

BROOKINGS

The Arsenal of Democracy and How to Preserve It: Key Issues in Defense Industrial Policy

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The numbers that make up what the United States spends on its military are large to be sure. In 2011, \$549 billion was in the main Defense Department budget, with another \$159 billion in the “supplemental” budget that funds wartime operations in places like Afghanistan and Iraq. The sum total of \$708 billion that the United States spends on its defense is actually 43% of all the military spending in the world, distantly followed by China (7.3% of world military spending share), UK (3.7%), France (3.6%), and Russia (3.6%).

That the United States spends so much on its military may strike some as unreasonable, but it reflects decisions made by the American public and its leaders about the role the United States should play in the world. It reflects the global commitments of a superpower and the requirements that go into meeting them via a modern and, importantly, professional (as opposed to draft-based) force equipped with some of the best military equipment in the world. It is also not a huge share of the nation’s economic output. At just over 4 percent of GDP, it is substantially less by this measure than defense spending during the Reagan years (6 percent) or the 1950s and 1960s (typically 9 to 10 percent). Indeed, it is somewhat less than the 4.5 percent figures that characterized the U.S. armed forces during the post-Vietnam days of a “hollow Army.”

Since the attacks of 9-11, these military commitments, and the ensuing costs, have shot upwards, with the Pentagon’s budget effectively doubling. Ten years in, and with the American economy faltering, however, the budget situation is poised for a sea change. With the United States coming to a political and then economic crisis related to its debt and deficit, America’s leaders came to a begrudging compromise in the summer of 2011. In tense, last minute, negotiations between the Obama White House and congressional Republicans, the two sides agreed to continue to finance the growing U.S. debt beyond the old ceiling. But the deal also came with a catch: they would also engage in a massive search for budget savings as well as explore how to deal with the underlying problems in America’s entitlement and tax policies that were truly driving the crisis.

The deal agreed that somewhere between \$400 billion and almost \$1 trillion dollars worth of spending on national security over the next decade will have to be cut from the budget. \$400 billion in cuts were agreed to in the debt ceiling deal reached at the end of summer 2011. And another roughly \$500 billion in cuts is potentially on the table, dependent on how the Congress deals with the sequestration commitment it made as part of the debt limit deal.

In short, the fiscal and political reality is that the United States will again undergo a post-war defense budget reduction of the type that has followed every major war in its modern history. The numbers remain to be resolved, but the most likely scenarios are that the annual resources available to the military and the wider defense industrial base will decline significantly over the coming years.

The magnitude of this reduction will feel dire to a Defense Department and industrial base that have known only growth in spending for the last decade. But it is not unusual by historical standards. Indeed, the budgetary starting point of more than \$700 billion is in fact substantially higher than

peak spending in past periods including the Korean War, Vietnam War, and Reagan defense buildup. The Obama budget proposal of early 2012 would take the base budget back to near 2007 levels—a steep drop to be sure, especially when combined with much larger percentage cuts in war spending, but not an historical anomaly.

Yet there are severe challenges that could result to the nation's security interests even with 10 percent cutbacks. Despite the likely potential of lesser resources, the demand side of the equation does not seem likely to grow easier. The international security environment is challenging and complex. China's economic, political and now military rise continues. Its direction is uncertain, but it has already raised tension, especially in the South China Sea. Iran's ambitions and machinations remain foreboding, with its nuclear plans entering a new phase of both capability but also crisis. North Korea is all the more uncertain with a leadership transition, but has a history of brinkmanship and indeed even the occasional use of force against the South, not to mention nuclear weapons-related activities that raise deep concern. And the hopeful series of revolutions in the broader Arab world in 2011, while inspiring at many levels, also seem likely to raise uncertainty in the broader Middle East. Revolutions are inherently unpredictable and often messy geostrategic events. On top of these remain commitments in Afghanistan and beyond and the frequent U.S. military role in humanitarian disaster relief. Thus, there are broad challenges for American defense planners as they try to address this challenging world with fewer available resources.

The current wave of defense cuts is also different than past defense budget reductions in their likely industrial impact, as the U.S. defense industrial base is in a much different place than it was in the past. Defense industrial issues are too often viewed through the lens of jobs and pet projects to protect in congressional districts. But the overall health of the firms that supply the technologies our armed forces utilize does have national security resonance. Qualitative superiority in weaponry and other key military technology has become an essential element of American military power in the modern era—not only for winning wars but for deterring them. That requires world-class scientific and manufacturing capabilities—which in turn can also generate civilian and military export opportunities for the United States in a globalized marketplace.

While procurement budgets have finally, in recent years, reached their historic norms as a percent of the overall defense budget, the legacy of the 1990s procurement “holiday” remains real. In that period, the United States as a matter of policy bought much less equipment than it would normally, enjoying the fruits of the 1980s buildup as it sought to reduce defense spending. But Reagan-era weaponry is wearing out, and the recent increase in procurement spending has not lasted long enough to replenish the nation's key weapons arsenals with new weaponry. The last decade of procurement policy focused more on filling certain gaps in counterinsurgency capabilities than replacing the mainline weapons programs that make up the bulk of conventional capabilities. Meanwhile, the main elements of DoD's weapons inventories—fighter jets, armored vehicles, surface vessels and submarines—continue to age.

We often say that, in today's American armed forces, people are our most cherished commodity and greatest asset. That is certainly true at one level, through the dedication and excellence shown by our brave men and women in uniform. But it is also true that adjusting the personnel size of the military up or down has been done with success multiple times, and seems likely to happen again. By contrast, scientific and manufacturing excellence in the defense space is not something easily moved up and down. Today's industrial capabilities took decades to build and would be hard to restore if

lost (Great Britain's difficulty restoring its ability to build nuclear submarines is a frequently cited example.).

Unlike the period just after the Cold War, there are no obvious surpluses of defense firms, such that a natural paring process will find the fittest firms and ensure their survival. While there are roughly five major firms, there are often just one or two suppliers in any given major area of defense technology. Similar challenges exist within the subcontractor community, which has become highly specialized, with certain key components or capabilities similarly reflecting monopolies or oligopolies, or being acquired by the primes in a way that risks future competition. The defense economy is also experiencing meta-changes in everything from shifts in traditional sectors, such as the move from manned to unmanned planes, to new sectors arising like cybersesecurity, to a broader move from the exclusive production of goods to the growing provision of defense services.

Such issues in the defense economy also touch on broader areas of national economic and geopolitical competitiveness. Top class American firms rely on top class scientists and engineers. At present, the United States ranks in the lower half of industrial countries for the average math and science scores of its public school students and graduates just a fraction as many scientists and engineers a year from university-level studies as does either China or India. These trends should not be overstated; the quality of American scientists and engineers remains world class. But the trends still pose deep worries in the American defense industrial field as it looks towards the future of its work force, which is aging rapidly in numerous sectors.

Not only then are the U.S. military services, but also American defense industry at a crossroads. Normally, defense policy decisions in times of retrenchment begin with strategy, threats, missions, and force structure and only address defense industrial issues as an afterthought. In past days of flush budgets and numerous duplicative suppliers, this approach may have made sense. It makes sense no longer. Careless defense reductions or poor planning won't just cost jobs or competitiveness, but could actually result in lost American military industrial capability in core areas.

The Department of Defense has recently made some encouraging moves towards emphasizing the role of the industrial base in its strategic and budgetary planning. The 2010 Quadrennial Defense Review examined the subject, for example, and Secretary Panetta and his deputies have convened several meetings in recent months with industry leaders to discuss their concerns. But industrial base considerations remain little discussed outside the specialist community and too frequently take a short term or single interest approach, such as asking a candidate to weigh in on an individual product or firm. Rather, it is the overall state of the field and its future that should be of concern to all, regardless of where they stand on the political spectrum.

Thus, as presidential candidates and other national leaders develop their platforms for the 2012 elections and beyond, any serious discussion of national security and the current state and future of the military must also give direct attention to matters of the American national security scientific and industrial base. This discussion should be direct and forthright, recognizing the context of severe budgetary dilemmas for the nation, the success and challenges of the defense economy, changing military demands, and the gradual erosion of American manufacturing in many sectors over the last several decades.

Among the core questions for candidates to develop their policy answers around are:

1. Are there any sectors within American defense industry or types of technologies for the Department of Defense that should be prioritized? If this is the case, what should be prioritized and what are the areas that are not quite as important as others—or even over resourced at present?
2. The Department of Defense is likely to reduce the size of the nation's ground forces considerably in the years ahead, as the war in Afghanistan gradually winds down. Does this imply prioritizing investment in Air-Sea battle capabilities at the expense of ground force capability, or should the United States try to do all with less?
3. Do the Pentagon and Congress have enough tools for evaluating the strength of the nation's industrial base and its access to key raw materials and technologies? If not, what should be done to give this subject greater scrutiny and sustained attention?
4. Should the Department of Defense move to more fixed-price contracts in its procurement policies? Should private companies be allowed to compete for a higher share of maintenance contracts, even if that means downsizing government depots?
5. Is the Pentagon's increased focus on enlarging its acquisition oversight workforce making the acquisition process more innovative, economical, and efficient or more burdensome and bureaucratic?
6. Are there tools of export and trade policy that need to be adjusted to strengthen the U.S. defense industrial base? If so, what? Is the FMS program basically sound? Does the consolidation of export control lists within Commerce bode well or are other steps needed?
7. Are there certain allies from which the United States should be willing to import more defense technology, especially if the improved trade opportunities are reciprocated? Should we explore pooling and joint production options with our close allies, along the lines of what Britain and France have recently launched?
8. How should the nation strengthen STEM education in the United States, in high schools and colleges, to encourage more Americans to pursue careers in science, technology, engineering, and math? Does the nation need to revise any of its immigration and green-card policies to increase the ability of foreign scientists to remain in this country after studying here and contribute to its scientific and industrial strength?
9. Do government regulations and requirements deter new and innovative firms from entering the defense market to the detriment of the nation's military? If so, what should be done to induce their entry?
10. Are there any other policy interventions that might be needed to ensure American military technological preeminence in the years ahead? A certain floor under R&D budgets? Targeted sustainment funding for specific capabilities such as independent weapons design teams at numerous firms? Greater DoD contributions to research and prototyping by defense firms?

The United States, and its civilian leaders, cannot afford to avoid the hard questions that now come with maintaining a strong successful military, a top flight defense industrial base, and a fiscally sound national economy. Our defense industrial base is certainly not broken, but there are clear, unavoidable challenges that loom, which might undercut broader national security, and the looming big budget cutbacks raise the stakes and heighten the sense of urgency in addressing the issue.

In sum, the arsenal of democracy that arms the best military in the world, took decades to build. If allowed to atrophy, it would take decades to rebuild. Those who would seek to lead the U.S. armed forces must answer the key questions to ensure these capabilities are not lost in a matter of years.

Signatories

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Reading Ideas

David J. Berteau, Guy Ben-Ari, Gregory Sanders, Joachim Hofbauer, David Morrow, Jesse Ellman-
“Structure and Dynamics of the US Federal Services Industrial Base, 2000-2010”
http://csis.org/files/publication/111123_Services_2011.pdf

Mackenzie Eaglen and Diem Nguyen- “Super Committee Failure and Sequestration Put at Risk Ever More Military Plans and Programs” <http://www.heritage.org/research/reports/2011/12/debt-ceiling-deal-puts-at-risk-ever-more-military-plans-and-programs>

Evelyn Farkas- “An Urgent To-Do List for US Export Controls.”
<http://www.defensenews.com/story.php?i=7120056>

Rebecca Grant- “Crunch Time for the Industrial Base”
<http://www.airforce-magazine.com/MagazineArchive/Documents/2011/June%202011/0611base.pdf>

Michael E. O'Hanlon- “Defense Budgets and American Power”
http://www.brookings.edu/papers/2010/12_defense_budget_ohanlon.aspx

Peter W. Singer- “The Future of National Security, By The Numbers”
http://www.brookings.edu/articles/2011/05_national_security_singer.aspx

Rebecca Grant- "The Vanishing Arsenal of Airpower"
http://www.afa.org/mitchell/reports/MP4_Arsenal_1009.pdf

Barry Watts and Todd Harrison- "Sustaining Critical Sectors of the U.S. Defense Industrial Base"
<http://static.csbaonline.org/wp-content/uploads/2011/09/2011.09.20-Defense-Industrial-Base.pdf>

Barry D. Watts- “The US Defense Industrial Base: Past, Present and Future”
<http://www.csbaonline.org/wp-content/uploads/2011/02/2008.10.15-Defense-Industrial-Base.pdf>

House Armed Services Committee Republican Staff- “Assessment of Impacts of Budget Cuts”
http://www.airforce-magazine.com/SiteCollectionDocuments/Reports/2011/September%202011/Day29/HASC_budg_et.pdf