will all vary based on the increased number of personnel at MCRD San Diego and will no longer be required at MCRD Parris Island. The recruit training support costs are variable between the two alternatives because efficiencies are gained with all recruit training occurring in one location.

2. Irrelevant Costs

The irrelevant costs attributed to Alternative 3 are associated with the three cost categories from the Status Quo alternative. Restoration and modernization, and HQMC projects costs are the FSRM costs for MCRD San Diego that will remain the same. These costs are not contingent upon the number of recruits that the depot trains in a year, and are therefore, stable in behavior. The base operations category costs that remain

unchanged with the consolidation at MCRD San Diego are those that can be directly linked to the CG of the Eastern Recruiting Region. The grounds maintenance, pest, and tree costs would behave in a fixed manner, which makes them irrelevant. The DDR program costs would be consolidated from both depots to one and would not change over all, which then makes irrelevant.

The recruit training cost category includes costs that would not change between alternatives. Although efficiencies would be gained under this cost, the actual requirements for direct support training equipment that fall under the RTR cost would remain. As stated in Alternative 2, the total throughput of recruits is not expected to change in this decision, which makes the cost irrelevant. The PCO 782 gear and PSE costs would behave in the same way. The costs remain steady based on the assumption that throughput levels of recruits would remain constant. DIOP and supply is still a necessity with the consolidation of the two facilities. The costs would be combined and remain, which makes the costs irrelevant. Recruit uniform alterations would behave the same as it did prior to the comparison. TAD costs are still going to exist with the consolidation, as well as the athletic trainer costs, which makes them both irrelevant for this decision. The USMC as whole will still be training the same number of recruits annually, which makes the requirements for the direct support supplies fixed, and therefore, makes them irrelevant. For a more detailed list, see Appendix D.

3. Sunk Costs

The sunk costs attributed to Alternative 3 are linked to those HQMC projects already committed.

D. ALTERNATIVE 4 RESULTS

Alternative 4 encompasses the construction of a new recruit depot in the central part of the United States. This alternative also involves closing both MCRD Parris Island and MCRD San Diego. The majority of the costs associated with this alternative are relevant. This alternative does include costs that fall under the irrelevant and sunk categories.

1. Relevant Costs

Costs from all five categories are included in the relevant cost category for this alternative: Closure, construction, FSRM, base operations, and recruit training. The FSRM costs included in the relevant cost category under Alternative 4 are civilian labor for both MCRD Parris Island and MCRD San Diego, and both categories of sustainment costs. Although modernization and restoration will be required to bring the depots up to standard for sale or turnover, the costs in the long run are still relevant.

Base Closure costs are relevant in this comparison. This alternative includes closing both MCRD Parris Island and MCRD San Diego. All costs associated with closing the two facilities are a change to the Status Quo and are relevant. These costs include civilian severance packages for both depots, the labor required to complete and oversee the transition, PCS costs, environmental cleanup, and transporting USMC property from the two depots to the new location (Department of Defense, 2014).

The construction cost category is relevant in this comparison. This alternative would include the acquisition of land, architectural design costs, construction, material, and labor costs (Department of Defense, 2014). All these subcategory costs did not exist in Alternative 1 and are in incremental change in the movement to Alternative 4, and are therefore, relevant.

Base operations costs from both depots are relevant as a whole. The consolidation of both facilities in the central part of the United States allow for economies of scale. The civilian labor required to run both MCRD San Diego and MCRD Parris Island are relevant for this decision. Although a need for civilians in the base operations category exists to provide the various services, the number as a whole would decline. The utilities cost is relevant in this decision. The exact change in behavior cannot be immediately determined; however, with the shutdown of the other two facilities, the cost will change in one way or another. As stated with the civilian labor, the supplies required to run the various offices associated with base operations will change with the combining of forces between the two locations into one new facility. The unification of the operations and

communications costs would cause a change in both costs, which makes them both relevant.

The base operations costs associated with environmental labor and programs differ between the two alternatives. Both MCRD Parris Island and MCRD San Diego environmental costs will be terminated once the facilities are turned over or sold. The grounds maintenance, refuse, and pest control costs would be terminated with the closing of the two current depots. The new depot would require the same identified cost; however, the projected cost would differ from the current costs based on a single location rather than two. Thus, a variance occurs with the PCO office going from two to one at the new facility. All MCCS MCRD San Diego costs are relevant. The costs are no longer required with the consolidation at a single facility. Even though the new facility would have MCCS operations, the cost would vary based on the increased number of personnel at the new depot, which causes an incremental change in the cost. Requirements for services and personnel will be changed when the depots are combined at one new location. This combination allows for economy of scale. With all the recruits being trained at one facility, the requirements change. A requirement for two Provost Marshall's office no longer exists; thus, only one is needed. The costs seen as fixed overhead in the Status Quo alternative change with the comparison to Alternative 4. For a more detailed list, see Appendix E.

Recruit training category costs for MCRD San Diego and MCRD Parris Island will vary at some level with the consolidation. The civilian labor costs change under this alternative. Although the billets will exist with the consolidation of the facilities, the number required to complete the support mission will change. The Recruit Administrative Branch is a cost that will change with the combining of administrative support. Vehicle support for the second run to Camp Pendleton will no longer be a requirement and is relevant to this decision. The chaplain, armory, athletic trainer, and custodial costs will still exist at the new depot and will change due to the consolidation of forces. As the two depots combine forces, as is the case seen previously, gains in efficiency will occur. All the recruit training being conducted at one location will allow for economy of scale to occur.

2. Irrelevant Costs

The irrelevant costs ascribed to Alternative 4 come from all five cost categories. Some FSRM costs are classified as sunk costs, and therefore, irrelevant to this decision. The base operations costs see the biggest decline in irrelevant cost in comparison to the two previously analyzed alternatives. This decline is attributed to the consolidation at one location, which will consolidate costs.

The base operations category has costs that are irrelevant to the decision between Alternative 1 and Alternative 4. As was the case with the previous two alternatives, the base operations costs that are directly linked to the support of the Western Recruiting Region and Eastern Recruiting Region not in support of the recruit training costs are irrelevant. The recruiting region will still be required to continue its mission from a different location. The costs associated with the CG and his staff in support of the recruiting region remain irrelevant to the decision between these two alternatives.

The recruit training cost category includes three main cost subcategories irrelevant to the decision between the alternatives. The total throughput of recruits is not dependent on the decision of whether they are being trained at MCRD Parris Island, MCRD San Diego, or a new depot. The number of recruits be trained annually will not change. Based on that lack of change, the PCO 782 Gear, PSE, DIOP, and supply is still a necessity with the consolidation of the two facilities, which makes the cost irrelevant. TAD costs are still going to exist with the consolidation, as well as the athletic trainer costs. For a more detailed list, see Appendix V.

3. Sunk Costs

Sunk costs encompass the FSRM costs obligated prior to the decision.

E. SUMMARY OF FINDINGS

The comparison of the four alternatives provided the necessary information to identify which costs are relevant to the decision of the future of USMC recruit training depots. Relevant cost analysis is a tool that can be utilized in the decision process when choosing between two alternatives. At a first glimpse, the decision makers could make

the assumption that consolidating at one facility whether it be one of the two existing or a new depot means the automatic savings of the expenses of the closed depot. Through the analysis of the comparison of the two alternatives, not all costs are relevant to the decision process. The costs that would be considered overhead behaved differently between the two alternatives. The consolidation of support establishments causes their costs to change between the alternatives. This change in behavior made the costs relevant to the decision.

The analysis showed the variation of behavior of costs between alternatives. The understanding of which costs are relevant to the decision is important; however, it is just as important to know which costs are not relevant and why. It allows the decision maker to consider the alternatives through a clearer lens by looking at a more accurate picture of what the factors are in the decision. This understanding enables a more fiscally responsible decision to be made based on accurate information. As seen with previous iterations of BRAC, inaccurate cost projections lead to a lack of trust by Congress, which in turn, creates hurdles for DOD decision makers in their efforts to gain efficiency. The best outcome may or may not be to consolidate. With the use of this tool, it is much more likely that a more informed decision will be made.

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V. DISCUSSION

A. CLOSING THOUGHTS AND CONSIDERATIONS

The fiscally constrained environment is not going away. The requirement for the DOD to operate in an efficient and effective manner is enduring. The ability to understand costs, how they behave, and their relevance to a decision between alternatives is vital in this environment. The microscope through which Congress analyzes the financial decisions of the DOD is only getting stronger. The last iteration of BRAC caused skepticism with Congress in regards to the DOD's ability to provide accurate projections. The March 2003 GAO report states, "Overall onetime implementation costs for BRAC 2005 grew from $21 billion originally estimated by the BRAC Commission in 2005 to about $35.1 billion, an increase of about $14.1 billion, or 67%" (GAO, 2013, p. 3). The DOD and its services must have the ability to provide realistic and accurate cost projections to Congress and other senior level decision makers to garner their support. The use of relevant cost analysis gives the decision maker a more accurate understanding of the financial factors involved in a decision. It will enable the DOD, and more specially the USMC, to provide a better explanation of the implications of a decision between two or more alternatives.

B. RECOMMENDATIONS

The comparison and identification of costs in this thesis provide decision makers with an example of the utility of relevant cost analysis. The leadership of the USMC faces complex decisions regularly. The use of this tool will allow them to have greater confidence in their decisions. The use of relevant cost analysis allows the leadership to see a clearer picture and better understand the cost variables involved in each decision. Relevant cost analysis could be applied to both acquisition decisions as the precursor to a CBA or to a manpower decision in determining the task organization of the force.

This thesis also highlights that further research is needed to ensure that the inputs into the system are on level ground with a semblance of uniformity for each location. Additionally, the research indicates a void in the accuracy of estimates for the various

parts of the BRAC process. While the BRAC is just one example of the DOD's issues with cost identification, it highlights a greater lack of understanding of the relevance of the concepts utility.

C. IMPLICATIONS FOR FURTHER RESEARCH

The results of this thesis establish a foundation for further research either to justify the current layout of USMC recruit training or to pursue one of the alternatives. This complex problem is comprised of many facets that include recruit travel based on location, facility capacity and throughput cycle, and construction costs for the establishment of a new facility. Each of these items plays a significant role in the decision-making process. Each facet represents a substantial study in its own right.

Consolidation of the two existing recruit depots at one centrally located facility has multiple cost variables. Facility location has a large impact as a result of transportation costs. An optimization study of new locations based on travel costs is an option to gain a better understanding of the true cost of consolidation. Land acquisition and construction costs vary from location to location. A study of costs associated with the acquisition of enough land to construct a single point location for recruit training would also be instrumental in the decision-making process. Once the optimization and the acquisition costs are narrowed down, a CBA would provide decision makers with the financial implications of each of the alternatives.

The recommendations for further research were specific to the two recruit depot question. However, the process is not strictly tied to this example. The decision-making process laid out in this research is applicable to any decision between two or more alternatives. The process begins with the identification of alternatives or options, and then transitions to the identification and classification of costs. From that point, the required analysis is required to ensure all the necessary cost data is available to conduct the CBA. This process will give decision makers a more defined picture on which to base their decision. The key to this whole process is having the right inputs. The accurate identification and classification of costs is paramount to have a CBA worth using. Relevant cost analysis is an extremely valuable tool and should be utilized when valid.

APPENDIX A. ALTERNATIVE 1, PARRIS ISLAND

Facilities Sustainment, Restoration, and Modernization (FSRM)

- Civilian Labor
- Sustainment
- Restoration and Modernization
- HQMC Projects

Base Operations

- Civilian Labor
- Utilities
- Financial and Personnel Resource Management
- Information Management
- Environmental
- Facilities Services and Management
- Command and Staff Support
- Training and Operations Support
- Supply Operations
- Garrison Transportation & Management
- Unaccompanied Personnel Housing
- Regional Contracting Office
- Personnel Support Equipment (PSE)
- Food Services
- Safety
- Antiterrorism Program

Recruit Training

- Civilian Labor
- Weapons Field Training Battalion (WFTBn)
- Uniform Alterations
- Recruit Training Regiment
- Recruit Administrative Center
- PCO 782 Gear and Personal Support Equipment (PSE)
- Information Management
- Garrison Transportation and Management
- Organizational Clothing and Supply
- Training and Operations Support
- Religious Ministries
- Armory
- Witness Fees

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APPENDIX B. ALTERNATIVE 1, MCRD SAN DIEGO

Facilities Sustainment, Restoration, & Modernization

- Civilian Labor
- Sustainment
- Restoration and Modernization
- HQMC Projects

Base Operations

- Civilian Labor
- Utilities
- Administrative Building
- AC/S G6
- AC/S G6 Phones Request
- Environmental Civilian Labor
- Environmental Program
- Grounds Maintenance
- Refuse
- Pest Control
- Tree Maintenance
- AC/S G3
- Property Control Office (PCO)
- Garrison Property
- PSE
- CE
- FPSE
- Temporary Additional Duty
- Drug Demand Reduction Program
- MCCS UFM
- MCCS Civilian Labor
- MCCS Management Fees
- MCCS Indirect Support
- Facilities Maintenance Real Property Audit
- CG Reserve

Recruit Training

- Civilian Labor
- Weapons Field Training Battalion (WFTBn)
- Uniform Alterations

- Recruit Laundry and Linen Replacement
- Recruit Training Regiment
- PCO 782 Gear and Personal Support Equipment (PSE)
- AC/S G6
- Vehicle Support (2d run/ WFTBn)
- Drill Instructor Organizational Property (DIOP) and Supply
- AC/S G3
- Washers and Dryers
- Chaplain, Armory
- Temporary Additional Duty
- Custodial Services (SMIP and Theater)
- CG Reserve

APPENDIX C. ALTERNATIVE 2

Relevant

Closure:

- All associated with MCRD San Diego
    - Environmental Cleanup
    - Severance Packages for civilian labor
    - PCS
    - Transportation of Things
    - Real Property Maintenance
    - Transition Management Staff
    - Commanding General Western Region relocation

Construction:

- All associated with MCRD Parris Island:
    - Materials
    - Labor
    - Permits
    - Plans
    - Equipment
    - Land

FRSM:

- Civilian Labor (both depots)
- Sustainment Activities (both depots)
- Restoration and Modernization (SD)

Base Operations:

- Civilian Labor (both depots)
- Utilities (both depots)
- Administrative Building (SD)
- AC/S G6 (SD)
- AC/S G6 Phone (SD)
- Environmental Civilian Labor (SD)
- Environmental Program (SD)
- Grounds Maintenance (SD)
- AC/S G3 (SD)
- PCO (SD)

- MCCS UFM (SD)
- MCCS Civilian Labor (SD)
- MCCS Management Fees (SD)
- MCCS Indirect Support (SD)
- Facilities Maintenance Real Property Audit (SD)
- Commanding General's Reserve (SD)
- Garrison Transportation Management (PI)
- Training Operations Support (PI)
- Unaccompanied Personnel Housing (PI)
- Food Services (PI)
- Safety (PI)

Recruit Training:

- Civilian Labor (both depots)
- Weapons Field Training Battalion (both depots)
- Recruit Administrative Branch (both depots)
- Uniform Alterations (both depots)
- AC/S G6 (SD)
- AC/S G3 (SD)
- Vehicle Support (2d Run) (SD)
- Washers and Dryers (SD)
- Chaplain (both depots)
- Armory (both depots)
- Athletic Trainer (both depots)
- Custodial Services (SD)
- CG Reserve (SD)
- Training Operations Support (PI)
- Witness Fees (PI)

Irrelevant

FSRM:

- HQMC Projects that have already been contracted

Base Operations:

- CG costs that are not directly linked to recruit training

Recruit Training:

- PCO 782 Gear and Personal Support Equipment (both depots)
- DIOP and Supply
- TAD
- Recruit Training Regiment (both depots)

Sunk Costs:

- Any projects already allocated for, base pay for all active duty members

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APPENDIX D. ALTERNATIVE 3

Relevant Closure:

- All associated with MCRD Parris Island:
    - Environmental Cleanup
    - Severance Packages for civilian labor
    - PCS
    - Transportation of Things
    - Real Property Maintenance
    - Transition Management Staff
    - Commanding General Western Region relocation

Construction:

- All associated with MCRD San Diego:
    - Materials
    - Labor
    - Permits
    - Plans
    - Equipment
    - Land

FRSM:

- Civilian Labor (both depots)
- Sustainment Activities (both depots)
- Restoration and Modernization (PI)
- Base Operations:
- Civilian Labor (both depots)
- Utilities (both depots)
- Administrative Building (SD)
- AC/S G6 (SD)
- AC/S G6 Phone (SD)
- Environmental Civilian Labor (SD)
- Environmental Program (SD)
- AC/S G3 (SD)
- PCO (SD)
- MCCS UFM (SD)
- MCCS Civilian Labor (SD)
- MCCS Management Fees (SD)
- MCCS Indirect Support (SD)
- Garrison Transportation Management (PI)

- Training Operations Support (PI)
- Unaccompanied Personnel Housing (PI)
- Food Services (PI)
- Safety (PI)
- Recruit Training:
- Civilian Labor (both depots)
- Weapons Field Training Battalion (both depots)
- Recruit Administrative Branch (both depots)
- Uniform Alterations (both depots)
- AC/S G6 (SD), AC/S G3 (SD)
- Vehicle Support (2d Run) (SD)
- Washers and Dryers (SD)
- Chaplain (both depots)
- Armory (both depots)
- Athletic Trainer (both depots)
- Custodial Services (SD)
- Training Operations Support (PI)
- Witness Fees (PI)

Irrelevant
FSRM:

- HQMC Projects that have already been contracted

Base Operations:

- Grounds Maintenance for Parris Island
- Recruit Training:
- PCO 782 Gear and Personal Support Equipment (both depots)
- DIOP & Supply
- TAD
- Recruit Training Regiment (both depots)

Sunk Costs:

- Any projects already allocated for, base pay for all active duty members

APPENDIX E. ALTERNATIVE 4

Relevant Closure:

- All associated with MCRD San Diego and MCRD Parris Island:
    - Environmental Cleanup
    - Severance Packages for civilian labor
    - PCS
    - Transportation of Things
    - Real Property Maintenance
    - Transition Management Staff
    - Commanding General Western Recruiting Region relocation and Commanding General Recruiting Region relocation

Construction:

All associated with a new depot:

- Materials
- Labor
- Permits
- Plans
- Equipment
- Land

FRSM:

- Civilian Labor (both depots)
- Sustainment Activities (both depots)
- Restoration and Modernization (both depots)

Base Operations:

- Civilian Labor (PI)
- Utilities (PI)
- Financial and Personnel Resource Management (PI)
- Information Management (PI)
- Environmental (PI)
- Facilities Services and Management (PI)
- Command & Staff Support (PI)
- Training and Operations Support (PI)
- Supply Operations (PI)
- Garrison Transportation & Management (PI)
- Unaccompanied Personnel Housing (PI)
- Regional Contracting Office (PI)
- Personnel Support Equipment (PSE) (PI)

- Food Services (PI)
- Safety (PI)
- Antiterrorism Program (PI)
- Civilian Labor (SD)
- Utilities (SD)
- Administrative Building (SD)
- AC/S G6 (SD)
- AC/S G6 Phones Request (SD)
- Environmental Civilian Labor (SD)
- Environmental Program (SD)
- Grounds Maintenance (SD)
- Refuse(SD)
- Pest Control (SD)
- Tree Maintenance (SD)
- AC/S G3 (SD)
- Property Control Office (PCO)(SD)
- Garrison Property (SD)
- PSE (SD)
- CE (SD)
- FPSE (SD)
- Temporary Additional Duty (SD)
- Drug Demand Reduction Program (SD)
- MCCS UFM (SD)
- MCCS Civilian Labor (SD)
- MCCS Management Fees (SD)
- MCCS Indirect Support (SD)
- Facilities Maintenance Real Property Audit (SD)
- CG Reserve (SD)

Recruit Training:

- Civilian Labor(PI)
- Weapons Field Training Battalion (WFTBn) (PI)
- Uniform Alterations (PI)
- Recruit Administrative Center (PI)
- PCO 782 Gear and Personal Support Equipment (PSE) (PI)
- Information Management
- Garrison Transportation and Management (PI)
- Organizational Clothing and Supply (PI)
- Training and Operations Support (PI)
- Religious Ministries (PI)
- Armory (PI)
- Witness Fees(PI)
- Civilian Labor (SD)

- Weapons Field Training Battalion (WFTBn) (SD)
- Uniform Alterations (SD)
- Recruit Laundry and Linen Replacement (SD)
- PCO 782 Gear and Personal Support Equipment (PSE) (SD)
- AC/S G6 (SD)
- Vehicle Support (2d run/ WFTBn) (SD)
- Drill Instructor Organizational Property (DIOP) and Supply (SD)
- AC/S G3 (SD)
- Washers and Dryers (SD)
- Chaplain (SD)
- Armory (SD)
- Temporary Additional Duty (SD)
- Custodial Services (SMIP and Theater) (SD)
- CG Reserve (SD)

Irrelevant

FSRM:

- HQMC Projects that have already been contracted for both facilities

Base Operations:

- Closing both facilities will cause all baser operations cost to fluctuate

Recruit Training:

- PCO 782 Gear and Personal Support Equipment (both depots)
- DIOP & Supply
- TAD
- Recruit Training Regiment (both depots)

Sunk Costs:

- Any projects already allocated for, base pay for all active duty member

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LIST OF REFERENCES

Albright, T. L., Ingram, R. W., & Hill. J. W. (2006). *Managerial accounting information for decisions.* Mason, OH: Thomson South-Western.

Caplan, D. (2006). Management accounting concepts and techniques part 2: Microeconomic foundations of management accounting. Retrieved from http://classes.bus.oregonstate.edu/Spring-06/ba422/Management%20Accounting%20Chapter%203.htm

Caplan, D. (2010, November). Management accounting concepts and techniques: Chapter 3 relevant cost analysis. Retrieved from http://denniscaplan.fatcow.com/Chapter03.htm

Department of Defense. (2014). *DoD base realignment and closure BRAC rounds (BRAC 1988, 1991, 1993, 1995 & 2005) executive summary fiscal year (FY) 2015 budget estimates.* Arlington, VA: Author.

Feickert, A. (2014, January 9). *Marine Corps drawdown, force structure initiatives, and roles and missions*: *Background and issues for Congress* (CRS Report No. R43355). Washington, DC: Congressional Research Service. Retrieved from https://www.fas.org/sgp/crs/natsec/R43355.pdf

Ferrara, W. L. (1961, August). Are direct costs relevant costs? *Journal of Accountancy*, *11*, 61–62.

General Accounting Office. (1993). *Military bases analysis of DoD's recommendations and selection process for closures and realignments* (GAO/NSIAD-93-173). Washington, DC: Author. Retrieved from http://www.gao.gov/assets/160/153215.pdf

Government Accountability Office. (2013). *Military bases opportunities exist to improve future base realignment and closure rounds* (GAO-13-149). Washington, DC: Author. Retrieved from http://www.gao.gov/assets/660/652805.pdf

Horngren C. T., Datar, S. M., Foster, G., Rajan, M. V., & Ittner, C. M. (2009). *Cost accounting—A managerial emphasis.* London: Pearson Education.

Ishmael O., & Osamor, I. P. (2012, June). Relevant cost concept: A glaring dichotomy-accountant's perspective. *Australian Journal of Business and Management Research*, *2*(03), 25–33.

Kemper, V. P. (1993). An analysis of the cost of base realignment actions (COBRA) model. Retrieved from http://hdl.handle.net/10945/39702; http://hdl.handle.net/10945/39702

Marine Corps Recruit Depot San Diego. Depot history. (n.d.). Retrieved from http://www.mcrdsd.marines.mil/About/DepotHistory.aspx

Noreen E., Brewer, P., & Garrison, R. (2011). *Managerial accounting for managers.* New York: McGraw-Hill Irwin.

Office of the Deputy Under Secretary of Defense (Installations and Environment). (2006, March 1). Base redevelopment and realignment manual. Retrieved from http://www.defense.gov/brac/pdf/4165-66-M_BRRM.PDF

Office of the Under Secretary of Defense (Comptroller)/CFO. (2015). *Fiscal year 2016 budget request* [PowerPoint slides]. Retrieved from http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2016/FY2016_Budget_Request.pdf

Richardson, K. (2004). *COBRA users manual.* Retrieved from http://www.defense.gov/brac/minutes/cobra/COBRAUsersManual.pdf

Rose, A. (1988, October). Tutorial: Incremental analysis in capital budgeting. *Cost Engineering*, *30*(10), 13–15.

Sorenson, D. S. (2007). *Military base closure: A reference handbook.* Westport, CT: Praeger Security International.

United States Navy. (2015, May 22). Navy personnel. Retrieved from http://www.navy.mil/navydata/nav_legacy.asp?id=146

USMC . (n.d.). Marine Corps recruit depot eastern recruiting region: History of Parris Island. Retrieved from http://www.mcrdpi.marines.mil/About/HistoryofParrisIsland.aspx

Wynne, M. W. (2005). *2005 base closure and realignment selection criteria.* Washington DC: Department of Defense.

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