

Enabling Operational Reach and Endurance: The Use of Contractors During World War II

A Monograph

by

MAJ Jason W. Schultz
United States Army



School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas

2015

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 26-05-2016		2. REPORT TYPE SAMS Monograph		3. DATES COVERED (From - To) JUL 2015 - MAY 2016	
4. TITLE AND SUBTITLE Enabling Operational Reach and Endurance: The Use of Contractors During World War II				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) MAJ Jason W. Schultz				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Advanced Military Studies Program				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The Army's force reduction over recent years causes concern due to the continuation of commitments in a complex global environment. The current Army Operating Concept does not address the use or incorporation of contractors to augment force structure in the event of a militarized response, overlooking historical dependency on contractors to enable operational reach. The Army's use of contractors during World War II provides key insights as to how to rapidly source and integrate contractors into operations during a full mobilization of the nation's resources. Contractors served as substitutes for Soldiers or civilian employees, and provided key benefits such as flexibility, expansibility, and long-term cost savings associated with a lack of pension and other benefit obligations. These fact are directly applicable today.					
15. SUBJECT TERMS Contracting, Private Military and Security Companies,					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			MAJ Jason W. Schultz
(U)	(U)	(U)	(U)	51	19b. TELEPHONE NUMBER (Include area code) 205-706-5560

Reset

Monograph Approval Page

Name of Candidate: MAJ Jason W. Schultz

Monograph Title: Enabling Operational Reach and Endurance: The Use of Contractors During World War II

Approved by:

_____, Monograph Director
Bruce Stanley, PhD

_____, Seminar Leader
Kevin P. Romano, COL, SC

_____, Director, School of Advanced Military Studies
Henry A. Arnold III, COL, IN

Accepted this 26th day of May 2016 by:

_____, Director, Graduate Degree Programs
Robert F. Baumann, PhD

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other government agency. (References to this study should include the foregoing statement.)

Fair use determination or copyright permission has been obtained for the inclusion of pictures, maps, graphics, and any other works incorporated into this manuscript. A work of the United States Government is not subject to copyright, however further publication or sale of copyrighted images is not permissible.

Abstract

Enabling Operational Reach and Endurance: The Use of Contractors During World War II, by MAJ Jason W. Schultz, United States Army, 51 pages.

The Army's force reduction over recent years causes concern due to the continuation of commitments in a complex global environment. The current Army Operating Concept does not address the use or incorporation of contractors to augment force structure in the event of a militarized response, overlooking historical dependency on contractors to enable operational reach. The Army's use of contractors during World War II provides key insights as to how to rapidly source and integrate contractors into operations during a full mobilization of the nation's resources. Contractors served as substitutes for Soldiers or civilian employees, and provided key benefits such as flexibility, expansibility, and long-term cost savings associated with a lack of pension and other benefit obligations. These principles are directly applicable today.

Table of Contents

Acknowledgements.....	v
Acronyms.....	vi
Introduction.....	1
Definition of Terms.....	4
Theoretical Framework.....	6
Research Questions.....	7
Limitations and Delimitations.....	8
Assumptions.....	8
Organization of Study.....	9
Literature Review.....	9
Methodology.....	18
World War II Case Study.....	23
Findings and Analysis.....	39
Conclusion.....	42
Bibliography.....	47

Acknowledgements

I am grateful to Dr. Bruce Stanley for his support through this process, and I would like to thank him for his insights, guidance, and direction concerning contractors on the battlefield. I would like to thank COL Kevin Romano for his positive leadership and mentorship that kept me focused in class and in relation to this monograph. I would also like to thank my wife, Rebecca, for being a sounding board and for her support while I attended this course.

Acronyms

ADP	Army Doctrine Publication
ADRP	Army Doctrine Reference Publication
AOC	Army Operating Concept
ATTP	Army Tactics and Techniques Publication
ISIS	Islamic State in Iraq and Syria
JP	Joint Publication
PMSC	Private Military and Security Contractor

Introduction

In July 2015, the United States Army announced that it would cut an additional 40,000 soldiers in order to arrive at an end strength of approximately 450,000 soldiers by 2017, the smallest force size since World War II.¹ While the reduction in size impacts the combat arms, “there will also be cuts to enabler forces like logistics, signal corps, and military police units across the entire Army.”² The reduction in force will result in degraded overall capacity for the US Army, which will affect its ability to project forces, maintain operational tempo, and operational reach. In the instance of a global event requiring a militarized response, the reduction in forces will likely result in a capability gap. Historically, the United States used private military and security companies (PMSCs) as economic substitutes to fill capability gaps, and the use of PMSCs has increased over time. This trend is likely to continue with the ongoing reduction of forces based on the general theory of supply and demand. Given these factors, Army planners must anticipate requirements, identify capability gaps in advance, and incorporate PMSC personnel into operations in order to meet campaign goals. The Army routinely augments sustainment functions with contracted PMSC support; however, this traditional definition should be expanded to include security and training aspects as well.

Military leaders are concerned about the reliance on PMSCs to fill what would otherwise be military roles. This is significant because the US Army is reducing forces at a time instability is rising throughout much of the world, and the potential for conflict is increasing. “The chief

¹ Dan Lamothe, “Army Details How It Will Cut to Its Smallest Size Since Before World War II,” *The Washington Post*, July 9, 2015, accessed November 17, 2015, <https://www.washingtonpost.com/news/checkpoint/wp/2015/07/09/army-details-how-it-will-cut-to-its-smallest-size-since-before-world-war-ii/>.

² Jamie Crawford, “Army Announces Force Reduction of 40,000 Troops,” *CNNPolitics.com*, July 9, 2015, accessed November 17, 2015, <http://www.cnn.com/2015/07/09/politics/army-announces-force-reduction-40000-troops/>.

cauldron of contemporary disorder is the Middle East.”³ What was hailed as a model intervention in Libya has led to a failed state with no clear path to resolution.⁴ Regional powers Saudi Arabia, Turkey, and Iran are all involved in the ongoing conflict in Yemen, increasing the potential for widespread conflict in the region.⁵ The ongoing nuclear negotiations with Iran allude to the potential for war, as President Barack Obama stated “either the issue of Iran obtaining a nuclear weapon is resolved diplomatically through a negotiation or it’s resolved through force, through war.”⁶ Additionally, there is ongoing civil war in Syria and “terrorist groups such as Islamic State (also called ISIS) and al Qaeda present a grave threat to U.S. national security.”⁷ While these potential threats are all located in the Middle East, they do not exist in a vacuum; significant potential for conflict is emerging worldwide.

The current international order faces many threats outside the Middle East. In recent years, Russia initially demonstrated its willingness to use force in Georgia.⁸ This has expanded to Ukraine, which “may be the most pronounced, but not the last, manifestation of what could well

³ Richard N. Haass, "The Unraveling," *Foreign Affairs*, August 16, 2015, accessed August 16, 2015, <https://www.foreignaffairs.com/articles/united-states/2014-10-20/unraveling>.

⁴ Alan J. Kuperman, "Obama's Libya Debacle," *Foreign Affairs*, August 16, 2015, accessed August 16, 2015, <https://www.foreignaffairs.com/articles/libya/2015-02-16/obamas-libya-debacle>.

⁵ Aaron Stein, "Turkey's Yemen Dilemma," *Foreign Affairs*, August 16, 2015, accessed August 16, 2015, <https://www.foreignaffairs.com/articles/turkey/2015-04-07/turkeys-yemen-dilemma>.

⁶ President Barack Obama quoted in Greg Jaffe, “Obama Says Only Alternative to a Nuclear Deal with Iran Is War,” *Washington Post*, July 15, 2015, accessed August 16, 2015, http://www.washingtonpost.com/politics/obamas-defense-of-the-iran-deal-comes-with-a-tough-love-message/2015/07/15/a7614b4a-2b04-11e5-bd33-395c05608059_story.html

⁷ Chris Murphy, Brian Schatz, and Martin Heinrich, "Principles for a Progressive Foreign Policy," *Foreign Affairs*, August 16, 2015, accessed August 16, 2015, <https://www.foreignaffairs.com/articles/2015-06-08/principles-progressive-foreign-policy>.

⁸ Charles King, "The Five-Day War," *Foreign Affairs*, August 16, 2015, accessed August 16, 2015, <https://www.foreignaffairs.com/articles/russia-fsu/2008-11-01/five-day-war>.

be a project of Russian or, rather, Soviet restoration.”⁹ China’s increasing assertiveness and economic strengths raise concerns over the increased potential for conflict in the Pacific.

“Beijing’s expanding territorial claims threaten virtually every country along what is commonly known as ‘the first island chain,’ encompassing parts of Japan, the Philippines, and Taiwan—all of which Washington is obligated to protect.”¹⁰ North Korea continues is belligerence, recently threatening the US homeland in regards to US participation in an annual military exercise in South Korea.¹¹ In any of these cases, to include those previously listed in the Middle East, US involvement of any significant level would require the use of PMSCs to enable the achievement of objectives.

“Superpowers such as the United States cannot go to war without contractors in places like Iraq and Afghanistan,” and PMSC personnel equaled or exceeded the level of troops in theater during these particular conflicts.¹² The level of contracted PMSC use is a strong indication of significant capability gaps between operational requirements and US force structure available. At the end of major combat operations in Iraq and Afghanistan, the US Army began reducing forces in accordance with historical tendency. This raises concern over the ability of the US Army to respond to a militarized dispute or conflict, maintain operational agility, and to sustain operations in conditions of extended lines of communications and austere environments. Given the trends in contracted PMSC use, the US Army will likely remain dependent upon PMSCs to augment force structure into the future.

⁹ Haass, "The Unraveling."

¹⁰ Andrew F. Krepinevich, Jr., "How to Deter China." *Foreign Affairs*, August 16, 2015, accessed August 16, 2015, <https://www.foreignaffairs.com/articles/china/2015-02-16/how-deter-china>.

¹¹ Kevin Conlon, "North Korea Threatens to Attack U.S.," CNN.com, accessed August 16, 2015, <http://www.cnn.com/2015/08/15/world/north-korea-threats/>.

¹² Sean McFate, *The Modern Mercenary: Private Armies and What They Mean for World Order* (Oxford, United Kingdom: Oxford University Press, 2014), xii.

This study will demonstrate that in the event of a militarized dispute or conflict, demand for PMSCs to augment US Army capabilities will increase as the available supply of military personnel is exhausted. Operating under the conditions of a monopsony, which will be defined later in this paper, PMSCs will be available to serve as economic substitutes for military capabilities within required timelines to enable operational agility. The US Army will be able to incorporate PMSCs and their employees into force structures within required timelines to enable operations. Additionally, the US Army will be able to terminate contracted services at the end of the campaign or operation in a timely manner. Cost controls, while important, will not be the overriding theme throughout the contracting process.

Definition of Terms

There are no universally accepted terms for the companies that provide contracted military services or their employees. Recent authors differ in the terms they use. In his study of contractors, Dr. Bruce Stanley uses the term *private military contractor* for firms, and either *private security contractor* or *private contractor* for individuals or groups of individuals.¹³ In another study of contractors, Sean McFate uses the term *private military company* for those providing the equivalent of combat arms functions, *security support companies* for those providing the equivalent of combat service functions, and *general contractors* for those providing combat service support functions.¹⁴ For the purposes of this study, the term *private military and security companies* (PMSC) is used in accordance with the International Committee of the Red Cross's definition as found in the 2008 Montreux Document, which states:

“PMSCs” are private business entities that provide military and/or security services, irrespective of how they describe themselves. Military and security services include, in particular, armed guarding and protection of persons and objects, such as convoys, buildings and other places; maintenance and operation of weapons systems; prisoner

¹³ Bruce E. Stanley, *Outsourcing Security: Private Military Contractors and U.S. Foreign Policy* (Lincoln, NB: Potomac Books, an imprint of the University of Nebraska Press, 2015), 7.

¹⁴ McFate, *The Modern Mercenary: Private Armies and What They Mean for World Order*, 13-18.

detention; and advice to or training of local forces and security personnel.”¹⁵

Accordingly, this study will refer to individuals or groups of individuals working for PMSCs as *PMSC personnel* or *personnel of PMSCs* in accordance with the Montreux Document. This is the definition used by international legal scholar Hannah Tonkin in her work concerning the ability of traditional international law to accommodate PMSCs, and the term has credibility due to the United States being a signatory of the Montreux Document.¹⁶

While the Army uses PMSCs as substitutes for other purposes, they heavily serve support sustainment activities. “Any pair of goods that perform similar functions” and that “compete with one another, such as Shell and Exxon gas” are substitutes.¹⁷ This is true of contractors for the purposes of this study, as they perform functions that would otherwise be performed by service members. “Sustainment is the provision of logistics, personnel services, and health support necessary to maintain operations until successful mission completion.”¹⁸ Logistics activities include maintenance, transportation, supply, field services, distribution, operational contract support, and general engineering support.¹⁹ For the purposes of this study, requirements are those goods or services that are necessary for mission activities and operations as identified during a

¹⁵ United Nations General Assembly and Security Council, A/63/467-S/2008/636, “The Montreux Document on Pertinent International Obligations and Good Practices for States Related to Operations of Private Military and Security Companies During Armed Conflict,” September 17, 2008, accessed August 16, 2008, https://www.eda.admin.ch/content/dam/eda/en/documents/topics/Montreux-document-4_en.pdf.

¹⁶ Hannah Tonkin, *State Control Over Private Military and Security Companies in Armed Conflict*, Cambridge Studies in International and Comparative Law (Cambridge, United Kingdom: Cambridge University Press, 2011), 35.

¹⁷ Andrew Mell and Oliver Walker, *The Rough Guide to Economics*, Rough Guides (London: Rough Guides Ltd, 2014), 58; Walter J. Wessels, *Economics*, 5th ed., Business Review Books (Hauppauge, NY: Barron, 2012), 54.

¹⁸ Army Doctrinal Publication (ADP) 4-0, *Sustainment* (Washington, DC: Government Printing Office, 2012), 1.

¹⁹ *Ibid.*, 1-2.

requirements determination.²⁰ Capabilities refer to the resources that are available which can be allocated to a particular task.²¹ A capability gap is the difference between the identified requirements and available capabilities.

Theoretical Framework

The Army and the government use contractors under the conditions of a monopsony within the theoretical framework of the law of supply and demand. The law of supply and demand describes the “perpetual tendency toward equilibrium”²² of the quantity of an item supplied at a given price. Supply and demand is “one of the basic models used in economics. It is built on the logical assumption that buyers want to obtain goods and services at as little cost as is reasonable, and sellers want to obtain as high a price as is reasonable.”²³ The conditions of a monopsony occur because there is “a resource market situation in which there is a single buyer of a specific factor of production.”²⁴ In this case, the government is the single buyer who demands a good or service at as little price as possible, and PMSCs are those entities that want to supply the good or service at as high a price as possible.

Involvement by the United States in a militarized dispute or conflict will likely generate capability gaps, leading to a demand for goods and services provided by PMSCs. While cost is a consideration, “the acquisition of the real means for war is therefore the primary problem of war

²⁰ Army Tactics, Techniques, and Procedures (ATTP) 4-10, *Operational Contract Support Tactics, Techniques, and Procedures* (Washington, DC: Government Printing Office, 2011), 4-1.

²¹ Army Doctrinal Reference Publication (ADRP) 5-0, *The Operations Process* (Washington, DC: Government Printing Office, 2012), 3-2.

²² Robert H. Haveman and Kenyon A. Knopf, *The Market System*, 2d ed. (New York, NY: John Wiley and Sons, Inc., 1970), 149.

²³ Donald W. Moffat, *Economics Dictionary*, 2nd ed. (New York, NY: Elsevier, 1983), 176. Emphasis in original.

²⁴ Philip W. Bell and Michael P. Todaro, *Economic Theory: an Integrated Text with Special Reference to Tropical Africa and Other Developing Areas* (Nairobi, Kenya: Oxford University Press, 1969), 224.

economics”²⁵ and considerations for setting the conditions for successful operations override initial cost concerns. This is an important consideration due to the nature of the marketplace, as the demand generated is not part of ongoing market dynamics. “The monopsonist must consider that he will incur an additional cost over and above the higher price that has to be paid to the marginal factor in order to persuade the market to supply to supply”²⁶ the increased demand for specific goods and services.

Research Questions

This study utilizes George and Bennet’s structured, focused comparison method to examine the use of PMSCs during World War II. ²⁷ Based on a review of the literature, this study will examine three hypotheses:

Hypothesis 1: In the event of a militarized dispute or conflict requiring a military response, demand for private military contractors will increase as a result of a US military capability gap.

Hypothesis 2: PMSCs with the required specialties or services will be available to serve as substitutes within required timelines.

Hypothesis 3: The US Army will be able to incorporate PMSC support in a timely manner, the services provided will be adequate, and the contract will be terminated at the conclusion of an operation or campaign in a manner that facilitates controlled costs.

The following questions guide the research and comparison in this case:

²⁵ Economists, Brown University, *Introduction to War Economics*, 2 vols., edited by Alfred C. Neal (Chicago, IL: Richard D. Irwin, 1942), 4.

²⁶ Bell and Todaro, *Economic Theory: an Integrated Text with Special Reference to Tropical Africa and Other Developing Areas*, 225.

²⁷ Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences*, BCSIA Studies in International Security (Cambridge, MA: MIT Press, 2005), 67-72.

1. What capability gaps arose due to the conflict, and were these gaps related to a previous reduction of force in light of perceived threats?
2. Had force size changed significantly leading up to the conflict?
3. How many contractors were used, and what was the relationship to the force size used?
4. What functions were performed by PMSCs and how do these relate to one another in proportionally?
5. What was the duration of the conflict and how did this impact the PMSCs?
6. Were services transitioned from military to contractors or vice versa during the operation? If so, was this related to a change in the size of the military during the conflict?
7. What was the nature of the conflict (high intensity vs. low intensity, linear vs. non-linear battlefield) and how did this affect contractor use?

Limitations and Delimitations

This case study relies on unclassified information from published commercial military history works, official government historical documents, and case studies. There is sufficient information available to construct the case. This study will focus exclusively on contractor use during World War II, ranging from 1939 -1946. This study will focus on numbers of contractors and the functions they provided in comparison with the military force available. It will also seek to identify novel uses of contractors. This study will not perform detailed cost comparisons or generate models to describe or estimate the number of contractors used for a militarized dispute or conflict. Additionally, this study will not examine the morality of employing PMSCs in lieu of uniformed military personnel.

Assumptions

The basic premise of this study is that the entrance of the United States into World War II generated extensive capability gaps that could only be rapidly filled by PMSCs and their personnel. PMSC providers were able to serve as substitutes in accordance with timelines that enabled the planning and execution of campaigns. The services provided by PMSCs were

adequate and acceptable. At the conclusion of the campaign, the government was able to terminate the contracts in a timely manner.

Organization of the Study

This study is composed of seven sections in a logical sequence: the introduction, a literature review, a methodology, a case study of World War II, case study findings and analysis, and the conclusion. The literature review provides an overview of the currently available literature concerning the study and provides the underlying theoretical foundation for the case. The methodology introduces the case and provides the framework for evaluation. The case study of PMSC use during World War II provides a detailed examination of the seven research questions. The findings and analysis compares the results of the research questions with the three hypotheses. The conclusion discusses the implications of the case on policy and recommends further research for the Army.

Literature Review

This section discusses the employment of modern economic theory as the theoretical lens for examining the use of private military and security companies (PMSCs) as substitutes for uniformed military personnel. Modern economic theory is an excellent lens for analyzing PMSC use because military forces are typically bound by economic considerations and economic trends in a similar fashion to other services provided by the government. According to international relations scholar Richard Haas, “national security does not come cheap. Money – lots of it – is required to field a capable military with a broad range of missions.”²⁸ Based on the public’s reduced support for military spending, the overall trend for military spending in relation to gross national product has fallen since World War II with an overall expectation of an accompanying

²⁸ Richard N. Haass, *Foreign Policy Begins at Home: The Case for Putting America's House in Order* (New York, NY: Basic Books, 2013), 6.

“peace dividend” that can be applied to other priorities.²⁹ These economic considerations accompanied other economic trends, particularly the move towards the privatization of government services.

The trend towards privatization gained momentum during the 1990s, and was expected to “produce a panoply of significant improvements: boosting the efficiency and quality of remaining government activities, reducing taxes, and shrinking the size of government.”³⁰ This view exemplifies the “belief in the superiority of the marketplace in fulfilling organizational or public needs”³¹ that rose to prevalence. “Thus, when leaders faced new challenges and thought about how to improve their operations, whether in garbage collection, prisons, or in military support, they began to look in the private sphere.”³² While Robert Mandel notes that “complexities surrounding private contractors impede gauging their overall value,”³³ he notes the assertion that PMSCs save money because “private contractors are not eligible for pensions, retirement benefits, and long-term health care the way government soldiers are.”³⁴ Because of the economic basis found in each of these factors, economic theory is an excellent lens for examining PMSC use.

²⁹ Michelle R. Garfinkel, “The Economic Consequences of Reducing Military Spending,” Federal Reserve Bank of St. Louis *Review*, Fourth Quarter 1990, pp. 47-58, accessed September 13, 2015, https://research.stlouisfed.org/publications/review/90/11/Spending_Nov_Dec1990.pdf.

³⁰ John B. Goodman and Gary W. Loveman, “Does Privatization Serve the Public Interest?,” *Harvard Business Review*, November – December 1991, accessed September 13, 2015, <https://hbr.org/1991/11/does-privatization-serve-the-public-interest#>.

³¹ Peter W. Singer. *Corporate Warriors: The Rise of the Privatized Military Industry* (Cornell Studies in Security Affairs. Ithaca, NY: Cornell University Press, 2003), 66.

³² *Ibid.*, 66.

³³ Robert Mandel, “Overview of American Government Expeditionary Operations Utilizing Private Contractors,” in *Contractors and War: The Transformation of US Expeditionary Operations*, edited by Christopher Kinsey and Malcolm H. Patterson, 13-35 (Stanford, CA: Stanford University Press, 2012), 18.

³⁴ *Ibid.*, 16-17.

At its core, economics is “the study of how people choose to allocate their scarce resources.”³⁵ In this case, the US government is the “people” and scarcity applies to the competition between government requirements and initiatives that entail “wanting more than can be satisfied with available resources.”³⁶ Because the government has finite resources, it must choose between spending alternatives which generates opportunity costs. Opportunity costs are “the value of the next best alternative use of that time or asset which is foregone,”³⁷ meaning that money spent on the military generate opportunity costs in terms of other government services and initiatives that would otherwise receive funds committed to the military. These relationships play out at two levels of analysis, known as macroeconomics and microeconomics. “Macroeconomics studies the economy as a whole,”³⁸ which can be regional, national, or supra-national.³⁹ “Microeconomics is concerned with the behavior of economic actors such as consumers, households, or firms within individual markets.”⁴⁰ The government acts as a consumer when it employs PMSCs, as PMSCs serve as economic substitutes for uniformed military personnel.

Economic substitutes are those goods or services that “perform similar functions”⁴¹ and can therefore be used in the place of one another. In the absence of a normative statement, or “a moral claim about *what should be*,”⁴² costs interact with individual tastes and preferences in order for the consumer to choose between substitutes. While it is beyond the scope of this study to

³⁵ Walter J. Wessels, *Economics*, 5th ed., Business Review Books (Hauppauge, NY: Barron, 2012), 2.

³⁶ Ibid, 3.

³⁷ Mell and Walker, *The Rough Guide to Economics*, 15.

³⁸ Wessels, 101.

³⁹ Mell and Walker, *The Rough Guide to Economics*, 4.

⁴⁰ Ibid., 4.

⁴¹ Ibid., 58.

⁴² Wessels, 2. Emphasis in original.

determine the morality of using PMSCs in lieu of uniformed personnel, it is worth noting that normative considerations do play a role in determining which functions the government outsources to PMSCs. These factors all interact in relation to supply and demand.

Basic economic models focus on the relationship of supply to demand. The law of demand states that the “quantity demanded and price are inversely related – more is demanded at a lower price, less at a higher price (other things being equal).”⁴³ In the case of PMSCs, the demand is generated due to the capability gaps that are generated through various factors such as force reductions or an increase in need brought forth by an event requiring a militarized response. Private Military Security Corporations provide the supply of services that the government uses to fill those capability gaps. The law of supply states that the “quantity supplied and price usually are directly related – more is supplied at a higher price, less at a lower price (other things being equal).”⁴⁴ The US government has a heavy influence on the interaction of supply and demand in this model because it is the dominant firm in a monopsony.

A monopsony occurs when there is “a firm so dominant in a factor market that its hiring decisions affect the input’s market price.”⁴⁵ Based on legal constraints and utility, the US government is the sole source of demand in the United States, and arguably worldwide. Based on the model of supply and demand under the conditions of a monopsony, the price for employing PMSCs increases as the government contracts with more of these entities. Additionally, PMSCs are corporate entities driven by the profit motive to maximize profits, which are revenues minus costs incurred.⁴⁶ The demand and price points are ultimately driven by the government’s understanding of the costs of using uniformed service members in relation to using PMSCs.

⁴³ Wessels, *Economics*, 32.

⁴⁴ *Ibid.*, 32.

⁴⁵ *Ibid.*, 506.

⁴⁶ Mell and Walker, *The Rough Guide to Economics*, 63-64.

These economic factors are found throughout the prevailing literature concerning the use of PMSCs.

Key researchers acknowledge that the marketplace for PMSCs is a monopsony. According to contracting scholar Sean McFate, “the market is not truly free; it is a monopsony, where there is a predominant buyer – the United States – and many sellers.”⁴⁷ However, McFate posits that this situation will evolve into a free market for PMSCs in the near future, with other countries around the world using PMSCs to fill needs normally considered military in nature.⁴⁸ Additionally, he asserts that “supply can create demand in the context of security, and this will also diversify the marketplace.”⁴⁹ While McFate is primarily concerned with substitutes for combat arms personnel, his economic components are applicable to a wide variety of situations. The implications of a globalized, free market for PMSC personnel, particularly those who employ weapons as a primary service, are critical considerations for US military leaders. Changes of this nature will undoubtedly have an effect on the operational approach for military leaders who may find themselves fighting a PMSC force.

Contracting scholar Bruce Stanley argues that PMSCs operate under a protected monopsony, as the “U.S. military exhibits monopsonist behavior as its need increases.”⁵⁰ His work focuses on five hypotheses concerning PMCSs in relation to supply and demand while maintaining “that the private security industry fills vacuums created when the U.S. government does not have the means or the will to provide domestic and international security.”⁵¹ Stanley’s

⁴⁷ McFate, *The Modern Mercenary: Private Armies and What They Mean for World Order*, 4.

⁴⁸ *Ibid.*, 4-7.

⁴⁹ *Ibid.*, 5.

⁵⁰ Stanley, *Outsourcing Security: Private Military Contractors and U.S. Foreign Policy*, 33.

⁵¹ *Ibid.*, 41.

extensive study found strong evidence that PMSC use increases “when the size of a national military decreases,” “when the number of military disputes, engagements, and conflicts increases,” “when the duration of military conflict increases,” and “when there is a decrease in bureaucratic controls and regulations.”⁵² These relationships between PMSC use and factors affecting supply and demand are important to understanding the rise of contracted forces in relation to uniformed service members. When accompanied by other trends, such as the move towards privatization, a more complete picture of the phenomenon of PMSC use arises.

Hannah Tonkin observes that “the modern private security industry emerged in the early 1990s,”⁵³ which aligns with the overall trend towards privatization of government services outlined by Goodman and Loveman.⁵⁴ As part of a historical survey in the use of contracted forces, she notes that “even as states privatised [sic] many core public services during the latter half of the twentieth century, the military continued to be regarded as *qualitatively* different and thus remained one of the last bastions of government monopoly.”⁵⁵ Taking a mostly legalistic view of PMSCs, these are components of her overall assertion that “the state-centred [sic] frameworks of traditional international law are in fact sufficiently flexible to accommodate the modern private security industry,” and that the use of PMSCs have “not undermined the role of the state *per se* in regulating contemporary armed conflict.”⁵⁶ In her findings, Tonkin concludes that international law provides a sufficient basis to regulate PMSC use and that, for the most part, states still have the capacity and influence to manage their obligations for PMSCs on the

⁵² Ibid., 166; 167; 167-168; 168.

⁵³ Tonkin, *State Control Over Private Military and Security Companies in Armed Conflict*, 13.

⁵⁴ Goodman and Loveman, “Does Privatization Serve the Public Interest?”

⁵⁵ Tonkin, 7. Emphasis in original.

⁵⁶ Ibid., 2; 3. Emphasis in original.

international stage.⁵⁷ The ability of the existing legal framework is a critical aspect as governments outsource otherwise military functions based on capability gaps.

Capability gaps arise when demand for a service exceed the supply of the service. These conditions are likely to arise when a government reduces its military force, when there is an unanticipated scenario requiring a militarized response, or when there are constraints on troop levels. David Shearer states that “increases in private military forces have also often coincided with the end of a period of conflict which saw standing armies reduced.”⁵⁸ P.W. Singer concurs, writing that “the proliferation of private military forces coincided with rising conditions of instability. These included extreme changes in political orders or when standing armies were reduced at the end of a war.”⁵⁹ In discussing situations of reduced forces and steady or increasing demand, Frank Camm and Victoria Greenfield state that when there is “a constraint on military manpower, the Army naturally turns to other sources to expand its ability to deal with expanded workload.”⁶⁰ The US experience in Iraq exemplifies this basic trend, as previous force reductions combined with operational needs created capability gaps. Allison Stanger identifies the need for contractors in stating “without contractors, who supply the vast majority of the support services in Iraq in order to free up military personnel for combat roles, the Bush administration would have had to institute a draft to wage its war there.”⁶¹ Additionally, governments may choose to

⁵⁷ Tonkin, *State Control Over Private Military and Security Companies in Armed Conflict*, 256-263.

⁵⁸ David Shearer, *Adelphi Paper*. Vol. 316, *Private Armies and Military Intervention* (Oxford, United Kingdom: Oxford University Press for the International Institute for Strategic Studies, 1998), 13.

⁵⁹ Singer, *Corporate Warriors: The Rise of the Privatized Military Industry*, 23.

⁶⁰ Frank A. Camm and Victoria A. Greenfield, *How Should the Army Use Contractors On the Battlefield? Assessing Comparative Risk in Sourcing Decisions* (Santa Monica, CA: Rand, 2005), 84.

⁶¹ Allison Stanger, *One Nation under Contract: The Outsourcing of American Power and the Future of Foreign Policy* (New Haven, NJ: Yale University Press, 2009), 10.

outsource military functions in a similar vein to other services “because of issues of cost, quality, efficiency, or changing conceptions of governmental duties.”⁶² This assumes that PMSCs are available to meet the demand.

Private military and security companies have historically shown the ability to provide services in a timely and responsive manner, simply put by Allison Stanger as “the enduring reality that contractors are always there when you need them.”⁶³ The contemporary environment is no different, as “the military privatization phenomenon means that military resources are now available on the open market, often at better prices and efficiencies than could be provided by individual clients.”⁶⁴ Sean McFate states that supply is readily available and is likely to grow with the U.S. withdrawals from Iraq and Afghanistan, and he further asserts that “supply can create demand in the context of security.”⁶⁵ In McFate’s view, the “United States is increasingly dependent upon the private military industry to deliver ‘victory’ in modern war,” and should be concerned that “many of the specialized skills needed for stability operations can now only be found in the private sector and are considered proprietary knowledge.”⁶⁶ In this crucial leap, PMSCs are not only available to meet the demand in a timely manner, they have found ways to specialize knowledge in order to make themselves indispensable to the military. This follows the expectations found in economics theory, which relates directly to the hypotheses proposed in this study.

⁶² Singer, *Corporate Warriors: The Rise of the Privatized Military Industry*, 7.

⁶³ Stanger, *One Nation under Contract: The Outsourcing of American Power and the Future of Foreign Policy*, 93.

⁶⁴ Singer, 171.

⁶⁵ McFate, *The Modern Mercenary: Private Armies and What They Mean for World Order*, 4-5.

⁶⁶ *Ibid.*, 96-97.

This study proposes three hypotheses related to the US military's use of PMSCs to enable operational agility. The first hypothesis states that in the event of a militarized dispute or conflict requiring a military response, demand for private military contractors will increase as a result of a US military gap. A review of literature supports this hypothesis, particularly in terms of the move towards privatization that has occurred during the recent decades as identified by Tonkin, Singer, and Goodman and Loveman.

The second hypothesis states that PMSCs with the required specialties or services will be available to serve as substitutes within required timelines. As economic actors, PMSCs must maintain the flexibility to respond to increased demand if they are to remain viable as substitutes. This is a crucial aspect of the reliance upon PMSCs to fulfill otherwise military functions. A review of literature indicates that PMSCs will have sufficient supply to rapidly fill increased demand, particularly with McFate's assertion that supply is readily available and likely to grow.⁶⁷ The moves to reduce force structures and privatize many roles within the military also increase supply responsiveness, which is captured by Shearer's assertion that the net result of these actions "is a sharp increase in expertise in the private sector."⁶⁸ The existing literature does identify risks associated with using PMSCs. Camm and Greenfield identified one such risk as "the contractor may not even maintain personnel and equipment under its direct control until a deployment mission is well enough defined to determine what resources it actually needs."⁶⁹ In this scenario, the PMSC is reliant upon the military to provide a sufficient description of what it needs in order for the PMSC to contract the required resources. This could potentially reduce responsiveness.

⁶⁷ McFate, *The Modern Mercenary: Private Armies and What They Mean for World Order*, 4-5.

⁶⁸ Shearer, *Adelphi Paper*, Vol. 316, *Private Armies and Military Intervention*, 27.

⁶⁹ Camm, and Greenfield. *How Should the Army Use Contractors On the Battlefield? Assessing Comparative Risk in Sourcing Decisions*, 192.

The third hypothesis states that the US Army will be able to incorporate PMSC support in time to enable operations, the services provided will be adequate, and the contract will be terminated at the conclusion of an operation or campaign in a manner that facilitates controlled costs. A review of literature indicates that this is a normal part of using PMSCs to fulfill otherwise military roles, and is facilitated by ongoing relationships and the large presence of former military personnel within PMSCs. Per David Shearer, “US companies have close links with the Department of Defense (DoD); many are suppliers to the military-industrial market.”⁷⁰ He additionally points out that “the links between military companies and the US defence [sic] establishment have seen former senior US administration officials and military personnel become company directors.”⁷¹ This indicates that many of those involved with integrating PMSCs within the military have experience with and detailed knowledge of the US military, which helps facilitate the integration process. In terms of adequate service, all indications are that PMSCs not only provide adequate services, but in some cases serve as the sole source of supply due to proprietary knowledge as indicated by McFate.⁷²

This section provided the logic for employing economic theory as an appropriate theoretical lens for examining PMSC use within the US military to enable operational agility. Private military and security companies are economic substitutes for otherwise military organizations, and operate within the conditions of a monopsony. This section demonstrated that there are pressures to reduce military forces to likewise reduce military budgets, and that the reductions in force corresponded with an increase in privatization of government services, to include the military. Additionally, the literature indicates that PMSCs, as substitutes, are able to supply resources to fill capability gaps in times of increased demand.

⁷⁰ Shearer, *Adelphi Paper*,. Vol. 316, *Private Armies and Military Intervention*, 34.

⁷¹ *Ibid.*, 35.

⁷² McFate, *The Modern Mercenary: Private Armies and What They Mean for World Order*, 4-5.

Methodology

The aim of this study is to demonstrate that in the event of a militarized dispute or conflict, demand for PMSCs to augment US Army capabilities will increase in accordance with the laws of supply and demand. Using the theoretical lens of economic theory, this study proposes three hypotheses to lead the examination of PMSC substitution for otherwise military activities. Government use of PMSCs during World War II, defined as the period of 1939 – 1946, serves as the case study for this research in support of the overall research objectives. The case study of World War II is significant and sufficient alone because of the rapid and massive mobilization of both military and PMSC resources and their employment during the conflict.

The case study approach is applicable for the purposes of this research because the research is observational in nature. According to Stephen Van Evera, “observational tests come in two varieties: large-*n* and case study,”⁷³ and the large-*n* cannot be used to conduct this research study due to applicable restraints. This study uses George and Bennett’s method of structured, focused comparison as the approach for examining the case in relation to the three hypotheses and seven associated research questions. This method allows for “general questions that reflect the research objective”⁷⁴ with “a theoretical focus appropriate for that objective.”⁷⁵ This method therefore enables the examination of a specific case through questions designed with the aim of examining specific attributes of the case. For this study, the hypotheses and questions concern PMSC use during World War II.

The first hypothesis stated that in the event of a militarized dispute or conflict requiring a military response, demand for private military contractors will increase as a result of a US military gap. Military responses draw resources from existing military manpower in order to fill

⁷³ Stephen Van Evera, *Guide to Methods for Students of Political Science* (Ithaca, NY: Cornell University Press, 1997), 50.

⁷⁴ George and Bennett, *Case Studies and Theory Development in the Social Sciences*, 68.

⁷⁵ *Ibid.*, 70.

operational needs. The researcher expected to find similarities between World War II and the contemporary period, specifically that demand increased for military contractors at the outset of conflict due to capability gaps.

The second hypothesis stated that PMSCs with the required specialties or services will be able to serve as substitutes within required timelines. In order to plan and execute a campaign, the military must have sufficient resources available. In the absence of organic military capabilities, PMSCs fill capability gaps. In order to be effective as economic substitutes, supply must be either readily available or have the ability to generate rapidly. The researcher expected to find that supply was available sufficiently to serve as substitutes within required timelines due to ongoing relationships and the presence of former military personnel.

The third hypothesis stated that the US Army will be able to incorporate PMSC support in time to enable operations, the services provided will be adequate, and the contract will be terminated at the conclusion of an operation or campaign in a manner that facilitates controlled costs. Assuming that supply was sufficient to fill demand, it remains vital that the US Army can incorporate PMSC support into the overall operation in terms of planning and execution. To truly be economic substitutes, the services provided by PMSCs must be adequate so as not to cause any operational delays. Finally, in order to justify the use of PMSCs over organic forces, the military must be able to terminate the contract once the need passes. The researcher expected to find that all three aspects of this hypothesis were fulfilled.

The study used seven focused questions to guide the research and data collection during the case study. The researcher used these questions to inform each of the three hypotheses. The first question asked what capability gaps arose due to the conflict, and were these gaps related to a previous reduction of force in light of perceived threats (or lack thereof). This question examines the capability gaps that were identified for fulfillment by PMSCs during the conflict. This question is also concerned with the relationship between the capability gap, force structure, and perceived threats. The researcher expected to find that significant capability gaps arose

during World War II, and that these were caused by inadequate force structure in relation to the perceived threats prior to the outset of conflict.

The second question asked whether the force size changed significantly leading up to the conflict. This question examined the relationship between force structure and its modifications prior to the conflict. The information gained from this question was useful for understanding the capability gaps in relation to force structure. The researcher expected to find that force structure was reduced in the decades leading up to World War II, despite the growth in global threats manifested in Germany and Japan.

The third question asked how many contractors were used, and what was the relationship to the size of the military force during the conflict. This enables the development of a ratio of PMSC personnel to military personnel during the conflict. This ratio helps generate an understanding of the extent of capability gaps that arose, and provides an understanding of additional labor requirements that must be generated to achieve success. The researcher expected to find a ratio of roughly one contractor for every seven military personnel.

The fourth question examines what functions were performed by PMSCs and how these related to one another proportionally. The specific functionalities provided by PMSCs is important to understanding those areas best suited for outsourcing to PMSCs. The researcher expected to find the preponderance of PMSC personnel filling services in combat support roles such as sustainment.

The fifth question examines the duration of the conflict and its impact on PMSCs. The ability of PMSCs to maintain operations and endure conflict is an important aspect of relying on PMSCs to fill otherwise military functions. The researcher expected to find PMSCs employed for the duration of World War II, and that they improved in terms of ability to provide services during the course of the war.

The sixth question examines whether services were transitioned from the military to contractors or vice versa during the war and how this related to any change in the size of the

military. PMSCs fill capability gaps. If the military mobilizes in mass, it may assume some functions that were previously filled by PMSCs, or it may elect to outsource more functions to PMSCs in an effort to focus its personnel on specific functions. The researcher expected to find that any combat-related functions performed by PMSCs eventually transferred to the military, and that the proportion of sustainment functions filled by PMSCs either remained the same or increased during the war.

The seventh question examines the nature of the conflict (high intensity vs. low intensity, linear vs. non-linear battlefield) and its effect on contractor use. PMSCs are not conventional combat troops, and tend to fill services in the sustainment realm. The researcher expected to increased PMSC use in the rear areas of high intensity, linear combat. The researcher also expected to find that PMSCs were distributed during low intensity, non-linear combat environments.

Data collection for this study was derived from historical literature and accounts. Primary sources include the Center of Military History's accounts of the US Army technical services in World War II. Historical literature includes works on specific instances such as the Flying Tigers, contractors on Wake Island, and the construction of the Alaska Highway. Other sources cover overall US military logistics with specific references to the World War II timeframe and the associated analysis of the events surrounding this case study.

The research analyzed the data empirically using the research questions as guides to determine support for the three research questions. While the research sought quantitative measurement as a primary means, it relied upon prevailing themes and outcomes in order to answer the research questions in areas where quantitative data was lacking. In all aspects, the available data was compared to the researcher's expectations to determine consistencies or inconsistencies between the observed and expected values.

This section described the approach used for this study and the use of the structured, focused comparison for analyzing the case. The study uses seven focused questions as the basis of

comparison for the three hypotheses. Data was collected using historical literature and accounts to answer the questions. Upon analysis, the data was compared to the anticipated outcomes for the research questions to determine if each hypothesis was supported, not supported, or if it resulted in a mixed outcome.

Case Study

This section examines private military and security company (PMSC) use during World War II to determine support for the proposed hypotheses. The case is relevant to contemporary times because the United States continues to reduce force structure at a time when worldwide threats have the potential to require a militarized response in multiple locations across the globe. During World War II, the mass mobilization of military manpower generated capability gaps which were filled by PMSCs. This section provides an overview of the case, addresses the structured-focused questions, and provides the analysis and findings in relation to the case.

During the period of time just prior to World War II, the United States military maintained a small force structure in relation to worldwide threats. Following World War I, the Army demobilized, as “congressional interest in funding the military faded.”⁷⁶ As a result, the Army reduced its size, dropping from a high of approximately 2.4 million officers and men to an aggregate strength of approximately 135,000 men by 1927.⁷⁷ According to Alan Gropman, “certainly none of the major World War II adversaries was less prepared for war in 1939 than the United States. There were fewer than 200,000 men in the Army, only 125,202 in the Navy, and fewer than 20,000 in the Marine Corps.”⁷⁸ The disposition of the armed forces stood in stark

⁷⁶ Michael R. Matheny, *Campaigns and Commanders*, vol. 28, *Carrying the War to the Enemy: American Operational Art to 1945* (Norman, OK: University of Oklahoma Press, 2011), 45.

⁷⁷ Russell F. Weigley, *History of the United States Army* (New York, NY: Macmillan Pub Co, 1967), 599.

⁷⁸ Alan L. Gropman, ed., *The Big 'L': American Logistics in World War II* (Washington, DC: National Defense University Press, 1997), 3.

contrast to both the initial set of requirements by US planners and by the final reality of the military mobilization during World War II. In terms of the initial estimates, US Army planners “envisaged the need of a U.S. Army of approximately 215 divisions”⁷⁹ due to both American military theory and “American optimism and confidence in the industrial machine to produce the military hardware and the faith of the military in the ability to raise, equip, train, and lead a large citizen army for offensive purposes.”⁸⁰

The difference between available military resources and estimated requirements generated a large capability gap that PMSCs filled. According to the Defense Procurement and Acquisition Policy website, the military used approximately 734,000 PMSC personnel, resulting in a ratio of one contractor for every seven of the roughly 5,400,000 military personnel employed in the war.⁸¹ These numbers fall short of the overall impact of contracted personnel, as they only represent the number of contractors utilized overseas. PMSCs also provided critical support on the domestic front, as requirements for training and outfitting military personnel grew exponentially as the services expanded rapidly. In the case of the US Army, it experienced “growth from barely 200,000 men at the beginning of 1940 to over 8,000,000 in 1945.”⁸² The other services experienced high growth rates that generated demand for PMSCs, which provided a wide range of goods and services. Transportation, construction, supply, ordnance, and aviation operations are areas that demonstrate the strategic and operational impact of PMSCs in relation to the war effort.

⁷⁹ Maurice Matloff, *Strategic Planning for Coalition Warfare: 1943-1944* (Washington: CMH, 2003), 11.

⁸⁰ Ibid.

⁸¹ “Civilians Contracted to Support Military Operations,” Defense Procurement and Acquisition Policy, accessed October 18, 2015, <http://www.acq.osd.mil/dpap/pacc/cc/history.html>.

⁸² Gropman, ed., *The Big 'L': American Logistics in World War II*, 205.

Private military and security companies provided transportation for the men and equipment which deployed from the United States to the theaters of war. The sheer mass of men and materiel combined with the geographic realities associated with the United States in relation to the location of combat led to a monumental problem in terms of transportation. The US Merchant Marines serve as an example of the use of contracted assets for transportation, because the primary mode of transportation during the period was by sea. “The Joint Army-Navy War Plans of 1941 assigned the Navy the responsibility for sea transportation in the event of war,”⁸³ and at the outset of the war the Navy lacked the manpower and ships to meet shipping demand as it remained focused on fleet support. To meet this need, the Navy turned to merchant shipping.⁸⁴ This bulk of this role was filled by the US Merchant Marines, and “most of the United States flag shipping in World War II was manned and the cargo, no matter how hazardous, was delivered by these civilian members of the ships’ crews.”⁸⁵ A 1946 War Shipping Administration, or WSA, report indicates that a seagoing force of approximately 250,000 men supported the effort and that “at the time of the requisition of the American Merchant Marine by the WSA in April 1942 the great majority of seagoing personnel were members of various maritime labor unions.”⁸⁶ Worries about the dependability of the crews were alleviated because the “relationship between unions and operators had been stabilized through contractual agreements for several years.”⁸⁷ For their efforts, “the total cargo lift from the United States between December 7, 1941, and the

⁸³ Gropman, ed., *The Big 'L': American Logistics in World War II*, 305.

⁸⁴ Ibid., 306.

⁸⁵ Jerome G. Peppers, *History of United States Military Logistics, 1935-1985: A Brief Review* (Huntsville, AL: Logistics Education Foundation Pub., 1988), 62.

⁸⁶ War Shipping Administration, “The United States Merchant Marine at War” (Washington, DC: War Shipping Administration, 1946), 64, accessed October 18, 2015: <http://www.marad.dot.gov/about-us/maritime-administration-history-program/historical-documents-and-resources/>.

⁸⁷ Ibid., 64.

capitulation of Japan was 268,252,000 long tons;”⁸⁸ and “approximately 75 percent was carried by ships of the WSA-controlled fleet.”⁸⁹

Civilian transportation augmentation provided the critical capability to ship equipment and supplies to the Soviet Union, which became dependent upon the United States for materiel support during World War II. “Weakened as she was industrially, Russia did not have the means to provide the vast quantities of supplies necessary to equip her armies for the task of rolling back the Germans.”⁹⁰ Wary of potential consequences, “Roosevelt feared that Stalin might seek a separate peace if he were not given substantial material aid.”⁹¹ The United States used several routes to supply the Soviet Union, including the Persian Gulf route. “The safest all-year route through the Persian Gulf was also the longest in mileage and ship turn-around time, but it nevertheless remained a military necessity because of the safety factor.”⁹² In order to use this route, the Allies relied on civilian contractors to augment US forces. “American troops were supplemented by Iranian civilian drivers.”⁹³ Robert Jones notes “the Motor Transport Service set up schools to train natives as mechanics, drivers, and interpreters. The obstacles to using native labor proved great, but the natives worked fairly well, considering the handicaps.”⁹⁴ In addition to transportation, the US army used civilians to augment construction.

⁸⁸ War Shipping Administration, “The United States Merchant Marine at War”, 9.

⁸⁹ Ibid.

⁹⁰ Robert H. Jones, *The Roads To Russia: United States Lend-Lease to the Soviet Union* (Norman, OK: University of Oklahoma Press, 1969), x.

⁹¹ Hubert P. Van Tuyl, *Feeding the Bear: American Aid to the Soviet Union, 1941-1945* (New York, NY: Greenwood Press, 1989), 73.

⁹² Jones, 84.

⁹³ Joseph Bykofsky and Harold Larson, *United States Army in World War II: The Technical Services, The Transportation Corps: Operations Overseas* (Washington, DC: Office of the Chief of Military History, 1957), 419.

⁹⁴ Jones, 203.

Construction, both domestically and overseas, proved to be a strategic consideration during World War II. The military required facilities, infrastructure, and a supporting industrial base in order to mobilize, train, equip, and deploy service members. Domestic construction requirements were as critical, if not more critical, than those overseas. “Logistically speaking, it is difficult to ignore the precedent position of construction activity in a large scale mobilization effort. Before troops can be trained, cantonments must be built; before navy vessels sail or aircraft fly, naval and air bases have to be constructed.”⁹⁵ PMSCs built cantonment areas and training facilities, worked on projects to expand the industrial base, and essentially developed the ordnance industry.⁹⁶ “By 1942 construction contractors employed 2.17 million civilian workers, up from 1.15 million in 1939.”⁹⁷ PMSC personnel also built vital infrastructure, such as the Alaska Highway.

Prior to World War II, American and Canadian officials discussed building a highway through British Columbia and the Yukon Territory, with President Roosevelt going so far as to establish the Alaska International Highway Commission.⁹⁸ In relation to the perceived threat from Japan, the US government built bases in key Alaskan cities and developed the Alaskan Defense Force prior to the attack on Pearl Harbor. The attack on Pearl Harbor intensified the need for the highway, and the United States and Canada agreed to the terms of the project on 18 March 1942.⁹⁹ This proved prescient, as Japan initially attacked the Aleutian Islands on 2 June 1942 and

⁹⁵ Gropman, ed., *The Big 'L': American Logistics in World War II*, 195.

⁹⁶ *Ibid.*, 193-213.

⁹⁷ *Ibid.*, 213.

⁹⁸ Kenneth Coates and William R. Morrison, *The Alaska Highway in World War II: The U.S. Army of Occupation in Canada's Northwest* (Norman, OK: University of Oklahoma Press, 1992), 1-24.

⁹⁹ *Ibid.*, 30-34.

occupied Kiska on 6 June 1942.¹⁰⁰ With an order to have a “pioneer road – that is, a rough road suitable for slow travel by heavy trucks – open by fall of 1942,”¹⁰¹ work began at a breakneck pace. “The Alaska Highway, built in 1942, had been largely rebuilt in 1943”¹⁰² consisting of approximately 1,645 miles by a combination of approximately 14,100 civilian contractors and approximately 10,756 military personnel.¹⁰³ By all accounts, the Alaska Highway represented a remarkable achievement due to the inhospitable terrain and timelines, and PMSCs were a critical aspect of its completion. In addition to outsourcing construction, the military also looked for contracted sources of supply during World War II.

The United States military used local procurement, or contracted sourcing of goods and services from the local markets within the theaters of operation, as a means to meet demands and reduce dependence on shipping from the continental United States. Throughout history, military leaders used local procurement as a necessary means to obtain resources to meet military objectives. As an example, during the Mexican-American War Winfield Scott executed his plan to “purchase food and supplies from the Mexican people rather than resort to forced requisitions”¹⁰⁴ as part of his plan to pacify the local population. Local procurement was prevalent during World War II for a variety of reasons, and “in no other theater of operations did local procurement become quite as extensive as in the Southwest Pacific and South Pacific

¹⁰⁰ US Army, “Aleutian Islands: The U.S. Army Campaigns of World War II,” Accessed October 18, 2015. <http://www.history.army.mil/brochures/aleut/aleut.htm>.

¹⁰¹ Coates and Morrison, *The Alaska Highway in World War II: The U.S. Army of Occupation in Canada's Northwest*, 38.

¹⁰² *Ibid.*, 58.

¹⁰³ *Ibid.*, 47-58.

¹⁰⁴ Timothy D. Johnson, *A Gallant Little Army: The Mexico City Campaign*, (Lawrence, KS: University Press of Kansas, 2007), 17.

Areas.”¹⁰⁵ Australia and New Zealand “furnished the major part of the meat consumed by U.S. armed services below the equator,”¹⁰⁶ and Australia proved to be a key supplier for the US military. In addition to meat, Australia provided canned goods, flour, sugar, fresh fruits and vegetables, items of clothing, and shoes as Australian production increased to meet US demand.¹⁰⁷ These goods were essential to the war effort, freeing shipping resources and enabling the consumption of goods, such as perishables, that would have otherwise been impossible.

Ordnance operations, which include ammunition and maintenance, provided another example of PMSC use and integration during World War II. An early example of contractor integration with maintenance took place in Heliopolis, Egypt, where fifty civilian workers augmented the maintenance shop during the North Africa campaign.¹⁰⁸ The military used contractors to augment maintenance in the Algerian city of Oran after the landings; however, this particular instance serves as an example of potential pitfalls as there were instances with theft and mistakes such as filling dry batteries with wine instead of electrolyte.¹⁰⁹ The US Army also used over 1,200 local mechanics along the Persian Gulf supply route to the Soviet Union in places such as Iran. This is remarkable, because no local training programs were established for the mechanics, while there were training programs for the drivers hired along this route.¹¹⁰

¹⁰⁵ Alvin P. Stauffer, *United States Army in World War II: The Technical Services, The Quartermaster Corps: Operations in the War Against Japan* (Washington, DC: Office of the Chief of Military History, Department. of the Army, 1956), 98.

¹⁰⁶ Ibid.

¹⁰⁷ Ibid., 98-124.

¹⁰⁸ Lida Mayo, *United States Army in World War II: The Technical Services, The Ordnance Department: On Beachhead And Battlefield* (Washington, DC: Office of the Chief of Military History, Department. of the Army, 1968), 22.

¹⁰⁹ Ibid., 120.

¹¹⁰ Bykofsky and Larson, *United States Army in World War II: The Technical Services, The Transportation Corps: Operations Overseas*, 418-419.

Operations in Italy presented manpower shortages in ammunition supply points, and “the ammunition labor problem was solved by hiring Italian civilians”¹¹¹ who tended to be ex-military and have excellent discipline. As forces moved through Italy, “the field headquarters were also using thousands of Italian civilian laborers for maintenance work as well as for Class II and IV and ammunition supply.”¹¹² US forces also used “Italian displaced persons”¹¹³ as augmentation “for the task of locating, guarding, controlling, inventorying, and disposing of”¹¹⁴ enemy materiel during the push into Germany. While these are outstanding examples of PMSC use for logistics purposes, the United States also contracted other activities, such as the use of contracted airpower to defend China against Japanese forces.

Seeking a means to help defend the Chinese against Japanese aggression, the United States utilized a group of airmen known as The Flying Tigers. The envisioned missions “were to be carried out by American mercenaries, men released from the army and navy and paid by the United States government through a private corporation.”¹¹⁵ The basic concept of the Flying Tigers being used to bomb Japan was developed the year prior to the Japanese attack on Pearl Harbor; however, the group only had ninety-nine P-40 aircraft on 7 December 1941.¹¹⁶ The force first saw action on 20 December 1941 when they met ten Japanese bombers near Kunming, shooting down six of them.¹¹⁷ The Flying Tigers had continuing success during their operations

¹¹¹ Mayo, 186-187.

¹¹² Mayo, *United States Army in World War II: The Technical Services, The Ordnance Department: On Beachhead And Battlefront*, 189.

¹¹³ *Ibid.*, 347.

¹¹⁴ *Ibid.*

¹¹⁵ Duane P. Schultz, *The Maverick War: Chennault and the Flying Tigers* (New York, NY: St. Martin, 1987), 1-2.

¹¹⁶ *Ibid.*, 1-15.

¹¹⁷ *Ibid.*, 137-143.

from 1941 – 1942, and “they were paid combat bonuses for destroying almost 300 enemy aircraft, and lost only 14 pilots on combat missions.”¹¹⁸ This unique example of contractors in World War II also exemplifies the dangers faced by PMSC personnel during the war.

Private military and security company personnel faced danger in carrying out their jobs. Wake Island serves as a prominent example. The Navy contracted construction of a naval airbase and defensive fortifications on Wake Island just prior to World War II. When the Japanese initially attacked Wake Island on 8 December 1941, there were approximately 1,146 contractors working on the island.¹¹⁹ “Seventy contractors were killed, twelve wounded, and most survivors were sent to labor camps in North China.”¹²⁰ Of those sent to labor camps, “five civilians were beheaded aboard ship while en route to China to ensure order was maintained.”¹²¹ Those taken as prisoners and forced to work on the island suffered horrendously until the Japanese executed ninety-seven of the imprisoned contractors on 7 October 1943. At that point, the Japanese had already executed one of the contractors for stealing food.¹²² The experience of the US Merchant Marines serves as another example. The 1946 War Shipping Administration, or WSA, report indicated that “a total of 5,638 merchant seamen and officers [were] dead and missing; 581 were made prisoners of war.”¹²³

¹¹⁸ CECOM Historical Office, “Flying Tigers of World War II,” accessed October 19, 2015, <http://cecomhistorian.armylive.dodlive.mil/2010/12/20/flying-tigers-wwii/>.

¹¹⁹ Gordon Rottman, *World War II Pacific Island Guide: a Geo-Military Study* (Westport, CT: Greenwood, 2001), 37-38.

¹²⁰ *Ibid.*, 39.

¹²¹ *Ibid.*, 39.

¹²² Matthew M. Burke, “Search for Closure, Accurate Account of Wake Island Massacre Continues,” *Stars and Stripes*. Accessed October 18, 2015: <http://www.stripes.com/news/search-for-closure-accurate-account-of-wake-island-massacre-continues-1.166538>.

¹²³ War Shipping Administration, “The United States Merchant Marine at War” 7.

The first question asked what capability gaps arose due to the conflict, and were these gaps related to a previous reduction of force in light of perceived threats (or lack thereof). Capability gaps initially rose in relation to construction of facilities to train forces, military facilities overseas, and in the infrastructure needed to produce the materiel for war.¹²⁴ The capability gap in domestic military construction capacity was exemplified by the growth in military construction contractors from 1.15 million in 1939 to 2.17 million in 1942 used to complete over 371 construction projects aimed at training and infrastructure for war.¹²⁵ In addition to training camps and bases, these contractors completed projects such as the Alaska Highway in order to facilitate the war effort. Capability gaps were not limited to domestic considerations, and Wake Island serves as an example of the expanded need for contracted construction to build bases, ports, and airfields overseas.

Capability gaps in transportation generated critical demands for contracted assistance. Sea transportation served as the main form of transportation from the United States to the various theaters of operation. The US Merchant Marines filled this demand, transporting over 268 million long tons of cargo while facing direct engagement from the enemy head-on. Military operations also created demand for contracted aviation transportation assets. Immediately following the Japanese attack on Pearl Harbor, “Western Airlines was called on to fly ammunition to jittery and virtually unarmed U.S. forces on the west coast,”¹²⁶ Virtually all major US carriers contracted their services to the US government. “From June 1942 until the end of 1943, these airlines flew virtually all of the military passengers and freight that went by air within the United States.”¹²⁷

¹²⁴ Gropman, ed., *The Big 'L': American Logistics in World War II*, 193-214.

¹²⁵ *Ibid.*, 207.

¹²⁶ Theodore J. Crackel, “A History of the Civil Reserve Air Fleet,” (Washington, DC: Air Force History and Museums Program, 1998), 29, accessed October 18, 2015: <http://www.afhso.af.mil/shared/media/document/AFD-130916-006.pdf>.

¹²⁷ *Ibid.*, 36.

The trends were similar in international flights early on, but the US military gradually assumed a greater role in air transportation:

“In 1942, the airlines logged 90 percent of the air transport miles flown worldwide and 85 percent of the total passenger miles. It was not until the early months of 1944 that military crews began to carry more freight and passengers than the contract airlines. In 1945 the military hauled over 80 percent of the freight and over 70 percent of the passengers, yet that was a function of the growth of the military capability, not a diminished effort on the part of the airlines.”¹²⁸

In addition to sea and air transportation, contracted sources also assisted with ground transportation overseas. The Army used civilian truck augmentation during Operation Torch, and in Italy, Iran, and China.¹²⁹

Similar capability gaps arose in supplying the war effort. Due to the extended lines of communication and the massive military mobilization, sources of supply outside of the United States were required for the military. The example of local procurement in Australia demonstrates that other sources of supply were both needed and available, helping to enable operations literally across the globe. Similar situations were annotated in France and in Morocco, demonstrating that local procurement was a common occurrence throughout the war.¹³⁰ The Quartermaster Corps required assistance training its personnel, and the Quartermaster Corps eventually “[requested] assistance from factories, commercial trade schools, and civilian educational institutions in training officers and enlisted men for certain jobs requiring highly developed technical or administrative skills.”¹³¹ The Army outsourced laundry operations as “the War Department

¹²⁸ Ibid., 40.

¹²⁹ Bykofsky and Larson, *United States Army in World War II: The Technical Services, The Transportation Corps: Operations Overseas*, 162; 226; 414-419; 614.

¹³⁰ William F. Ross and Charles F. Romanus, *United States Army in World War II: The Technical Services, The Quartermaster Corps: Operations in the War Against Germany* (Washington, DC: Office of the Chief of Military History, 1965), 52; 512.

¹³¹ Erna Risch and Chester L. Kieffer, *United States Army in World War II: The Technical Services, Quartermaster Corps: Organization, Supply and Services, Volume II* (Washington, DC: Office of the Chief of Military History, 1955), 277.

permitted post quartermasters or supply officers to execute government contracts for commercial laundry and dry cleaning services.”¹³² The Army also contracted for burial services during World War II, and had to update its procedures for doing so after receiving a large quantity of complaints in 1943.¹³³ From these prominent examples of outsourced quartermaster activities, one can gauge that the Army used civilian sources for a great deal of its supplies and services during World War II.

In terms of ordnance functions, the US Army used local labor to augment ammunition supply points, such as the previously cited example in Italy.¹³⁴ The Army also used local labor to augment materiel destruction and maintenance activities as the availability of manpower was unable to meet the needs of military leaders in executing these functions. These capability gaps were likely unrelated to the previous reduction in forces which occurred after World War I.

The United States did execute a massive demobilization after World War I; however, the demobilization and drawdown was completed during the 1920s. Because a twenty year time gap separates the two conflicts, the drawdown of forces after World War I has a reduced relationship to the capability gaps which arose during World War II. There were no reductions in personnel during the five years preceding World War II when the perceived worldwide threats increased. Overall, troop strength actually increased during this period.¹³⁵

The second question asked whether the force size changed significantly leading up to the conflict. Between 1930 and 1935, the US Army maintained an active force roughly between

¹³² Risch and Kieffer, *United States Army in World War II: The Technical Services, Quartermaster Corps: Organization, Supply and Services, Volume II*, 351.

¹³³ *Ibid.*, 381-384.

¹³⁴ Mayo, *United States Army in World War II: The Technical Services, The Ordnance Department: On Beachhead And Battlefield*, 347.

¹³⁵ Weigley, *History of the United States Army*, 599.

135,000 and 140,000 soldiers.¹³⁶ Authorizations for troop increases began in fiscal year 1935, with Congress authorizing “an enlisted strength of 165,000”¹³⁷ within the Regular Army. The next substantial increase in troop authorizations came in 1940, when Congress authorized an active force of 375,000 soldiers.¹³⁸ Following the collapse of France in 1940, the War Department envisioned a requirement to increase the size of the force with “a combat army of a million men by October 1, 1941, of two million by January 1, 1942, and of four million by April 1, 1942.”¹³⁹ By the end of 1941, the US Army increased to approximately 1.46 million troops total.¹⁴⁰ The increase in troop strength was significant, as the force grew roughly ten times its size between 1935 and 1941.

The third question asked how many contractors were used and what was the relationship to the size of the military force during the conflict. According to the Defense Procurement and Acquisition Policy website, the military used approximately 734,000 PMSC personnel, resulting in a ratio of one contractor for every seven of the roughly 5,400,000 military personnel employed in the war.¹⁴¹ However, the available literature lends evidence to possible inaccuracy in these figures. In one account, the “ETO [European Theater of Operations] Quartermaster Service was employing 195,000 non-Americans, while its military strength was 133,600.”¹⁴² This is a significant number of PMSC personnel alone. When added to the approximately 250,000 PMSC

¹³⁶ Ibid.

¹³⁷ Weigley, *History of the United States Army*, 417.

¹³⁸ Ibid., 425.

¹³⁹ Ibid., 425.

¹⁴⁰ Ibid., 599.

¹⁴¹ “Civilians Contracted to Support Military Operations,” Defense Procurement and Acquisition Policy, accessed October 18, 2015, <http://www.acq.osd.mil/dpap/pacc/cc/history.html>.

¹⁴² Ross and Romanus, *United States Army in World War II: The Technical Services, The Quartermaster Corps: Operations in the War Against Germany*, 735.

personnel supporting the War Shipping Administration, a figure that does not include shore-based personnel such as longshoremen, the total of these two efforts together is approximately 383,600 PMSC personnel, or roughly 52 percent of contracted personnel.¹⁴³ These figures do not account for PMSC personnel used in ground transportation, completing construction projects, supporting quartermaster activities in the Pacific, or supporting ordnance activities in both theaters. The ambiguity in many accounts of the Office of the Chief of Military History's series, *United States Army in World War II*, provides more evidence to the likelihood of these figures being inaccurate. In one example, US Army troops in North Africa were "supplemented by locally owned trucks with native drivers,"¹⁴⁴ but no specifics were given as to the number of trucks or drivers used. In another example, "the maintenance men set up an Ordnance service center and were able to find competent civilian mechanics to assist them" during operations in the Philippines.¹⁴⁵ Given that the official historical documents fail to provide sufficient quantification, there is a strong likelihood that the number of PMSC personnel used exceeded the figure of 734,000 provided by Defense Procurement and Acquisition Policy website. Furthermore, the ratio of one PMSC personnel to every seven US military personnel is likely higher as well.

The fourth question asked what functions were performed by PMSCs and how these related to one another proportionally. Per the case study, PMSCs performed a wide range of activities including construction, sustainment activities such as providing transportation, and tactical actions against the enemy as was the case of the Flying Tigers. The overwhelming majority of activities performed by PMSCs in the case study were in the realm of sustainment activities such as transportation, supply, maintenance, and general construction.

¹⁴³ War Shipping Administration, "The United States Merchant Marine at War" 64.

¹⁴⁴ Bykofsky and Larson, *United States Army in World War II: The Technical Services, The Transportation Corps: Operations Overseas*, 167.

¹⁴⁵ Mayo, *United States Army in World War II: The Technical Services, The Ordnance Department: On Beachhead And Battlefield*, 433.

The fifth question examined the duration of the conflict and its impact on the ability of PMSCs to provide services. The United States entered World War II against Japan on December 8, 1941 after the Japanese attack on Pearl Harbor, and entered the war in Europe after Germany declared war on the United States on December 11, 1941.¹⁴⁶ For the United States, the war in Europe ended on May 8, 1945,¹⁴⁷ and the war against Japan ended on September 2, 1945.¹⁴⁸ The war lasted for just under four years. The case study indicates that private military and security companies continued to provide services throughout the war. From the preponderance of available evidence, the ability of PMSCs to provide services increased over time. This was likely due to ongoing efforts to train both American and local sources of labor, as in the cases of the US Merchant Marines in the United States and with local labor as truck drivers in the Persian Gulf route to the Soviet Union.

The sixth question examined whether services were transitioned from the military to contractors or vice versa during the war and how this related to any change in the size of the military. The case suggests that the transitions were due to the effects of national mobilization on available manpower. For the United States, World War II represented a total military, economic, and industrial mobilization. Competition emerged between military and industrial interests in relation to the proposed size of the military, as “the War Production Board and the War Manpower Commission objected on the grounds that an Army of the size proposed would throw the national economy out of balance and would prove too large for efficient use.”¹⁴⁹ The Army continued to grow throughout the war, and the manpower focus shifted from combat formations

¹⁴⁶ Martin H. Folly, *The United States and World War II: The Awakening Giant*, Baas Paperbacks (Edinburgh, Scotland: Edinburgh University Press, 2002), 29-30.

¹⁴⁷ Ibid. 125.

¹⁴⁸ Ibid., 134.

¹⁴⁹ Byron Fairchild and Jonathan Grossman, *United States Army in World War II: The War Department, The Army and Industrial Manpower* (Washington, DC: Office of the Chief of Military History, 1959), 47.

to support personnel. “Through 1942 the Army had persisted in concentrating on the formation of new divisions and finding manpower to fill them; after 1942 the main effort turned to improving the support and sustaining the efficiency of the existing divisions.”¹⁵⁰ This change in focus from combat arms personnel to support personnel, as exemplified by the Army, improves the understanding of shifts in the use of contractors.

The case study indicates that combat services, such as those provided by the Flying Tigers, were transitioned to US military as forces became available to fill those functions. The initial focus on combat arms personnel supports the overall transition, as the services of the Flying Tigers were transitioned in 1942. Civilian personnel augmented the ground transportation effort throughout the war as “native labor and operating forces were utilized to the greatest possible extent.”¹⁵¹ However, the case study indicates that more transportation functions were filled by US service members as American transportation soldiers became available in the theaters of operation. Based on the European theater, the number of PMSC personnel supporting quartermaster operations continued to grow throughout the war. This was particularly true in rear areas of operation.¹⁵² The incorporation of civilian labor into ordnance function appears to have remained steady based on the availability of local labor.¹⁵³

The seventh question asked what was the nature of the conflict and how did that effect contractor use. World War II was a high intensity conflict. The National World War II Museum estimates that there were approximately 15 million battle-related deaths of military personnel, 25 million military members wounded in action, and over 45 million civilians killed during the

¹⁵⁰ Weigley, *History of the United States Army*, 438.

¹⁵¹ Bykofsky and Larson, *United States Army in World War II: The Technical Services, The Transportation Corps: Operations Overseas*, 614.

¹⁵² Ross and Romanus, *United States Army in World War II: The Technical Services, The Quartermaster Corps: Operations in the War Against Germany*, 734-737.

¹⁵³ Mayo, *United States Army in World War II: The Technical Services, The Ordnance Department: On Beachhead And Battlefront*, 186-187, 189, 197, 217, 358, 419, 461.

war.¹⁵⁴ The war's operations consisted of multiple campaigns which occurred in the European and Pacific theaters. The military used PMSCs in both forward and rear areas. The Flying Tigers, the contractors on Wake Island, and the US Merchant Marines faced direct contact with enemy forces. In other instances, such as the transportation augmentation on the Persian Gulf route, direct contact with the enemy was less likely but possible. These examples indicate that the military employed PMSCs as substitutes in a wide variety of roles and functions, even in instances where the chance of direct combat with the enemy was the goal.

Findings and Analysis

A structured, focused analysis of the use of private military and security companies (PMSCs) in World War II provides insight as to whether PMSCs will be available to serve as economic substitutes for military capabilities within required timelines to enable operational agility and reach. The seven research questions guided the research and data collection to inform three hypotheses. The findings portion provides a brief review and synthesis of the questions. The analysis compares the findings in order to determine whether the hypotheses are supported, not supported, or result in a missed outcome for the case.

The first question asked what capability gaps arose due to the conflict, and were these gaps related to a previous reduction of force in light of perceived threats or lack thereof. Capability gaps arose across multiple specialty areas within the military, ranging from direct combat roles to support functions. The gaps were not related to a previous military force reduction, as the drawdown after World War I preceded the conflict by roughly twenty years. The second question asked whether the force size changed significantly leading up to the conflict. The force size did change significantly beginning with initial end strength increases in 1935; however, the increases in force size were inadequate for the demand arising from World War II. The third

¹⁵⁴ "World-Wide Casualties," National World War II Museum, accessed November 8, 2015, <http://www.nationalww2museum.org/learn/education/for-students/ww2-history/ww2-by-the-numbers/world-wide-deaths.html>.

question asked how many contractors were used and what was the relationship to the size of the military force during the conflict. The Defense Procurement and Acquisition Policy website indicates that the military used approximately 734,000 PMSC personnel, resulting in a ratio of one contractor for every seven military personnel,¹⁵⁵ though these figures are likely lower than the actual number of contractors used.

The fourth question asked what functions were performed by PMSCs and how these related to one another proportionally. Private military and security companies performed a wide variety of functions, from active combat to basic labor with the majority of PMSC personnel employed in sustainment roles such as supply and maintenance. The fifth question examined the duration of the conflict and its impact on the ability of PMSCs to provide services. The US involvement in the conflict lasted almost four years, and the case suggests that PMSC activity increased over the course of the war. The sixth question examined whether services were transitioned from the military to contractors or vice versa during the war and how this related to any change in the size of the military. The case indicates that combat-related activities were transitioned to the military as military capability rose, while sustainment functions increasingly used PMSC labor as the war progressed. The seventh question asked what was the nature of the conflict and how did that effect contractor use. World War II was a high intensity conflict, and the majority of PMSC use was in rear areas. However, there were instances where PMSCs executed functions that placed them in direct contact with enemy forces.

The first hypothesis stated that in the event of a militarized dispute or conflict requiring a military response, demand for private military contractors will increase as a result of a US military gap. The case found that the United States employed at least 734,000 contractors during the war, and the evidence suggests that the number is actually higher. This was a significant level

¹⁵⁵ “Civilians Contracted to Support Military Operations,” Defense Procurement and Acquisition Policy, accessed October 18, 2015, <http://www.acq.osd.mil/dpap/pacc/cc/history.html>.

of demand, accounting for one contractor for every seven military personnel involved in the conflict. The military used PMSC construction crews to build facilities to train military personnel, indicating a capability gap at the outset of the conflict. Organizations such as the Flying Tigers and the US Merchant Marines provided key capabilities that were simply not available within the resources of the US military at that time. Basic sustainment functions, such as supply and transportation, competed with combat arms for personnel during the conflict. PMSCs played a vital role in providing personnel for these functions, such as the contractors used as truck drivers along the Persian Gulf route. These examples support the existence of a US military capability gap throughout the war, and the employment of PMSC personnel reinforces the notion that demand for PMSC services increased during the war. Taken together, the case study findings support the hypothesis.

The second hypothesis states that PMSCs with the required specialties or services will be available to serve as substitutes within required timelines. The construction personnel who built mobilization and training facilities within the United States, the contractors employed on Wake Island, and the PMSC personnel who built the Alaska Highway are examples of skilled, specialized personnel who served as substitutes for Army engineers. The Flying Tigers also provide evidence that skilled personnel, even within the combat arms, were available within prescribed timelines. In instances such as the US Merchant Marines and the Iranian truck drivers used to support the Persian Gulf route, programs to train PMSC personnel were able to produce sufficient personnel within the prescribed timelines to enable the war effort. The case produced several examples that expand the notion that personnel will be available with the required specialties in the field of logistics, as local civilians were used as mechanics in Algeria and Italians were employed in ammunition supply points. The findings from the case support the hypothesis.

The third hypothesis stated that the US Army will be able to incorporate PMSC support in a timely manner, the services provided will be adequate, and the contract will be terminated at

the conclusion of an operation or campaign in a manner that facilitates controlled costs. The findings of the case suggest that PMSC support can be incorporated in a timely manner, and the preponderance of evidence suggests that the services provided will be adequate. The Flying Tigers exemplify that rapid integration of PMSCs into operations, as the group engaged in combat with the Japanese within a month of the United States entering the war. The US Army was able to rapidly incorporate civilian mechanics, such as in Algeria and Iran. The experience with the Algerians provided an example of inadequate service in terms of batteries filled with wine instead of electrolyte; however, the case suggests that PMSCs provided adequate services in the vast majority of instances. Local procurement in areas such as Australia, France, and Morocco were essential to the war effort, enabling operational reach. This service provided goods that were otherwise unavailable due to scarcity or transportation limitations. The case did not provide sufficient evidence concerning contract termination or cost figures to make a specific determination as to the particular aspects of contract termination and cost controls.

This section provided a review of the seven structured questions which enabled a better understanding of the evidence in the case as related to the three hypotheses. The analysis of the case suggests support for the first and second hypotheses. The third hypothesis consists of three parts. The first two parts, that the US Army will be able to incorporate PMSC support in a timely manner and that the services provided will be adequate, were supported. There was insufficient evidence to determine whether contracts will be terminated at the conclusion of an operation or campaign in a manner that facilitates controlled costs.

Conclusion

According to the 2014 Quadrennial Defense Review, “unrest and violence persist everywhere”¹⁵⁶ and the world “is growing more volatile, more unpredictable, and in some

¹⁵⁶ United States Department of Defense, *Quadrennial Defense Review 2014* (Washington, DC: Government Printing Office, 2014), III.

instances more threatening to the United States.”¹⁵⁷ This increases the likelihood of a scenario in which the United States will be required to employ a militarized response, which would lead to an increase in demand for military capabilities. At the same time, the United States is continuing to reduce force size, which will reduce the capability, or supply, of the military. Based on the lens of economic theory, the mismatch between available supply and demand will generate capability gaps that must be mitigated in order to support a sufficient response. Based on historical precedents such as World War II or Operation Iraqi Freedom, where “between 2003 and 2011 there was a 1:1 ratio of private contractors to U.S. military troops in Iraq,”¹⁵⁸ Private Military and Security Companies (PMSCs) will fill those gaps.

Military planners should include considerations for PMSCs in all aspects of contingency plans, and should consider incorporating PMSCs into major training activities. “The Army Operating Concept (AOC) describes how future Army forces will prevent conflict, shape security environments, and win wars while operating as part of our Joint Force and working with multiple partners.”¹⁵⁹ This document is crucial for establishing the framework for both the design of the Army and establishing the doctrine that the Army will use to train and prepare for future conflicts. In reference to logistics optimization, the AOC discusses “[increased] logistical efficiencies and unit self-sufficiency,”¹⁶⁰ briefly references initiatives such as fuel efficiency,¹⁶¹

¹⁵⁷ United States Department of Defense, *Quadrennial Defense Review 2014*, III.

¹⁵⁸ Stanley, *Outsourcing Security: Private Military Contractors and U.S. Foreign Policy*, 141.

¹⁵⁹ Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-1, *The U.S. Army Operating Concept: Win in a Complex World, 2020-2040* (Washington, DC: Government Printing Office, 2014), i.

¹⁶⁰ *Ibid.*, 37.

¹⁶¹ *Ibid.*, 18.

and “scalable organic sustainment capabilities.”¹⁶² Internal capabilities, fuel efficiency, and using technology to reduce the logistics footprint are all important aspects the framework for sustaining high tempo operations in the future. However, history also suggests that contractors will be required to fill capability gaps during a militarized response. The AOC fails to mention contracted support, which the Army should correct because PMSCs will be crucial to any future conflict.

The 2014 Quadrennial Defense Review also states that “our forces will no longer be sized to conduct large-scale prolonged stability operations.”¹⁶³ Given historical precedents such as Korea and Afghanistan, this is likely an optimistic outlook towards the stabilizing (Phase IV) and enabling civil authority (Phase V) phases of a campaign¹⁶⁴ found in *Joint Operations*. The 2014 US Army Operating Concept retains “[conducting] stability and counterinsurgency operations”¹⁶⁵ as one of the Army’s missions, but does not address the design of forces or doctrine to meet this need. Based on historical precedent and the last fourteen years of conflict, these documents should address stability operations to the same depth as decisive action. Due to the lengthy nature of these phases, PMSCs have the potential for use as a critical resource in order to reduce the demand for uniformed personnel and free these forces for other potential missions. PMSCs may also provide additional cost savings in areas where indigenous or local labor is available at a rate less than the cost of uniformed personnel. Additionally, the use of contracted personnel in the area has the potential to provide a positive economic benefit to the local economy, which may have a positive impact on the overall operation.

¹⁶² TRADOC Pamphlet 525-3-1, *The U.S. Army Operating Concept: Win in a Complex World, 2020-2040*, 18.

¹⁶³ United States Department of Defense, *Quadrennial Defense Review 2014*, VII.

¹⁶⁴ Joint Publication (JP) 5-0, *Joint Operation Planning* (Washington, DC: Government Printing Office, 2011), III-43 – III-44.

¹⁶⁵ TRADOC Pamphlet 525-3-1, 17-18.

Private Military and Security Companies will continue to provide critical services to the military for the foreseeable future, with the potential that their use may actually increase proportionally in future operations. Max Boot notes that “continued downsizing will mean that the military won’t be able to stop relying on contractors in future conflicts.”¹⁶⁶ His point reinforces that “contracted support and its associated contractor management challenges must be closely integrated into the overall planning process”¹⁶⁷ by operational planners when designing and planning campaigns. PMSCs provide a wide range of expertise and functionality that can potentially enhance any mission set, increase operational reach, and expand the options available to a commander. PMSCs can provide flexibility when planners are faced with limits on the number of troops allowed in theater at any given time. Additionally, PMSC personnel provide a suitable alternative when the local civilian population is sensitive to the sight of military personnel.

Further research on the use of contractors will strengthen the hypotheses and benefit the Army and the joint force. This case examined World War II, but “the American Civil War and World War II are the outliers in American military history with respect to the objectives sought and the resources the nation was willing to expend to achieve them.”¹⁶⁸ Because the war was viewed as an existential threat, success was more important than cost. However, cost-benefit analysis concerning the use of contractors would be beneficial to understanding the overall impact and benefit provided by contractors, particularly in conflicts where there are limitations on costs.

¹⁶⁶ Max Boot, “More Small Wars,” *Foreign Affairs*, accessed December 2, 2015, <https://www.foreignaffairs.com/articles/libya/more-small-wars>.

¹⁶⁷ Army Tactics, Techniques, and Procedures (ATTP) 4-10, *Operational Contract Support Tactics, Techniques, and Procedures* (Washington, DC: Government Printing Office, 2011), 3-1.

¹⁶⁸ Matthew Morton, “Learning from the Past, Looking to the Future,” *The US Army War College Quarterly Parameters* 45, no. 1 (Spring 2015) (Carlisle, PA: United States Army War College Press, 2015), 55-67.

Further research on the integration of contractors in regards to the increasing level of technology and sophistication of techniques on the battlefield would also strengthen the hypotheses. In some instances, contractors maintain a technological lead on the military, and this is a critical benefit they provide. However, contractors must be able to fully integrate into the military force structure to serve as substitutes without the need for converting them into soldiers. The integration of PMSC during key training scenarios, such as National Training Center rotations, has the potential to serve as a proof of concept and provide further insight as to potential training requirements for integrating contractors into the force during rapid escalations.

The research included in this study focused on the use of PMSCs as economic substitutes in the event of militarized disputes or conflicts. A structured, focused analysis of the evidence from the use of PMSCs during World War II suggested support for the proposed hypotheses that demand for private military contractors would increase as the result of a military capability gap, that PMSCs with the required specialties or services will be available, and that the US Army will be able to incorporate PMSC support in a timely manner. Economic theory was used as the lens for examining these hypotheses. Further investigation concerning cost-benefit analysis and rapid integration of contracted personnel will allow operational planners to develop more options for commanders while developing campaign plans.

Bibliography

- Army Doctrinal Publication (ADP) 4-0, *Sustainment*. Washington, DC: Government Printing Office, 2012.
- Army Doctrinal Reference Publication (ADRP) 5-0, *The Operations Process*. Washington, DC: Government Printing Office, 2012.
- Army Tactics, Techniques, and Procedures (ATTP) 4-10, *Operational Contract Support Tactics, Techniques, and Procedures*. Washington, DC: Government Printing Office, 2011.
- Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-1, *The U.S. Army Operating Concept: Win in a Complex World, 2020-2040*. Washington, DC: Government Printing Office, 2014.
- Bell, Philip W. and Michael P. Todaro, *Economic Theory: an Integrated Text with Special Reference to Tropical Africa and Other Developing Areas*. Nairobi, Kenya: Oxford University Press, 1969.
- Boot, Max. "More Small Wars." *Foreign Affairs*. Accessed December 2, 2015. <https://www.foreignaffairs.com/articles/libya/more-small-wars>.
- Bykofsky, Joseph, and Harold Larson. *United States Army in World War II: The Technical Services, The Transportation Corps: Operations Overseas*. Washington, DC: Office of the Chief of Military History, 1957.
- Camm, Frank A., and Victoria A. Greenfield. *How Should the Army Use Contractors On the Battlefield? Assessing Comparative Risk in Sourcing Decisions*. Santa Monica, CA: Rand, 2005.
- CECOM Historical Office. "Flying Tigers of World War II." Accessed October 19, 2015. <http://cecomhistorian.armylive.dodlive.mil/2010/12/20/flying-tigers-wwii/>.
- Coates, Kenneth, and William R. Morrison. *The Alaska Highway in World War II: The U.S. Army of Occupation in Canada's Northwest*. Norman: University of Oklahoma Press, 1992.
- Conlon, Kevin. "North Korea Threatens to Attack U.S.," CNN.com. Accessed August 16, 2015. <http://www.cnn.com/2015/08/15/world/north-korea-threats/>.
- Crackel, Theodore J. "A History of the Civil Reserve Air Fleet." Washington, DC: Air Force History and Museums Program, 1998. Accessed October 18, 2015. <http://www.afhso.af.mil/shared/media/document/AFD-130916-006.pdf>.
- Crawford, Jamie. "Army Announces Force Reduction of 40,000 Troops." CNNPolitics.com, July 9, 2015. Accessed November 17, 2015. <http://www.cnn.com/2015/07/09/politics/army-announces-force-reduction-40000-troops>
- Defense Procurement and Acquisition Policy. "Civilians Contracted to Support Military Operations." Accessed 18 October 2015. <http://www.acq.osd.mil/dpap/pacc/cc/history.html>.

- Economists, Brown University. *Introduction to War Economics*. 2 vols. Edited by Alfred C. Neal. Chicago, IL: Richard D. Irwin, 1942.
- Fairchild, Byron and Jonathan Grossman. *United States Army in World War II: The War Department, The Army and Industrial Manpower*. Washington, DC: Office of the Chief of Military History, 1959.
- Folly, Martin H. *The United States and World War II: The Awakening Giant*. Baas Paperbacks. Edinburgh: Edinburgh University Press, 2002.
- Garfinkel, Michelle R. "The Economic Consequences of Reducing Military Spending," Federal Reserve Bank of St. Louis *Review*, Fourth Quarter 1990, pp. 47-58. Accessed September 13, 2015. https://research.stlouisfed.org/publications/review/90/11/Spending_Nov_Dec1990.pdf.
- George, Alexander L., and Andrew Bennett. *Case Studies and Theory Development in the Social Sciences*. BCSIA Studies in International Security. Cambridge, MA.: MIT Press, 2005.
- Goodman, John B. and Gary W. Loveman. "Does Privatization Serve the Public Interest?," *Harvard Business Review*. November – December 1991. Accessed September 13, 2015. <https://hbr.org/1991/11/does-privatization-serve-the-public-interest#>.
- Gropman, Alan L., ed. *The Big "L": American Logistics in World War II*. Washington, DC: National Defense University Press, 1997.
- Haass, Richard N. *Foreign Policy Begins at Home: The Case for Putting America's House in Order*. New York: Basic Books, 2013.
- Haass, Richard N. "The Unraveling." *Foreign Affairs*. August 16, 2015. Accessed August 16, 2015. <https://www.foreignaffairs.com/articles/united-states/2014-10-20/unraveling>.
- Haveman, Robert H. and Kenyon A. Knopf. *The Market System*. 2d ed. New York, NY: John Wiley and Sons, Inc., 1970.
- Johnson, Timothy D. *A Gallant Little Army: The Mexico City Campaign*. Lawrence, KS: University Press of Kansas, 2007.
- Joint Publication 5, *Joint Operation Planning*. Washington, DC: Government Printing Office, 2011.
- Jones, Robert Huhn. *The Roads To Russia: United States Lend-Lease to the Soviet Union*. Norman: University of Oklahoma Press, 1969.
- King, Charles. "The Five-Day War." *Foreign Affairs*. August 16, 2015. Accessed August 16, 2015. <https://www.foreignaffairs.com/articles/russia-fsu/2008-11-01/five-day-war>.
- Krepinevich, Andrew F., Jr. "How to Deter China." *Foreign Affairs*. August 16, 2015. Accessed August 16, 2015. <https://www.foreignaffairs.com/articles/china/2015-02-16/how-deter-china>.

- Kuperman, Alan J. "Obama's Libya Debacle." *Foreign Affairs*. August 16, 2015. Accessed August 16, 2015. <https://www.foreignaffairs.com/articles/libya/2015-02-16/obamas-libya-debacle>.
- Lamoth, Dan. "Army Details How It Will Cut to Its Smallest Size Since Before World War II." *The Washington Post*, July 9, 2015. Accessed November 17, 2015. <https://www.washingtonpost.com/news/checkpoint/wp/2015/07/09/army-details-how-it-will-cut-to-its-smallest-size-since-before-world-war-ii/>.
- Mandel, Robert. "Overview of American Government Expeditionary Operations Utilizing Private Contractors," In *Contractors and War: The Transformation of US Expeditionary Operations*, edited by Christopher Kinsey and Malcolm H. Patterson, 13-35. Stanford, CA: Stanford University Press, 2012.
- Matheny, Michael R. *Campaigns and Commanders*. Vol. 28, *Carrying the War to the Enemy: American Operational Art to 1945*. Norman: University of Oklahoma Press, 2011.
- Matloff, Maurice. *Strategic Planning for Coalition Warfare: 1943-1944 (United States Army in World War II: The War Department)*. Washington: Center for Military History, 2003.
- Mayo, Lida. *United States Army in World War II: The Technical Services, The Ordnance Department: On Beachhead And Battlefront*. Washington: Office of the Chief of Military History, Department of the Army, 1968
- McFate, Sean. *The Modern Mercenary: Private Armies and What They Mean for World Order*. Oxford: Oxford University Press, 2014.
- Mell, Andrew, and Oliver Walker. *The Rough Guide to Economics*. Rough Guides. London: Rough Guides Ltd, 2014.
- Moffat, Donald W. *Economics Dictionary*. 2nd ed. New York: Elsevier, 1983.
- Morton, Matthew. "Learning from the Past, Looking to the Future." *The US Army War College Quarterly Parameters* 45, no. 1 (Spring 2015): 55-67. Carlisle, PA: United States Army War College Press, 2015.
- Murphy, Chris, Brian Schatz, and Martin Heinrich. "Principles for a Progressive Foreign Policy." *Foreign Affairs*. August 16, 2015. Accessed August 16, 2015. <https://www.foreignaffairs.com/articles/2015-06-08/principles-progressive-foreign-policy>.
- National World War II Museum. "World-Wide Casualties." Accessed November 8, 2015. <http://www.nationalww2museum.org/learn/education/for-students/ww2-history/ww2-by-the-numbers/world-wide-deaths.html>.
- Obama, Barack quoted in Greg Jaffe. "Obama Says Only Alternative to a Nuclear Deal with Iran Is War." *Washington Post*, July 15, 2015. Accessed August 16, 2015. http://www.washingtonpost.com/politics/obamas-defense-of-the-iran-deal-comes-with-a-tough-love-message/2015/07/15/a7614b4a-2b04-11e5-bd33-395c05608059_story.html.
- Peppers, Jerome G. *History of United States Military Logistics, 1935-1985: A Brief Review*. Huntsville, AL: Logistics Education Foundation Pub., 1988.

- Risch, Erna and Chester L. Kieffer. *United States Army in World War II: The Technical Services, Quartermaster Corps: Organization, Supply and Services, Volume II*. Washington, DC: Office of the Chief of Military History, 1955.
- Ross, Charles F. and William F. Romanus. *United States Army in World War II: The Technical Services, The Quartermaster Corps: Operations in the War Against Germany*. Washington, DC: Office of the Chief of Military History, 1965.
- Rottman, Gordon. *World War II Pacific Island Guide: a Geo-Military Study*. Westport, CT: Greenwood, 2001.
- Schultz, Duane P. *The Maverick War: Chennault and the Flying Tigers*. New York, NY: St. Martin, 1987.
- Shearer, David. *Adelphi Paper*,. Vol. 316, *Private Armies and Military Intervention*. Oxford: Oxford University Press for the International Institute for Strategic Studies, 1998.
- Singer, Peter W. *Corporate Warriors: The Rise of the Privatized Military Industry*. Cornell Studies in Security Affairs. Ithaca, NY: Cornell University Press, 2003.
- Stanger, Allison. *One Nation under Contract: The Outsourcing of American Power and the Future of Foreign Policy*. New Haven, CT: Yale University Press, 2009.
- Stanley, Bruce E. *Outsourcing Security: Private Military Contractors and U.S. Foreign Policy*. Lincoln, NB: Potomac Books, an imprint of the University of Nebraska Press, 2015.
- Stauffer, Alvin P. *United States Army in World War II: The Technical Services, The Quartermaster Corps: Operations in the War Against Japan*. Washington: Office of the Chief of Military History, Department of the Army, 1956
- Stein, Aaron. "Turkey's Yemen Dilemma." *Foreign Affairs*. August 16, 2015. Accessed August 16, 2015. <https://www.foreignaffairs.com/articles/turkey/2015-04-07/turkeys-yemen-dilemma>.
- Tonkin, Hannah. *State Control Over Private Military and Security Companies in Armed Conflict*. Cambridge Studies in International and Comparative Law. Cambridge, United Kingdom: Cambridge University Press, 2011.
- Van Tuyll, Hubert P. *Feeding the Bear: American Aid to the Soviet Union, 1941-1945*. New York, NY: Greenwood Press, 1989.
- United Nations General Assembly and Security Council. A/63/467-S/2008/636, "The Montreux Document on Pertinent international Obligations and Good Practices for States Related to Operations of Private Military and Security Companies During Armed Conflict," September 17, 2008. Accessed August 16, 2008, https://www.eda.admin.ch/content/dam/eda/en/documents/topics/Montreux-document-4_en.pdf.
- US Army. "Aleutian Islands: The U.S. Army Campaigns of World War II." Accessed October 18, 2015. <http://www.history.army.mil/brochures/aleut/aleut.htm>.

US Department of Defense. *Quadrennial Defense Review 2014*. Washington, DC: Government Printing Office, 2014.

Van Evera, Stephen. *Guide to Methods for Students of Political Science*. Ithaca: Cornell University Press, 1997.

War Shipping Administration. "The United States Merchant Marine at War." (Washington, DC: War Shipping Administration, 1946), 64. Accessed October 18, 2015.
<http://www.marad.dot.gov/about-us/maritime-administration-history-program/historical-documents-and-resources/>.

Weigley, Russell F. *History of the United States Army*. New York, NY: Macmillan Pub Co, 1967.

Wessels, Walter J. *Economics*. 5th ed. Business Review Books. Hauppauge, NY: Barron, 2012.