

In times of intense budgetary pressure, the tagline for the new 114th U.S. Congress should be "do more, with less." This is definitely a mantra the U.S. military has adopted since the trillion-dollar, decade-long defense cuts began with the budget control act of 2011. Since then, the Defense Department has focused on making every dollar count, and doing so requires a fundamental understanding of defense economics. Not every spending cut the Defense Department makes reflects sound economic principles. Most notable is the potential quick and quiet killing of one of the most effective and efficient weapons in the U.S. military arsenal—the Tomahawk cruise missile. Tomahawks have been a staple in military superiority over our adversaries in the Balkans, Africa, and the Middle East. Launching from ships or submarines, flying from up to 1,000 miles offshore, these precisionguided cruise missiles have struck fear in the heart of Islamist terrorists and brutal dictators since the first Gulf War. Most recently, they have been instrumental in destroying the command and control structures of ISIS and Khorasan targets in Syria. Yet, the Pentagon introduced a budget plan last year, phasing out the Navy's successful Tomahawk program over the next two years. Congress reversed the Pentagon's position for fiscal year 2015, but the fate of the program in the future is still in question. According to insiders in the Pentagon, the Navy plans to retire the Tomahawks in favor of a next-generation antisurface weapon known as the Long-Range Anti-Ship Missile (LRASM), which realistically won't be operational for about a decade. Essentially the Navy is phasing out a battle-tested, combat-ready system before its replacement is ready. But that is just one concern. Of equal concern is the fact that cutting the Tomahawk for the LRASM program violates a couple core economic principles in defense spending. 1. Marginal analysis An important decisionmaking tool in defense acquisitions is marginal analysis, allowing decision makers to measure the additional benefits of one production activity versus its costs. Too often in defense spending, we are lured to look at aggregate costs and expenditures, but in reality it is the unit cost of each program that matters most. A Tomahawk missile has a unit cost of approximately \$1.1 million per missile, which is significantly cheaper than the LRASM whose unit cost is projected to be as high as \$2.5 million. This means that each LRASM shot fired in the future will potentially cost taxpayer's more than one million more per missile, diminishing its marginal utility faster than the Tomahawk. Moreover, reducing production of Tomahawk's today will substantially raise the unit cost of this cruise missile in the future, ostensibly creating inefficiency in both weapons systems. 2. Comparative advantage The relative low-cost, high-value Tomahawk program has caught the attention of some of our closest allies abroad. According to the Heritage Foundation, the United Kingdom has already spent a considerable amount of money configuring its entire attack submarine fleet to be able to fire the Tomahawk missile. Furthermore, the Royal Australian Navy is currently contemplating to equip three of its destroyers with Tomahawk-capable launch systems. As the Tomahawks continue to show success on the battlefield, more allied



countries will increasingly turn to this weapon system as part of their future defense strategy—providing the U.S. with a comparative advantage in producing vital weapons that not only protect our national interests, but also those of our closest allies. Yet the current lack of industrial capacity, no battlefield testing, and relative complexity of the LRASM—are all comparative advantages contained in the Tomahawk program. An advantage that will diminish once production stops, reducing our overall gains from trade in selling defense systems abroad. Having the world's strongest military while maintaining a sound economy is the national security challenge of our times. In this context, a general principle of defense spending should involve upgrading proven weapons systems before considering scrapping a working one. In terms of saving the taxpayers money, the Tomahawk has already demonstrated its efficiency with its most recent version, the "Block IV," which significantly boosts the missile's capability while maintaining its low cost—a rarity in defense production. The LRASM, on the other hand, was developed in response to China and Russia's increased military spending on anti-ship missiles. Ironically, if the cold war taught us anything—it is that a strong military depends on a strong economy. In the realm of defense spending, good economics is vital to saving money but also to saving lives. Investing in battle-tested technologies can prove to be a strategically sound and fiscally responsible way to modernize our military. An important point the new Congress should keep in mind when making discretionary decisions on defense spending. Read the original article at the hill.com.