2018

Socioeconomic and Environmental Consequences of Military Base Closures

AEC 406 FALL 2018

KATHERINE THOMAS

Table of Contents

Abstract

The Base Realignment and Closure (BRAC) Act was introduced to address the superfluous Department of Defense (DoD) spending following the Cold War by reducing excess military bases and increasing the effectiveness of existing installations. A BRAC Commission was created to oversee the realignments and closures, and minimize any negative impacts BRAC may have on their surrounding communities.

Numerous studies have been conducted to determine the effectiveness of the BRAC Commission and this paper addresses the economic and environmental studies done post-BRAC rounds. Base realignments that added additional military employment were found to have a positive impact on local employment; communities that have base closures experience immediate negative impacts on the local economy and employment, but, were found to have long term positive economic and environmental benefits. The reduction in force infrastructure has an annual net savings of $12 billion per year.

The Department of Defense (DoD) is required to clean prior military land to an industrial standard as per the National Environmental Policy Act (NEPA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) before the transfer of land may occur. As of 2015, the DoD reported that 85% of military property had been transferred for civilian use.

BRAC is a contentious political and public issue, but with the knowledge acquired from previous rounds, Congress and the DoD can ensure an effective future for BRAC in our country.

Personal interest in the topic

My husband is currently deployed as an active duty service member in the United States Navy; we have been stationed at four bases throughout the country in the last six years. These bases have all been in rural communities that are dependent on the military installations to support their economy. Many of the local community members are retired military and seldom did I meet a civilian that was born and raised in that area without any military ties.

Through my research on this topic, I have learned the communities affected by BRAC recommendations were able to recover quickly and, in some cases, have better employment rates than the national average. Though BRAC remains a contentious issue, there will be future rounds to improve DoD spending and reduce excess infrastructure.

Introduction

Introduction of BRAC and the BRAC Commission

In 1988, the Base Realignment and Closure Act (BRAC) was passed to decrease Department of Defense (DoD) spending and increase the efficiency of military bases by realigning[1] or closing unnecessary installations and having a higher concentration of bases on the coasts to support a strike-attack defense. Before the Act was passed, the DoD had all the decision-making power to close or realign bases as they deemed necessary; now, BRAC allows for an open-line of communication between the Legislative and Executive branches, providing a balance of

[1] Base realignment refers to combining one or more military bases to create a joint force base.

power to make decisions for military bases while considering the impact on local economies and the environmental consequences.

Military budget spending remains a contentious issue and highly scrutinized by the public. Communities surrounding recommended bases have asserted that the government is not concerned about civilian employment and the effect closures would have on their community. The BRAC Commission aims to address public concerns and ease their worries by conducting and providing thorough research on the potentially affected areas. The Commission was created by Congress to provide an objective and non-partisan economic and environmental evaluation of the bases due for realignment or closure, recommended by the Department of Defense (BRAC, 2005).

The Commission conducts economic and environmental analyses of the areas to be affected by the DoD recommendations, and may add or remove bases as necessary. The recommendations are selected based on eight criteria and passed on to Congress for final approval. The criteria are as follows in order of most importance:

- The current and future mission capabilities and operational readiness of the total military force.
- The availability and condition of land, facilities, and associated airspace of both existing and potential locations.
- The ability to accommodate contingency, mobilization, surge, and future total force requirements at both existing and potential locations.
- The cost of operations.
- The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.
- The economic impact on existing communities in the vicinity of military installations.
- The infrastructure of both existing and potential receiving communities to support forces, missions, and personnel.

- The environmental impact, including the impact of costs related to potential environmental restoration, waste management, and environmental compliance.

(Department of Defense, 2005)

Five BRAC Rounds: 1988, 1991, 1993, 1995, and 2005

The first four rounds of BRAC conducted in the years: 1988-1995; recommended 499 base realignments or closures. The main goals of these rounds were to reduce DoD infrastructure and excess costs and increase military efficiency in the post-Cold War era.

In 2005, Congress authorized a final round of base closures and realignments in which 182 recommendations were made, including 22 major base closures and 33 major realignments. The 2005 round goals were to reduce excess infrastructure and produce savings, furthering transformation, and fostering jointness in a post 9/11 environment aimed at security (Government Accountability Office, 2005).

Environmental Remediation and Property Transfer

The property from the base closures must be cleaned of environmental contamination before property transfer and redevelopment can be fulfilled. The DoD is responsible for the site clean-up and must meet the industrial standards of the National Environmental Policy Act (NEPA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Funds for the clean-up are appropriated from Congress and once cleanup is complete, the property may be transferred to the local community to be redeveloped.

Project Statement

This paper will address the economic and environmental consequences of military base closures and realignments.

Hypothesis

The BRAC Commission does a thorough investigation of the economic and environmental consequences the DoD recommendations will have on the surrounding communities. The Commission can add or subtract recommendations based on their report findings and these recommendations are presented to Congress for final approval. Due to the fact that the BRAC criteria considers the economic impact on existing communities in the vicinity of military installations and transfers property to the local communities, I hypothesize, the effected BRAC communities will have positive economic and environmental outcomes in the long run. The Commission provides these communities with resources for property transfer to ease into a success post-BRAC transition.

Objectives

The main objective of this paper is to provide a thorough investigation of the economic and environmental impacts of BRAC. Also, to review case studies of affected areas and the necessary steps the DoD must take to close the bases and the obligation they have to the affected communities. I will address the shortcomings of the economic analyses and the challenges faced by the DoD during their implementation of BRAC recommendations to identify policy implications for a successful BRAC future.

Approach

To address my project statement, test my hypothesis, and achieve my project objectives, I will collect and review literature on the history of BRAC, and review reports from the DoD and Government Accountability Office (GAO) concerning the economic and environmental

consequences of the base closures and compare the BRAC rounds. I will also review independent economic analyses of BRAC areas and communicate these results with a written report to help community members understand the likely impacts of BRAC.

Literature Review

1988-1995 BRAC Rounds

The first four rounds of the Base Realignment and Closure Act (BRAC) recommendations were to introduced better serve the military needs of the post-Cold War era by reducing unnecessary military infrastructure and decreasing Department of Defense (DoD) spending. Congress approved the DoD recommendations for the closure or realignment of 499 bases across the United States, totaling in a 20% reduction of bases in the first four rounds (Warren, 1998). A six-year timeframe was given after each round for the recommendations to be implemented, allowing additional time for environmental cleanup and property transfer. These rounds achieved their cost-saving goal and generated a total of $8 billion in annual recurring savings (House of Representatives, Committee on Armed Services, Subcommittee on Readiness, 2012).

The economic impacts on the communities affected by the 1988-1995 BRAC recommendations vary depending on whether the base was realigned or closed. A 2012 report examined the local economic impacts of military base closures and realignments. Data on total military and civilian personnel employed at each U.S. military base from 1977 to 2005 was used and this employment was aggregated at the county-level, resulting in 510 counties containing one or more military bases during those years. The BRAC affected counties were compared to the counties unaffected by BRAC rounds. The results found that BRAC had a statistically

significant impact on local nonbase employment within the county. Communities that experienced a base realignment saw civilian job gains; for every one enlisted base job gain, there was a total gain of 1.19 civilian jobs. The numbers are the same for communities experiencing a base closure, but a reversal in signs; for every one enlisted base job lost, there was a reduction of civilian employment by 1.19 jobs (Hultquist & Petras, 2012).

The report by Hultquist and Petras does not address the impact base closures or realignments have on local businesses, the change in the consumption of goods and services, or the effect BRAC has on the local housing market (Hultquist & Petras, 2012).

2005 BRAC Round

The 2005 BRAC round came during a post-9/11 environment when the DoD was participating in the War on Terror. The goals of the latest BRAC round changed to meet the needs of the military; then Secretary of Defense, Donald Rumsfeld, focused on military jointness by transforming installations to better support the war needs at the time. These transformational goals involved complex realignments, such as designating where military forces returning to the United States from overseas bases would be located; establishing joint military medical centers; creating joint bases; and reconfiguring the defense supply, storage, and distribution network (United States Government Accountability Office, 2012).

The 2005 round of BRAC approved recommendations consisted of 802 realignments and closures; this is larger than the prior four rounds combined. These recommendations were implemented within their six-year timeframe, with more time given for environmental remediation and property transfer.

In a 2016 report, the affected bases resulted in an average net loss of civilian jobs and an average net gain of military personnel employment; unlike the prior four rounds in which most of the job losses were military. Lee found the average job multiplier to be 1.8 across all installations on the BRAC list; for every one job lost due to base realignment or closure, 1.8 jobs were lost in the surrounding metropolitan area (Lee, 2016). The job multiplier for this round was larger due to the higher volume of implemented recommendations compared to prior rounds. These results were found using a direct input-output method, which generated estimates for employment changes in other parts of the local economy given a change in employment directly affected by BRAC recommendations (Lee, 2016).

There were some drawbacks to the report generated by Lee. The input-output method does not consider the opportunity costs of the military bases, such as the transfer of military property to civilian use and the potential job creation associated with the new land use opportunities. Also, the input-output analysis assumes local communities would not take any action to prepare for the potential effects of installation closure or realignments, therefore the analysis estimates potential impacts instead of actual impacts (Lee, 2016).

Due to the change of goals for the last BRAC round, the DoD had $21 billion in upfront costs to implement the transformation goals of these recommendations, compared to the $25 billion of costs for the first four BRAC rounds. In 2005, the BRAC Commission calculated the DoD would achieve a positive net present value of about $36 billion over a 20-year period ending in 2025; this included an estimated annual recurring savings of $4.2 billion per year (United States Government Accountability Office, 2012).

In a 2012 report from the GAO, the implementation costs increased to $35.1 billion, an increase of 67%, and the 20-year net present valued decreased to $9.9 billion, a 72% decrease. Much of the increase in costs were due to funding military construction projects, including new construction projects, requirements, and additions to plans not included in the original estimates. The net annual recurring savings have also decreased to about $3.8 billion per year, a 9.5% decrease (United States Government Accountability Office, 2012).

Environmental Remediation

Environmental remediation is key in the success of local communities affected by BRAC allowing for the reuse of prior federal land for civilian purposes. Before land can be transferred for redevelopment, the DoD is required to clean the land up to industrial use standards; if the communities intend to use the land for purposes other than industrial use, the property must be cleaned to a greater degree at the community's expense, slowing the transfer of land. As of 2015, the DoD reported that 85% of the 575,758 acres of prior military property had been transferred. The DoD estimated they will need about $3.4 billion to complete cleanup, in addition to the $11.5 billion already spent on environmental remediation further decreasing the net present value for the land remaining to be transferred (GAO, 2017).

In 1993, President Clinton introduced the BRAC Cleanup Plan (BCP) Guidebook for use by the BRAC Cleanup Team along with the DoD. The BRAC Cleanup Team consists of the BRAC Environmental Coordinator, State Representatives, and the Environmental Protection Agency (EPA) Representative to fast track the cleanup process and make decisions for responsible disposal of property and hazardous chemicals (Department of Defense, 1993).

The main goals of the BCP are to improve environmental response actions to precipitate the reuse of prior federal land while protecting human health and the integrity of the environment (Department of Defense, 1993). The BCP is responsible for conducting environmental impact statements or environmental assessment reports and compiling recommendations to expedite environmental restoration under the National Environmental Policy Act (NEPA). Additional cleanup actions must be identified for areas contaminated with hazardous substances and removed by appropriate remedial actions. Some hazardous chemical concerns listed by the EPA include: dioxane, an unstable synthetic chemical that may become explosive under elevated temperatures, and perchlorate, which is highly soluble in water and will quickly contaminate groundwater causing thyroid issues in those that consume contaminated water (EPA, 2017). Additional environmental laws and regulations must comply with remediation plans, such as the Clean Water Act (CWA), the Clean Air Act (CAA), Endangered Species Act (ESA), and the National Historic Preservation Act (NHPA) (Environmental Protection Agency, 2017).

Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the BCP must develop a Community Relations Plan (CRP) which allows state and local authorities to participate in the planning and selection of response actions within compliance of the health and safety of both humans and the environment (Environmental Protection Agency, 2017).

Despite the implementation of the BCP and other action plans, installations still face challenges that delay the transfer of property. Installation officials have reported to the Government Accountability Office (GAO) they have challenges navigating multiple regulatory agencies for disposal of contaminates and there is no formal mechanism within the DoD to share

information between installations on how to expedite cleanup efforts or share information on prior errors made (GAO, 2017).

Case Studies

Despite BRAC being a contentious issue, both within American politics and as a public issue, most of the communities affected by the BRAC recommendations have fully recovered from their loss of employment, with some having a lower unemployment rate than the national average. Communities can reach out to multiple government organizations for redevelopment training, helpful resources, and community planning.

The Federal Facilities Restoration and Reuse Office (FFRRO) leads efforts for the EPA to expedite the cleanup and property transfer of BRAC installations. One of the most successful FFRRO sites is the former Davisville Naval Construction Battalion Center (NCBC) in North Kingstown, Rhode Island. NCBC is now part of the Quonset Business Park, one of the largest business parks in the Northeast and is home to more than 97 companies, employing nearly 2,600 people (Federal Facilities Restoration and Reuse Office (FFRRO), 2017).

The Office of Economic Adjustment (OEA) under the DoD has aided in the successful redevelopment of many communities affected by BRAC, one of them being the prior Williams Air Force Base (AFB) in Arizona. The installation closed during the 1991 round and resulted in a loss of 728 civilian positions. The Governor of Arizona appointed the Williams AFB Economic Reuse Planning Advisory Committee, which developed the Williams Economic Reuse Plan outlining the redevelopment of the base. The majority of the AFB was converted to the Phoenix-Mesa Gateway Airport, employing more than 4,000 personnel and part of it was converted to housing for 10,000

college students. The land now generates over $1.3 billion annually (Office of Economic Adjustment, 2017).

Significance and Policy/Business Implications

The Base Realignment and Policy Act (BRAC) has been instrumental in changing military installations to better facilitate the needs of our current forces and has saved the Department of Defense (DoD) billions of dollars in expenses. BRAC remains a contentious issue within our political system, with some politicians trying to prevent additional rounds and others calling for action.

For the past several years, another BRAC round has been presented to Congress during budgetary meetings as an argument to save money and reduce excess military force infrastructure. Members of Congress do not agree on the Act's effectiveness and many members use the 2005 round as an example. The 2005 round chose base recommendations with a goal of military transformation during a post-9/11 wartime rather than a reduction in excess infrastructure and grossly underestimated the expected costs and overstated the long-term financial benefits. This round lacked organization within the DoD to properly handle the massive transformation and though the 2005 round has produced positive annual net benefits, an argument for additional rounds has not persuaded enough members of Congress to approve additional BRAC rounds.

A study, published in early 2018, was conducted to review the DoD's performance outcomes from BRAC 2005; this was to be accomplished by examining the data collected on the performance of areas affected by BRAC and how they addressed additional challenges to improve

performance for future BRAC rounds. The study found the DoD did not measure the 2005 BRAC round outcomes and generated no data on the effects of reducing excess infrastructure or realigning bases to promote joint activities. (GAO, 2018)

The main challenges that were faced by the DoD were communication and monitoring mission-related efforts. Installations voiced concerns over the inability to communicate with BRAC decision makers outside of the data-collection process due to signed nondisclosure agreements. Officials at the Army Base Fort Knox, Kentucky, stated they were unable to convey issues regarding the relocation of their human resources department to a building that would require additional renovation efforts beyond its expected costs. As a result, the DoD spent an additional $55 million on construction costs for a new building that would meet the needs of the command. (GAO, 2018)

The DoD's lack of monitoring mission-related changes during the implementation of the 2005 recommendations hindered units' ability to carry out their missions. At Eglin Air Force Base in Florida, the initial BRAC recommendation was to expand the base to provide an F-35 Joint Training Site for the Air Force, Navy, and Marines. Due to an environmental impact statement limiting the space needed for the joint training site, the decision was made by the Air Force to move to the Marine Corps Air Station in Beaufort, South Carolina, a site better equipped to accommodate their F-35 training missions. The mission change was not properly communicated, and the DoD approved the $27.7 million project to expand the airstrip in Eglin (GAO, 2018).

The Pentagon prepared an infrastructure capacity at the request of Congress in 2017 and found the military has 19% excess capacity based on the force structure from FY 2012 resulting

in $2 billion in costs. Present day military numbers are declining, about 1.4 million members in 2012 to approximately 1.28 million members in 2017, and are not expected to reach their 2012 levels again. In June 2018 before the Senate of Armed Services, Secretary of Defense Mattis stated, “Of all the efficiency measures the Department has undertaken over the years, BRAC is one of the most successful and significant—we forecast that a properly focused base closure effort will generate $2 billion or more annually—enough to buy 300 Apache attack helicopters, 120 F/A-18E/F Super Hornets, or four Virginia-class submarines…[we] must be able to eliminate excess infrastructure in order to shift resources to readiness and modernization.” (Rep. Smith & Preble, 2018).

In 2016, the then-Deputy Secretary of Defense Robert Work made an argument for future BRAC rounds to Congress; “Under current fiscal restraints, local communities will experience economic impacts regardless of a congressional decision regarding BRAC authorization. This has the harmful and unintended consequence of forcing the Military Departments to consider cuts at all installations, without regard to military value…Without BRAC, local communities’ ability to plan and adapt to these changes is less robust and offers fewer protections than under BRAC law.”

Some members of Congress oppose any new BRAC round because of the associated costs and concerns over the negative public view of base closures. If BRAC rounds are in the future, the DoD must address the concerns regarding communication and the monitoring of mission-related efforts. Clear and consistent communication and management efforts throughout all levels of the departments must be established to regain trust within Congress and avoid previous

complications. This will ensure data collection is up-to-date, complete, and accurate to avoid any additional costs for future recommendations.

The BRAC process is efficient and has long term positive effects on the communities affected. The DoD must address the communication and monitoring challenges so Congress can take the steps needed to ensure its goals to reduce unnecessary spending and developing a more efficient military. Along with the reduction of superfluous spending, there are environmental benefits associated with closing excess force structure. Bases are a great source of pollution, reducing the excess infrastructure has positive environmental benefits and allows the local communities to have control over the property once it is transferred. Congress should work with the current Administration to allow the DoD to effectively manage their facilities and reconsider the future of BRAC to meet the modern needs of the military.

Conclusion

The Base Realignment and Closure Act (BRAC) has reduced excess military infrastructure, fostered force jointness, and reduced Department of Defense (DoD) spending. The first four rounds of BRAC has an estimated annual net savings of about $8 billion and the last round has an estimated annual net savings of about $4 million, totaling a current annual net savings of about $12 billion. Affected communities initially had a loss of employment, but due to the property transfer of prior installations, they were able to reuse the land for civilian purposes and create jobs negating the initial job losses. BRAC remains a contentious issue political issue, but with the knowledge acquired from previous rounds, BRAC may have a future in our country again.

References

BRAC. (2005). *About the Commission*. Retrieved from Defense Base Closure and Realignment Commission: www.brac.gov/about.html

Cowan, T. (2012, February 07). *Military Base Closures: Socioeconomic Impacts.* Retrieved from Congressional Research Service: https://fas.org/sgp/crs/natsec/RS22147.pdf

Department of Defense. (1993). *BRAC Cleanup Plan (BCP) Guidebook.* Retrieved from https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=8546

Department of Defense. (2005). *Memorandum for Infrastructure Execcutive Council Members Infrastructure Steering Group Members Joint Cross-Service Group Chairman.* The Under Secretary of Defense. Retrieved from www.brac.gov/docs/criteria_final_jan4_05.pdf

Environmental Protection Agency. (2017, January 24). *Overview of Primary Environmental Regulations Pertinent to BRAC Cleanup Plan Development: Appendix A*. Retrieved from Cleanups at Federal Facilities: https://www.epa.gov/fedfac/overview-primary-environmental-regulations-pertinent-brac-cleanup-plan-development-appendix

EPA. (2017, December 5). *Emerging Contaminants and Federal Facility Contaminants of Concern.* Retrieved from Cleanups at Federal Facilities: https://www.epa.gov/fedfac/emerging-contaminants-and-federal-facility-contaminants-concern

Federal Facilities Restoration and Reuse Office (FFRRO). (2017). *BRAC AND EPA'S FEDERAL FACILITY CLEANUP PROGRAM: Three Decades of Excellence, Innovation and Reuse.* Office of Land and Emergency Management (OLEM). Washington, DC: EPA. Retrieved from

https://www.epa.gov/sites/production/files/2017-12/documents/brac_v9_11_2_2017_508.pdf

GAO. (2017). *Military Base Realignments and Closures; DOD has improved Environmental Cleanup Reporting but Should Obtain and Share More Information.* Washington, DC: United States Government Accountability Office. Retrieved from https://www.gao.gov/assets/690/682204.pdf

GAO. (2018). *DoD Should Address Challnges with COmmunication and Mission Changes to Improve Future Base Realingment and CLosure Rounds.* United States Government Accountability Office. Retrieved from https://www.gao.gov/assets/700/690996.pdf

Government Accountability Office. (2005). *Analysis of DOD's 2005 Selection Process and Recommendations for Base Closures and Realignments.* Report to Congressional Committees, United States Government, GAO. Retrieved from https://www.gao.gov/assets/250/246994.pdf

House of Representatives, Committee on Armed Services, Subcommittee on Readiness. (2012). REQUEST FOR AUTHORIZATION OF ANOTHER BRAC ROUND AND ADDITIONAL REDUCTIONS IN OVERSEAS BASES. *Hearing Before the Subcommittee on Readiness of the Committee on Armed Services; House of Representatives One Hundred Twelfth Congress Second Sessions* (p. 101). Washington DC: U.S. Government Publishing Office. Retrieved from https://www.gpo.gov/fdsys/pkg/CHRG-112hhrg73441/html/CHRG-112hhrg73441.htm

Hultquist, A., & Petras, T. L. (2012). An Examination of the Local Economic Impacts of Military Base Closures. *SAGE journals, 26*(2), 151-161. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.842.404&rep=rep1&type=pdf

Lee, J. (2016). The Regional Economic Effects of Military Base. *Defence and Peace Economics, 2018*, 264-311. doi:10.1080/10242694.2016.1170335

Office of Economic Adjustment. (2017, October). *Project Profiles - Williams Air Force Base*. Retrieved from Base Realignment and Closure: http://www.oea.gov/how-we-do-it/base-realignment-and-closure

Rep. Smith, A., & Preble, C. (2018). *Another BRAC Now.* Strategic Studies Quarterly. Air University Press. Retrieved from https://www.jstor.org/stable/26333873?seq=1#metadata_info_tab_contents

United States Government Accountability Office. (2012). *Military Base Realignments and Closures.* Washington DC: GAO. Retrieved from https://www.gao.gov/assets/600/592076.pdf

Warren, D. R. (1998). *Military Bases: Status of Prior Base Realignment and Closure Rounds.* National Security and International Affairs Division. General Accounting Office. Retrieved from https://www.acq.osd.mil/brac/Downloads/Prior%20BRAC%20Rounds/gaostatus98-2.pdf