PERSPECTIVE

Enhancing the Defense Industrial Base
Strategic Analysis for National Security Policy

Zachary Miller

August 2012

In Brief:

- The defense industrial base will be facing significant changes after the war in Afghanistan and its future will be largely dependent upon changes in the global security environment as well as domestic budgets.
- The U.S. defense posture in Asia, drone technology, and continued counterterrorism operations are set to frame a post-Afghanistan era.
- The United States can better harness the defense industrial base in the 21st Century by determining national security goals and focusing on long-term strategic planning.
- Export control reform, acquisitions reform, and long-term budgets will be critical improvements for the defense industry.

Introduction

The defense industry is reaching a profound era of uncertainty in the 21st Century due to dramatic shifts in domestic budgetary priorities and changes in the national security posture of the United States. There are various international[1] and domestic political developments[2] which will impact U.S. national security policy and ultimately the future of the defense industry.

The defense industry serves an important purpose in U.S. national security policy. It provides a range of services from actual hardware to analytical capabilities.[3] These capabilities are interwoven into the U.S. national security agenda, and provide many essential functions for many government agencies. How policy makers yield this critical industrial base will be an essential question in an era of austerity and unforeseen threats.

This paper will discuss the future of the defense industry as a result of these fundamental shifts in strategic priorities for the United States, and will also examine policies of the current domestic environment on the defense industry. In addition to international security

Zachary Miller is an Adjunct Junior Fellow with the American Security Project

considerations, domestic factors such as fiscal restraints, acquisitions reform, and export controls are all relevant when considering the future of the industry.

This paper is not an attempt to provide market projections for defense firms or future market entry opportunities. Nor does it attempt to break any new ground on defense budgets. It does however provide a strategic guide on how the United States can harness this large industrial base in order to enhance U.S. national security and develop industry. Through analysis of the current global security environment within its historical context, we can develop a better understanding of how the defense industry can enhance national security.

The importance of the military-industrial complex is of varied interest and concern to the American public. While many see the defense industry as too bloated and over-budget,[4] others claim that cuts will damage national security and defense.[5]

The strategic necessity of industry, of course, lies in the middle of these extremes and must be based upon the contingent notion that the U.S. defense industrial base has profound capabilities.

If harnessed through effective policies, industry can better serve the overall national security interests of the United States. Unless serious reforms are considered, however, the industry may find itself in a post-Afghanistan phase without concrete direction.

In order for industry to serve the security apparatus of the United States, it must achieve a narrative for its future. This is a difficult concept considering the United States has not yet achieved a firm posture or strategy for the post-Afghanistan security environment

Historical considerations, domestic pressures, and global security are all relevant factors when examining the future of the U.S. defense industrial base. Proposing adequate and serious reforms in addition to strategic planning will be important in harnessing the strength of the defense industrial base and determining its future.

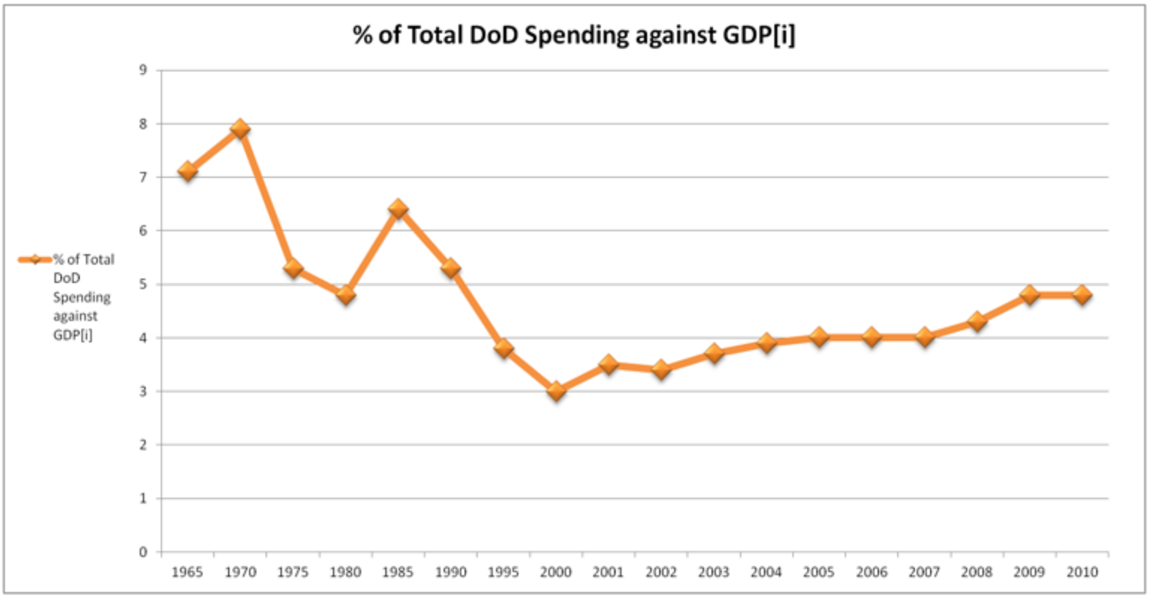
Historical Legacies

The Cold War was a period in American history where the United States reached a high levels of military spending and had a clear strategic priority: achieving military advantage over the Soviet Union. While the Soviet Union and the United States wanted to avoid a direct conflict with each other,[6] both desired a strategic advantage over the other, and used military capabilities to project power and influence where possible.

This desire to gain a comparative military advantage was deeply interwoven into U.S. national security and the defense industry itself. Aside from a brief period of cooling through détente,[7] the arms race between both countries led a profound period of growth for industry[8]. The objective was clear. The purpose was well defined. And the means were open.

The geopolitical conflict meant all innovations were good, so long as the opposing side did not achieve the same military advantage. Geopolitics, strategy, and zero-sum military power meant industry was vital to national security.

In 1989, the Cold War ended, and without a shot being fired the United States lost its enemy. And industry suddenly lost its narrative. During the 1990's, defense spending was reduced by approximately 34% from the peak in FY 1985 through FY 1998.[9]



[i]Based on GDP numbers from: World Bank, World Development Indicators, Gross Domestic Product, Google Public Data Explorer,

Industry had to redefine itself in the post-Cold War environment. The United States suddenly found itself in a unipolar international structure.

The United States asked itself: what threat would emerge? What would be the role of the United States?

These national security questions, obviously, left the industrial base with uncertainty and questions about its future. Major contractors began to consolidate, and some firms sold their defense practices to other contractors.[10]

Despite the loss in revenue from the budget and the loss of an existential threat, the defense industry continued to provide the United States with an unparalleled military advantage. The only country willing to fight the U.S. with traditional forces was Iraq during the Persian Gulf War. Iraq was quickly defeated, and the military capabilities of the United States were on full display for the world. CNN's coverage[11] showed precision guided weapons, night vision, and air superiority.

The technological capabilities and importance of contractors became obvious to the American public. However the manner in which the U.S. would project this military superiority remained to be seen.

This military superiority gave the United States a new obligation to involve itself in regions of the world which had previously been off limits due to the geopolitical considerations of the Cold War.

The narrative for a humanitarian military ultimately involved the United States in Somalia.[12] The Battle of Mogadishu ended in the tragic loss of U.S. soldiers' lives and brutal images from Somalia left many to question the need for American involvement in conflicts that had no strategic benefit for the United States. The failure of Somalia even prevented President Clinton from undertaking military involvement in Rwanda.[13]

Yet Somalia also indicated something new for foreign policy, and perhaps even the defense industry. No longer could U.S. military power alone guarantee victory. The difficulty of Somalia was not based on technological disadvantages or military equipment. It was based the difficulties of peace-enforcement in conflict zones. While Somalia has proven to be a tragedy in and of itself, as well as a security concern for the international community, it was symbolic of military power's limitations. It was a problem that couldn't be solved by projecting military force. Military power does not necessarily guarantee victory.

The defense industry's trajectory, of course, dramatically shifted in the post-9/11 environment. The tragic deaths of thousands of Americans had given policymakers, industry leaders, and all Americans a new national security purpose: defeat terrorism and bring those who committed the atrocities to justice.

In addition to the counterterrorism operations and full scale invasions of Iraq and Afghanistan, private contractors began to fill another void in the national security apparatus – homeland security. The creation of DHS and installment of TSA created a void for industry to fill: providing security at vulnerable locations and onsite to actually deter terrorism before it became a reality.

Large budgets and a willingness to spend[14] gave DOD contractors an integral purpose to their security functions through protecting domestic targets and infrastructure. DHS currently comprises a significant portion of defense related expenditures: nearly $43.2 billion dollars.

As the wars in Iraq and Afghanistan unfolded, the United States was quickly reminded of the lessons learned in Somalia. Military capabilities did not always produce favorable political outcomes. Strategic victory would not be based on military superiority alone. As the difficulties of state building and democracy unfolded, the lack of cohesive civil society in Iraq and Afghanistan presented the military with a political and social goal, not only a military one.

While industry has continued to see its narrative evolve over the past 10 years since the beginning of the NATO mission in Afghanistan, the threats have changed and evolved. Now the United States seeks an end to the war in Afghanistan by 2014 and has withdrawn forces from Iraq.

The Future Security of the United States

The future role of the defense industry in U.S. national security remains to be seen and is difficult to determine what threats will emerge and what capabilities can deter these threats.

Overall, the United States is witnessing two profound changes to the national security environment as the war in Afghanistan winds down.

1) Counterterrorism through Asymmetric Operations

The defence industry and contractors have found a new important role in counterterrorism operations throughout the world, even as the war in Afghanistan begins to wind down.

Over the past decade, contractors' involvement in Africa has continued to expand, and by 2005 private firms had trained nearly 80% of African peacekeepers.[15]

Contractors have played a growing role in the operations of AFRICOM and intelligence missions[16] which may be indicative of their future defense narrative.

The increased use of UAV/ drones in Pakistan,[17] Yemen,[18] and Somalia[19] also indicates a strong willingness to engage in counterterrorism operations, even as the U.S. reduces its overall military presence in the Middle East.

Drone technology, has been viewed as a cost effective, lower-risk kinetic military operation. In fact, nearly 1 out of 3 U.S. militray aircraft are drones.[20] Companies such as General Atomics Aeronautical Systems and Northrop Grumman have been integral contractors in the development and growth of these technologies.[21]

The consensus on drone technology has not been fully developed and it remains to be seen how effective these weapons are in achieving long-term counterterrorism objectives. While the tactical capabilities and relatively low costs have been a source of comfort for policymakers, there is evidence that drones will produce political blowback,[22] and be counterproductive in long-term scenarios. These conclusions are, however, underdeveloped. Skepticism regarding the effectiveness of drones is merited, but in the meantime, they serve an integral role in counterterrorism operations. Industry will be critical in their continued technological evolution and deployment.

2) A Pivot Towards Asia

The realignment of partnerships in Asia has also categorized a new concept for future U.S. defense posture. The administration and the DOD have indicated[23] the Asia pivot as integral to future U.S. foreign policy. The recent appropriations bill certainly reflects this interest: nine ships intended on being retired have been reauthorized for funding.[24]

The Asia pivot, in particular, has been the forefront of the debate for the future United States national security agenda. The rationale is to enhance strategic partnership, balance Chinese hegemony, and provide a security umbrella to a region of the world that the current administration views as critical. The Pentagon has emphasized a new and loosely defined operational concept known as Air-Sea Battle.[25] ASB provides for enhanced integration of naval and aerial forces in area-denial and anti-access strategies employed by different states.

The Asia pivot has given contractors in aerospace and naval operations a new narrative in the national security agenda. This narrative, however, is on shaky footing.

The issues in the South China Sea[26] require hard power and military force deployments to balance Chinese hard power and aggression in the region. In this respect, contractors will have an important role in continued naval and aerospace operations.

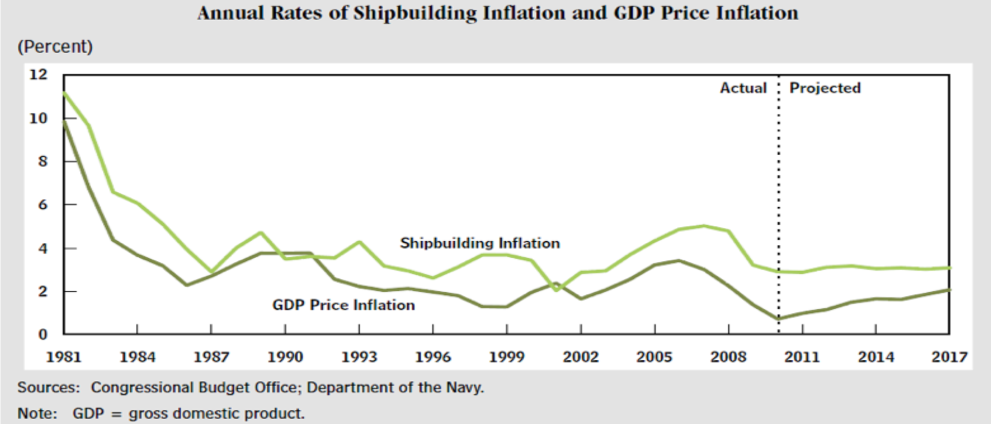
The Asia pivot, however, is incomplete and lacks a comprehensive strategy other than shifting military forces to the Pacific[27]. The Asia pivot should involve other foreign policy agenda items, such as economic trade and strengthening diplomatic partnerships. In this respect the defense industry will have a limited role.

The evolving nature of the global security environment, ultimately, prevents anyone from making firm conclusions on what threats will emerge and what capabilities can match those threats. While we can predict, we know a strong, competent, and also restrained defense industrial base will be critical in ensuring American security in the future.

What does the United States need from industry?

The most important question we can ask from a national security perspective is what can the United States gain from industry? How can industry more effectively serve the national security apparatus of the United States?

The first need is that **industry must become more efficient through tighter program management**. Shrinking budgets and austerity should be considered the future, and it is necessary for industry to continue to work on efficiency, constraining costs, and reducing risk (where possible) for large programs. Reports have indicated rapidly inflating prices[28] for defense programs that far exceed other capital markets. Below is a chart created by the Congressional Budget Office (2011) in their analysis of shipbuilding inflation versus inflation in terms of GDP[29].

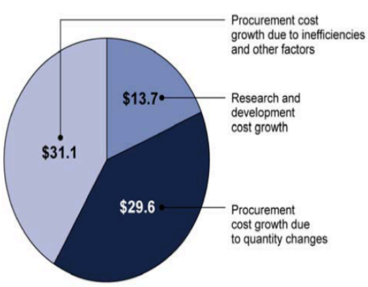


The norm in defense acquisitions has been to accept program cost overruns[30] and for the government to compensate contractors for over spending on projects.

A GAO study in 2011 which surveyed 96 major defense acquisition processes, found acquisition costs to have risen by $74.4 billion in the past year. Approximately $31.1 billion could be attributed to factors such as inefficiencies in production.

Government should demand, and industry should expect, **greater discipline in development and production**.

Cost Growth over the Past Year for DOD's 2011 Portfolio of Major Defense Acquisition Programs (Fiscal Year 2012 Dollars in Billions)



Source: GAO analysis of DOD data.

A tangible solution is to reduce the amount of cost-plus contracts where the government reimburses the tax payers for incurred costs. More fixed price contracts (where possible) could lessen the burden on the American taxpayer. Fixed price contracts, however, aren't always realistic (sometimes there are inflated costs, due to research and development).

The greater problem is the inherent culture within the DOD and industry to accept incurred costs and delays as the norm.[32] Being over-budget is too standard, too accepted, and too easy for industry to skirt.

Aside from effcienecy, progam mangement and acquisitions reform, another key area for potential improvement within industry is through a **reform of the export control regulatory regime.**

Export controls are the trade regulations that prevent the transfer of defense capabilities to other nation in a way that may jeopardize the national security interests of the United States. The proliferation[33] of "dual –use" technologies (those with commercial and military applications) have also been difficult to regulate and manage.[34]

For decades, export controls have been a source of conflict between industry and government, and have been, unfortunately, a peripheral national security interest of the United States.

The Obama administration launched an export control reform initiative[35] in 2009 to address this somewhat inefficient and redundant export control regulatory regime. As of now, the regime is bureaucratic and should be streamlined through greater transparency. A consolidation of the regulatory lists of defense items would enhance efficiency and provide contractors will greater clarity.

Perhaps most importantly, there must be better compliance enforcement. Recent violations by companies, such as Pratt and Whitney's development of engines and software for a Chinese Z-10 attack helicopter,[36] are a clear indication that compliance and enforcement mechanisms must be strengthened and reformed. United Technologies (Pratt and Whitney's parent company) was forced to pay $75 million in fines for misleading federal authorities.[37]

In an era of shrinking budgets, industry may attempt to look for more loopholes – this cannot become culture or commonplace. The strategic technological advantage of the United States depends on it.

The Three Things Industry Needs

In order for industry to achieve greater effectiveness, there are a few key measures on the domestic level which much take place.

The first is a **long-term budget**. The current political climate is stifling long-term strategic budgetary guidance. Sequestration is perhaps the best example of this problem. Sequestration requires 10% across the board cuts across all military programs, and will require roughly $487B in total reductions over the next decade.[38]

Sequestration, while not quite as catastrophic as industry is portraying, is inherently wrong to due the arbitrary 10% cuts to be administered "across the board" and not based upon strategic considerations.

According to a report published by the Center for Strategic and Budgetary Assessments, the important difference between military spending over the past decade and previous wars is that the current decade of increasing military expenditures was not due to a significant build-up of force size (the size of the military today is approximately the same as it was when the force build up began). According to CSBA, the reductions would not be as "practical" as reductions were following previous wars draw- downs.[39]

The defense industrial base will have the capability to move into adjacent markets but will undoubtedly shrink from inescapable cuts to defense spending. Sequestration, however, is the wrong approach.

The second is **greater access to rare-earth elements**. Rare earth elements are critical for a variety of weapons systems,[40] and the market is being dominated by China, which holds 95% market share in rare earth elements[41].

The U.S., with the second largest deposit of rare earth elements,[42] has lost most of its market share and does not currently mine at a competitive rate with China. If the U.S. wants to have a strong defense industrial base, independent access to rare-earth elements that will be vital to long term national security planning, and must continue to invest more money into R&D. Nations such as India are already increasing investments in rare-earth elements,[43] the United States should as well.

And finally, what is necessary for a greater defense industrial base is **enhancing the American workforce** through improving education. The benefits of such investments are not limited to the defense industry, but rather to the entire economy and the United States as a whole. Education will be important for future technological advancements, economic growth, and maintaining a competitive edge in national security.

Conclusion

Recent events on the domestic level and the international security environment will shape the defense industry in a post-Afghanistan era. Reforms of existing regulations, long-term budgets, and greater planning through investments in R&D will be critical in harnessing the defense industrial base and forcing it to more effectively serve the national security agenda of the United States.

On the international level, the proliferation of drone technologies in counterterrorism operations as well as a new defense posture in Asia may be shaping the new national security narrative. Industry will be important in developing new capabilities for these foreign policy goals.

The Untied States, however, must continue to view industry as an important resource that employs a large workforce deeply interwoven into the national security apparatus of the United States. If harnessed effectively, it can be used to counter threats and provide for greater security.

Zachary Miller is an Adjunct Junior Fellow with the American Security Project who specializes on issues relating to the defense industry, defense policy, and national security strategy.

Endnotes

1. Julian E. Barnes, "U.S. Plans Naval Shift Towards Asia", *The Wall Street Journal*, 2 June 2012, http://online.wsj.com/article/SB10001424052702303552104577439943137674490.html

2. Anna Palmer and Austin Wright, "Defense Industry Sounds Alarm on Sequestration", *Politico,* 24 June 2012, http://www.politico.com/news/stories/0612/77773.html

3. Eloise Lee and Robert Johnson, "Top 25 Biggest US Defense Companies in America", *Business Insider*, 13 March 2012, http://www.businessinsider.com/top-25-us-defense-companies-2012-2?op=1

4. Gretchen Hamel, "US Can't Afford Bloated Defense Spending", *AOL Defense*, 13 September 2011, http://defense.aol.com/2011/09/13/us-cant-afford-bloated-defense-spending/

5. Brian Slattery, "Defense Cuts Ignore Threats, Increase Risk", *The Foundry Blog – Heritage Foundation*, 23 February 2012, http://blog.heritage.org/2012/02/23/defense-cuts-ignore-threats-increase-risks/

6. Col. Alan J. Parrington, USAF, "Mutually Assured Destruction Revisited, Strategic Doctrine in Question", *Airpower Journal*, Winter 1997, http://www.airpower.maxwell.af.mil/airchronicles/apj/apj97/win97/parrin.html

7. "détente", *Encyclopedia Britannica*, http://www.britannica.com/EBchecked/topic/159484/detente

8. Barry D. Watts, "The U.S. Defense Industrial Base: Past, Present, and Future", *Center for Strategic and Budgetary Assessments*, 2008, www.csbaonline.org/wp.../2008.10.15-Defense-Industrial-Base.pdf

9. Todd Harrison, "Five Facts About Defense and Sequestration", *Center for Strategic and Budgetary Assessments*, November 2011, http://www.csbaonline.org/wp-content/uploads/2011/11/2011.11.02-Five-Defense-Sequestration-Facts.pdf

10. August Cole, "The Uncertain Future of the Military-Industrial Complex", *The Atlantic,* 14 December 2011, http://www.theatlantic.com/international/archive/2011/12/the-uncertain-future-of-the-military-industrial-complex/249861/

11. Bill Goodykoontz, "Iran, Gulf War led to ABC and CNN revolutions in news coverage", *The Arizona Republic*, 14 January 2011, http://www.azcentral.com/ent/celeb/articles/2011/01/14/20110114nightline-cnn-abc-war-american-hostages-news-gulf-iran-tv-coverage.html

12. Luke Glanville, "Somalia Reconsidered: An Examination of the Norm of Humanitarian Intervention", *The Journal of Humanitarian Assistance,* 1 Septemeber 2005, http://sites.tufts.edu/jha/archives/98

13. Walter Clarke and Jeffrey Herbst, "Somalia and the Future of Humanitarian Intervention", *Foreign Affairs*, March/April 1996, http://www.foreignaffairs.com/articles/51844/walter-clarke-and-jeffrey-herbst/somalia-and-the-future-of-humanitarian-intervention

14. Dan Froomkin, "9/11 Attacks Led to Half-Trillion Dollar Homeland Security Spending Binge", Huffington Post, 9 September 2011, http://www.huffingtonpost.com/2011/09/09/september-11-homeland-security-spending_n_953288.html

15. Lawrence Delevingne, "Defense Contractor's Growing African Business", Bloomberg Businessweek, 23 October 2008, http://www.businessweek.com/stories/2008-10-23/defense-contractors-growing-african-businessbusinessweek-business-news-stock-market-and-financial-advice

16. Craig Whitlock, "Contractors run U.S. spying missions in Africa", *The Washington Post*, 14 June 2012, http://www.washingtonpost.com/world/national-security/contractors-run-us-spying-missions-in-africa/2012/06/14/gJQAvC4RdV_story.html

17. *Indira A.R. Lakshmanan, "Obama Increases Pakistan Drone Strikes as Relations Sour", Bloomberg, 8 June 2012,* http://www.bloomberg.com/news/2012-06-08/obama-increases-pakistan-drone-strikes-as-relations-sour.html

18. Peter Bergen, "Obama ramps up covert war in Yemen", *CNN*, 12 June 2012, http://www.cnn.com/2012/06/11/opinion/bergen-yemen-drone-war/index.html

19. Craig Whitlock, "Drone operations over Somalia pose danger to air traffic, U.N. report says", *The Washington Post*, 24 July 2012, http://www.washingtonpost.com/world/national-security/drone-operations-over-somalia-pose-danger-to-air-traffic-un-report-says/2012/07/24/gJQALvnf7W_story.html

20. Spencer Ackerman and Noah Shachtman, "Almost 1 in 3 U.S. Warplanes is a Robot", *Wired*, 9 January 2012, http://www.wired.com/dangerroom/2012/01/drone-report/

21. Brendan McGarry, "Drones Most Accident Prone U.S. Air Force Craft: BGOV Barometer", Bloomberg, 18 June 2012, http://www.bloomberg.com/news/2012-06-18/drones-most-accident-prone-u-s-air-force-craft-bgov-barometer.html

22. Sudarsan Raghavan, " In Yemen, U.S. airstrikes breed anger, and sympathy for al-Qaeda", *Washington Post,* 29 May 2012, http://www.washingtonpost.com/world/middle_east/in-yemen-us-airstrikes-breed-anger-and-sympathy-for-al-qaeda/2012/05/29/gJQAUmKI0U_story.html

23. Jane Perlez, "Leon Panetta Outlines New Weaponry for the Pacific", *New York Times*, 1 June 2012, http://www.nytimes.com/2012/06/02/world/asia/leon-panetta-outlines-new-weaponry-for-pacific.html?_r=2

24. Colin Clark, "Navy Wins Big As Senate Approps Adds $4.2B to Keep Nine Ships, Add Destroyer, Fund Attack Subs", *AOL Defense*, 31 July 2012, http://defense.aol.com/2012/07/31/navy-wins-big-as-senate-approps-adds-4-2b-to-keep-nine-ships-a/

25. Background Briefing on Air-Sea Battle by Defense Officials from the Pentagon, U.S. Department of Defense, 9 November 2011, http://www.defense.gov/transcripts/transcript.aspx?transcriptid=4923

26. Bonnie S. Glaser, "Armed Clash in the South China Sea", *Council on Foreign Relations*, April 2012, http://www.cfr.org/east-asia/armed-clash-south-china-sea/p27883

27. Sandra I. Erwi, "U.S. Asia-Pacific Strategy's Missing Link: How to Work With China", *National Defense Magazine*, 2 August 2012, http://www.nationaldefensemagazine.org/blog/Lists/Posts/Post.aspx?ID=851

28. Sandra I. Erwin, "Why the Pentagon Pays More, Buys Less", *National Defense Magazine*, 7 August 2012, http://www.nationaldefensemagazine.org/blog/lists/posts/post.aspx?ID=854

29. Congressional Budget Office. "An Analysis of the Navy's Fiscal Year 2012 Ship Building Plan. Washington: Government Printing Office, June 2011

30. Nathaniel H. Sledge Jr. , "Pentagon Procurement Reforms Face Slim Chance of Success", September 2012, http://www.nationaldefensemagazine.org/archive/2012/september/Pages/PentagonProcurementReformsFaceSlimChanceofSuccess.aspx

31. Sandra I. Erwin, "Why the Pentagon Pays More, Buys Less", *National Defense Magazine*, 7 August 2012, http://www.nationaldefensemagazine.org/blog/lists/posts/post.aspx?ID=854

32. Howard L. Berman, "U.S. Export Control Policy in Dire Need of an Update", *San Jose Mercury News*, 15 January 2010, http://www.hcfa.house.gov/111/press_011510.pdf

33. Evelyn N. Farkas, "U.S. Export Controls: Emerging Consensus on Increasing Risk", *American Security Project*, April 2010, http://americansecurityproject.org/blog/2010/asp-releases-new-report-%E2%80%9Cu-s-export-controls-emerging-consensus-on-increasing-risk%E2%80%9D/

34. "About Export Control Reform", Export.gov, http://export.gov/ecr/eg_main_047329.asp

35. Kate Linebaugh, "UTC Helped Build China's First Military Attack Copter", *Wall Street Journal*, 28 June 2012, http://online.wsj.com/article/SB10001424052702303649504577494783727664496.html

36. Michael S. Schmidt, "Military Contractors Are Fined Over Aid to China", *New York Times*, 28 June 2012, http://www.nytimes.com/2012/06/29/business/global/arms-contractor-pleads-guilty-on-china-exports.html

37. Todd Harrison, "Defense cuts could be only the beginning, CNN, 9 January 2012, http://www.cnn.com/2012/01/09/opinion/harrison-defense-plan/index.html

38. Todd Harrison, "Five Facts About Defense and Sequestration", *Center for Strategic and Budgetary Assessments*, November 2011, www.csbaonline.org/wp.../2011.11.02-Five-Defense-**Sequestration**-Facts.pdf

39. Emily Coppel, "Rare Earth Metals and U.S. National Security", *American Security Project,* 8 June 2011, http://americansecurityproject.org/wp-content/uploads/2011/07/Fact-Sheet-Rare-Earth-Metals-FINAL.pdf

40. Paul Martyn, "Rare Earth Minerals: An End to China's Monopoly is In Sight", *Forbes*, http://www.forbes.com/sites/ciocentral/2012/06/08/rare-earth-minerals-an-end-to-chinas-monopoly-is-in-sight/

41. Emily Coppel, "Rare Earth Metals and U.S. National Security", *American Security Project,* 8 June 2011, http://americansecurityproject.org/wp-content/uploads/2011/07/Fact-Sheet-Rare-Earth-Metals-FINAL.pdf

42. Biman Mukherji and Tom Wright, "India Bets on Rare-Earth Minerals, *Wall Street Journal,* 13 August 2012, http://online.wsj.com/article/SB10000872396390443437504577546772533972202.html

Building a New American Arsenal

The American Security Project (ASP) is a nonpartisan initiative to educate the American public about the changing nature of national security in the 21st century.

Gone are the days when a nation's strength could be measured by bombers and battleships. Security in this new era requires a New American Arsenal harnessing all of America's strengths: the force of our diplomacy; the might of our military; the vigor of our economy; and the power of our ideals.

We believe that America must lead other nations in the pursuit of our common goals and shared security. We must confront international challenges with all the tools at our disposal. We must address emerging problems before they become security crises. And to do this, we must forge a new bipartisan consensus at home.

ASP brings together prominent American leaders, current and former members of Congress, retired military officers, and former government officials. Staff direct research on a broad range of issues and engages and empowers the American public by taking its findings directly to them.

We live in a time when the threats to our security are as complex and diverse as terrorism, the spread of weapons of mass destruction, climate change, failed and failing states, disease, and pandemics. The same-old solutions and partisan bickering won't do. America needs an honest dialogue about security that is as robust as it is realistic.

ASP exists to promote that dialogue, to forge consensus, and to spur constructive action so that America meets the challenges to its security while seizing the opportunities the new century offers.

ASP
American Security Project

www.americansecurityproject.org