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CHANGING THE BUSINESS OF DEFENSE

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The passage of the Budget Control Act of 2011 exacerbated an already uncertain budget environment for the Department of Defense. While the act did provide some clarity on the level of funding for the current fiscal year (roughly \$26-27 billion less than requested in FY 2012), it left many more issues unresolved. The allocation of cuts within the defense budget for FY 2012 is not yet decided and the Department may again operate under a continuing resolution well into the new fiscal year. Moreover, the level of funding for FY 2013 and beyond is far from certain. The base defense budget for FY 2013 could range from roughly \$524 billion if no additional cuts are imposed by the Super Committee to \$472 billion if sequestration occurs.¹ Given the schedule for when sequestration enforcement begins, the precise level of funding for FY 2013 may not be known until after the November 2012 election and well into the next fiscal year. DoD faces a fundamental choice in how it prepares to trim its budget under such a high degree of uncertainty. It can change the way it does business (get more efficient) or change the business it does (shift strategy). Under the deepest cuts proposed, it may well need to do both.

DoD should develop a menu of options for how cuts can be implemented, including cuts as deep as sequestration would impose. At the top of this menu should be options that change the way DoD does business, such as reforming the compensation system and relying more on unmanned systems. Such cuts can reduce costs without reducing military capabilities, although they may require politically difficult decisions. If deeper cuts are required, DoD should rethink its strategic approach to meeting global commitments, such as greater burden-sharing by allies around the world. Only once all of these options have been explored should DoD resort to accepting increased risks or shedding roles and missions. This backgrounder presents three examples in which the Department can reduce costs by changing the way it does business and shifting strategy to change the business it does.

¹ For a more detailed discussion of the Budget Control Act, see Todd Harrison, *Defense Funding in the Budget Control Act of 2011* (Washington DC: CSBA, August 2011).

Compensation and Benefits

Pay and benefits for military personnel total \$181 billion in the FY 2012 budget request.² The cost of military personnel has grown by 46 percent on a per person basis in real terms over the past ten years due to new and expanded benefits, higher than requested pay raises, and additional bonuses and incentive pays. But as costs have increased, little research has been conducted into how effective these efforts have been at improving recruiting, retention, and overall satisfaction within the ranks. A recent poll by the Pew Research Center found that service members who have served since 9/11 are actually less satisfied with their personal financial situation than those who served before 9/11, despite the large increases in pay and benefits over the past decade.³ This suggests that the significant increases in compensation over the past decade did not have the desired effect—service members do not value these increases commensurate with what they cost.

Rather than focusing exclusively on how to reduce costs, DoD should instead focus on how to get better value from its compensation and benefits programs. To do this the Department would need to measure the value service members place on current benefits and their preferences among various options to change these benefits. For example, Congress created the TRICARE for Life program in 2001 as a Medicare supplemental insurance policy for military retirees over the age of 65. This program will benefit relatively few members of the military currently serving, since more than 80 percent will not stay the full 20 years to earn a retirement and qualify for TRICARE for Life when they turn 65.⁴ But DoD must set aside \$5,580 annually for each person in the active duty force to pay for the future cost of this benefit.⁵ The relevant question is: do service members value this benefit commensurate with what it costs DoD to provide? Someone who plans to stay 20 years and make a career of the military would likely value this benefit more than someone who plans to stay only 5 years. But it is possible that even those who plan to stay 20 years do not value the benefit as much as it costs—they may prefer an annual cash bonus that is less than the \$5,580 DoD spends to provide this benefit.

This approach, known as preference-based benefits optimization, could be applied across the full range of compensation and benefits, to include special pays, bonuses, healthcare, retirement, and in-kind benefits such as commissaries, on-base facilities, and K-12 schools. Where misalignments are identified between DoD's offerings and the value perceptions of service members, DoD can maintain

² This includes funding in the Military Personnel title of the budget as well as the Defense Health Program in the Operation and Maintenance title.

³ See the results of the Pew Research Center Survey "War and Sacrifice in the Post-9/11 Era," Appendix 2, question 2b. Accessed on October 6, 2011 at:

<http://www.pewsocialtrends.org/files/2011/10/war-and-sacrifice-in-the-post-9-11-era.pdf>

⁴ Defense Business Board, *Report to Secretary of Defense: Modernizing the Military Healthcare System* (Arlington, VA: DoD, October 2011), p. 2.

⁵ DoD Office of the Actuary, *Valuation of the Medicare-Eligible Retiree Health Care Fund* (Arlington, VA: DoD, September 30, 2009) p. 2.

or even increase perceived value while reducing costs. A central part of this process is measuring how individuals make decisions regarding compensation and benefits and the perceived dollar value of each aspect of compensation. Instead of using a one-size-fits-all approach, options could be developed that allow service members to choose among benefits to improve their perceived value while reducing costs. The goal would be to create a total compensation package that service members prefer over the existing package at a lower total cost to the Department. Moreover, if DoD had better insight into the preferences of service members, it could use a broader array of tools to shape the force and retain the right mix of personnel in terms of skills and experience.

Preference-based benefits optimization has been applied successfully by private sector companies to predict acceptance of and satisfaction with changes to compensation and benefits before they are implemented. For example, TrueChoice Solutions, a company that specializes in benefits optimization, has used this approach to help Fortune 100 companies identify an average of \$1,200 to \$1,500 in benefits savings per employee per year while maintaining or improving perceived value. When all elements of compensation are on the table, they found that savings of over \$4,000 per employee per year are possible.⁶ Savings of this magnitude applied across 1.5 million active duty troops could result in some \$60 billion in savings over ten years—without cutting end strength or reducing service member satisfaction with their compensation and benefits.⁷ Given the prospect of a significant decline in defense funding over the coming decade, Congress should create a bi-partisan, BRAC-like commission to recommend reforms to the military compensation and benefits system that maintain or improve value while reducing costs.⁸ For its own part, DoD should begin taking the first steps toward using a preference-based benefits optimization approach by developing a capability to measure the preferences of service members.

Use of Unmanned Systems

An important development over the past decade of fighting in Iraq and Afghanistan has been the increased capabilities of unmanned systems. Unmanned aerial systems in particular provide persistent intelligence, surveillance, and reconnaissance (ISR) coverage and loitering strike capabilities that manned systems cannot provide on the scale commanders require. These

⁶ Data obtained from discussions with representatives of TrueChoice Solutions, Inc. For more information on their methodology, see <http://www.truechoicesolutions.com/>.

⁷ This estimate assumes \$4,000 in annual savings per service member, which would result in \$6 billion in annual savings or \$60 billion over ten years. Given that a much larger fraction of military personnel costs are in non-cash and deferred benefits (52 percent) as compared to the private sector (29 percent), it is reasonable to think that savings larger than \$4,000 per person are possible.

⁸ The Base Realignment and Closure (BRAC) process uses an independent commission to develop a comprehensive set of recommendations for base closures and realignments, which the Congress must accept (by allowing them to go into effect) or reject (by passing a joint resolution of disapproval) in their entirety without amendment or other modification.

operational advantages have been possible due in part to the relatively uncontested airspace in which these systems have operated.⁹ But unmanned systems also provide several cost advantages. They typically require fewer personnel to operate, fewer training resources, and fewer overall systems to achieve the same level of capability. One way DoD could achieve long-term cost savings would be to change the way it does business by relying more on unmanned systems where technology and missions allow—effectively substituting technology for labor to achieve operational efficiencies.¹⁰

To understand the magnitude and nature of the of costs savings involved, compare two nearly identical aircraft, one manned and one unmanned, that provide a long-range, long-endurance ISR capability similar to that of the RQ-4 Global Hawk.¹¹ A manned system is limited to mission durations of 10 hours or less due to the physical constraints of the pilot, while an unmanned system is limited only by the amount of fuel on board, meaning flights of 32 hours are possible in the case of the Global Hawk.¹² A longer duration flight means that for each reconnaissance sortie the aircraft spends less time in transit to and from the target area and more time over the target. This translates into fewer overall aircraft required to maintain a 24/7 orbit using an unmanned system.¹³ Eight manned aircraft would be required to maintain one orbit compared to 3 unmanned aircraft. When aircraft attrition rates are included over a projected 20 year time horizon, the number of aircraft procured rises to 17 for the manned system and 9 for the unmanned system. Thus, the total procurement cost is significantly less for the unmanned system.

The personnel costs associated with the unmanned system are also much lower. Personnel savings come from the fact that fewer pilots, maintenance, and support personnel are needed because fewer aircraft are used to perform the same mission. While a manned system would need 15 pilots and 96 maintainers forward-deployed to maintain one 24/7 orbit using 8 aircraft, an unmanned system would require only 4 pilots and 35 maintainers forward deployed using 3 aircraft. Similar personnel savings would be achieved in non-deployed personnel, with a manned system requiring a total of 74 personnel for mission

⁹ Systems such as the Predator and Reaper UAVs are not designed to operate in the presence of even modest air defenses or jamming.

¹⁰ The U.S. has a long history of using technology to improve force protection and military capabilities, resulting in a smaller force overall and more expensive systems procured in lower quantities. The use of unmanned systems creates an additional opportunity for savings through the substitution of technology for labor because it removes personnel from the battle-space rather than attempting to protect them.

¹¹ A detailed explanation of the cost model and assumptions used for this analysis can be provided by the author upon request.

¹² This assumes a maximum duty day of 12 hours, with one hour for pre-mission briefing and one hour for post-mission debriefing.

¹³ The example assumes a similar utilization rate for the manned and unmanned aircraft, roughly one flight every other day.

control support per orbit compared to 64 for an unmanned system.¹⁴ Assuming 6 total orbits would be maintained over a 20 year period, a total of 103 aircraft and 2,292 personnel would be needed for the manned system compared to 52 aircraft and 1,800 personnel for the unmanned system.

The most critical cost differentiator, however, is in training. While operators of unmanned systems require regular training to maintain proficiency, their training can be conducted almost entirely using simulators. Manned systems, in contrast, require actual flight time on a regular basis. Assuming six orbits are maintained and each non-deployed pilot receives 10 hours of flight time per month, an additional 21,600 flight hours would be required each year for training. An additional 62 aircraft (including an attrition reserve) would be needed to support the training mission, and these training aircraft would require an additional 600 maintenance personnel.¹⁵

In this example, the total lifecycle cost of the unmanned system is less than half the cost of the manned system due to the savings from procuring fewer aircraft, requiring fewer personnel, and flying fewer hours. While this example is specific to a type of ISR mission, it may be possible to achieve similar savings from unmanned systems in other areas, such as underwater vehicles and ground vehicles. However, current technology in unmanned systems limits their application to relatively permissive operating environments. For example, while both manned and unmanned aircraft can be made stealthy to evade air defenses, unmanned aircraft remain critically dependent on communication links for command and control and thus are vulnerable to jamming.¹⁶ Advances in autonomy and resilient communications, however, could expand the applicability of unmanned systems in contested environments, making these important areas for investment even in a constrained budget environment.¹⁷

Role of Allies

Depending on the extent of any future defense budget cuts, efforts to change the way DoD does business may not be adequate to address growing fiscal constraints. Instead, if the mismatch between economic resources and global responsibilities becomes too great, Washington may need to change the business that it does; that is, it may need to consider more fundamental changes in defense

¹⁴ An additional 197 personnel are assumed to be needed to support the processing of data obtained by the ISR platform, but this workload would be the same for either a manned or unmanned vehicle and is not a cost differentiator.

¹⁵ Fifty aircraft would be needed for the training mission and an additional 12 would need to be procured over time to replace normal attrition losses. Twelve maintenance personnel are assumed to be needed for each of the 50 training aircraft.

¹⁶ Both manned and unmanned ISR systems are dependent on communication links for real-time data exfiltration.

¹⁷ Advances in autonomy, for example, could reduce the dependence of unmanned systems on communication links for command and control by allowing some level of independent decision making.

strategy that could reduce the amount of resources that DoD requires, enable it to use available resources more effectively, or both.

Good defense strategies should have two closely related characteristics. First, they must strike a balance between means, ways, and ends so that a nation can meet its core objectives without suffering from overextension and eroding the economic strength that underpins military power. Second, achieving that balance is far easier if a nation can identify and exploit its own comparative advantages, especially if they can align these advantages against a rival's weaknesses.¹⁸ Today, one of the United States' most important and enduring advantages is its broad portfolio of formal military allies and informal security partners.¹⁹ Faced with the prospect of flat or declining defense budgets in the years ahead, Washington could exploit this advantage more aggressively through burden-shedding or increased burden-sharing. Although the former option would likely yield greater cost savings because it would entail relinquishing certain responsibilities and abandoning select mission areas, it would also require accepting a higher degree of risk because the United States would be entirely dependent on other nations to perform any roles that it abdicated. By contrast, the latter possibility could be a more viable and less dangerous way to avoid asking DoD to do the same or even more with less in the years ahead because it would only entail devolving partial responsibility for existing roles to other nations.

Of course, not all American allies and partners have the willingness and ability to shoulder the burdens that Washington might hope to share. For example, burden-sharing efforts have long been constrained by the "free-rider" dilemma: because the U.S. provides security guarantees to other nations as well as collective goods such as enforcing freedom of the seas, many allies and partners devote fewer resources toward defense than they might absent American support. Nevertheless, Washington's growing financial constraints could actually incentivize some allies overseas to take greater responsibility for their own security or to help provide collective goods by demonstrating the very real limits on American military power; if it becomes clear that the United States no longer has the capability or capacity to meet all of its existing obligations, free-riding could become a far less attractive option. More importantly, the United States should alter its defense strategy by attempting to identify and work with nations that do have considerable resources, shared interests, and the desire to play a more active role in meeting local and global security challenges.

India, for example, has a rapidly growing economy and is already using those resources to become a significant military power within its own region and

¹⁸ Andrew F. Krepinevich and Barry D. Watts, *Regaining Strategic Competence* (Washington, DC: Center for Strategic and Budgetary Assessments, 2009), chapter 2.

¹⁹ For an overview of the U.S. alliance portfolio, see Evan Braden Montgomery, *Reshaping America's Alliances for the Long Haul* (Washington, DC: Center for Strategic and Budgetary Assessments, 2009).

beyond. Not only has its defense budget grown considerably over the past decades, increasing from less than \$22 billion in 2000 to nearly \$35 billion in 2010, but it is also investing in a range of capabilities, including aircraft carriers, other large surface combatants, diesel-electric submarines, maritime patrol aircraft, and combat aircraft.²⁰ With a large fleet comprised of modern carriers, destroyers, undersea warfare systems, and the logistical infrastructure necessary to support them, India could take on a greater role in protecting the maritime commons by conducting freedom of navigation, counter-piracy, counter-smuggling, humanitarian assistance, and disaster relief operations across the Indian Ocean region—a role it might be willing to play given its own ambitions to become a serious naval power. This could, in turn, relieve the U.S. Navy of these burdens, which are only likely to grow if threats to seaborne commerce from non-state actors increase while the size of the U.S. Navy continues to decline. As then-Secretary of Defense Gates declared, “India can be a net provider of security in the Indian Ocean and beyond.”²¹

The U.S-Indian strategic partnership that first began to take root during the latter years of the Clinton administration has proceeded in fits and starts over the past decade, however, and could take another decade or more to mature. Yet New Delhi’s growing capabilities and compatible interests suggest that Washington should continue to prioritize bilateral cooperation through diplomatic engagement, combined military exercises, and arms sales.

Conclusion

Given the high degree of uncertainty in defense funding for the next two years and beyond, DoD should prepare budget options for a range of contingencies, including cuts as deep and abrupt as those sequestration would impose. Depending on the level of cuts ultimately enacted, DoD may well be forced to cut weapon systems, reduce force structure and personnel, and shed roles and missions. But before any of these cuts are decided upon, the Department should first look at options that do not involve eliminating capabilities and abdicating commitments. Using preference-based benefits optimization would allow DoD to get better value from its compensation and benefits programs; greater use of unmanned systems would reduce total lifecycle costs for some types of weapon systems; and increased burden-sharing with allies would allow DoD to maintain its global commitments with fewer resources.

²⁰ On India’s military modernization efforts see Richard A. Bitzinger, “Military Modernization in the Asia-Pacific” in Ashley J. Tellis, Andrew Marble, and Travis Tanner, eds., *Strategic Asia 2010-11: Asia’s Rising Power and America’s Continued Purpose* (Seattle: National Bureau of Asian Research, 2010); Walter C. Ladwig III, “India and Military Power Projection: Will the Land of Gandhi Become a Conventional Military Power,” *Asian Survey*, Vol. 50, No. 6; and Rahul Bedi, “Getting in Step: India Country Briefing,” *Jane’s Defence Weekly*, February 6, 2008. Aggregate defense budget figures are from the SIPRI military expenditure database, and are presented in constant 2009 U.S. dollars. Accessed at <http://milexdata.sipri.org/result.php4>.

²¹ Robert M. Gates, “Forward, Together,” *Times of India*, January 19, 2010.

There are no silver bullets that can dramatically reduce the defense budget without forcing tough decisions and tradeoffs. Developing budget options, such as those proposed here, inherently runs the risk of exposing vulnerable areas of the defense budget to additional scrutiny by the Office of Management and Budget and Congress and potentially increasing the likelihood that such cuts will occur. But failure to do so effectively prevents DoD from guiding how such cuts are made within the defense budget and increases the likelihood of untargeted, across the board cuts.²²

If the Super Committee does not reach an agreement and the trigger on sequestration is pulled, DoD should not expect to find a silver bullet in the chamber. Cuts under sequestration would be messy, inefficient, and uninformed by strategy. Rather than waiting and hoping, the Department should get ahead of the curve and develop its own set of targeted budget options, such as those proposed here, that can be rolled out quickly in the FY 2013 budget request, or in a budget amendment, in order to keep the request within the budget caps in effect at the time and avoid sequestration.

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²² For example, in the FY 2011 budget cycle Congress cut a total of \$20 billion from the President's budget request in a last minute agreement to avert a government shutdown. In FY 2012, Congress will need to cut approximately \$26 to \$27 billion from the President's budget request to stay within the initial budget caps enacted in the Budget Control Act of 2011. In both cases, DoD did not submit a budget amendment to Congress detailing how or where such cuts should be made.