

Military Assets and Public Investment

James Heintz

Political Economy Research Institute
2 February 2011

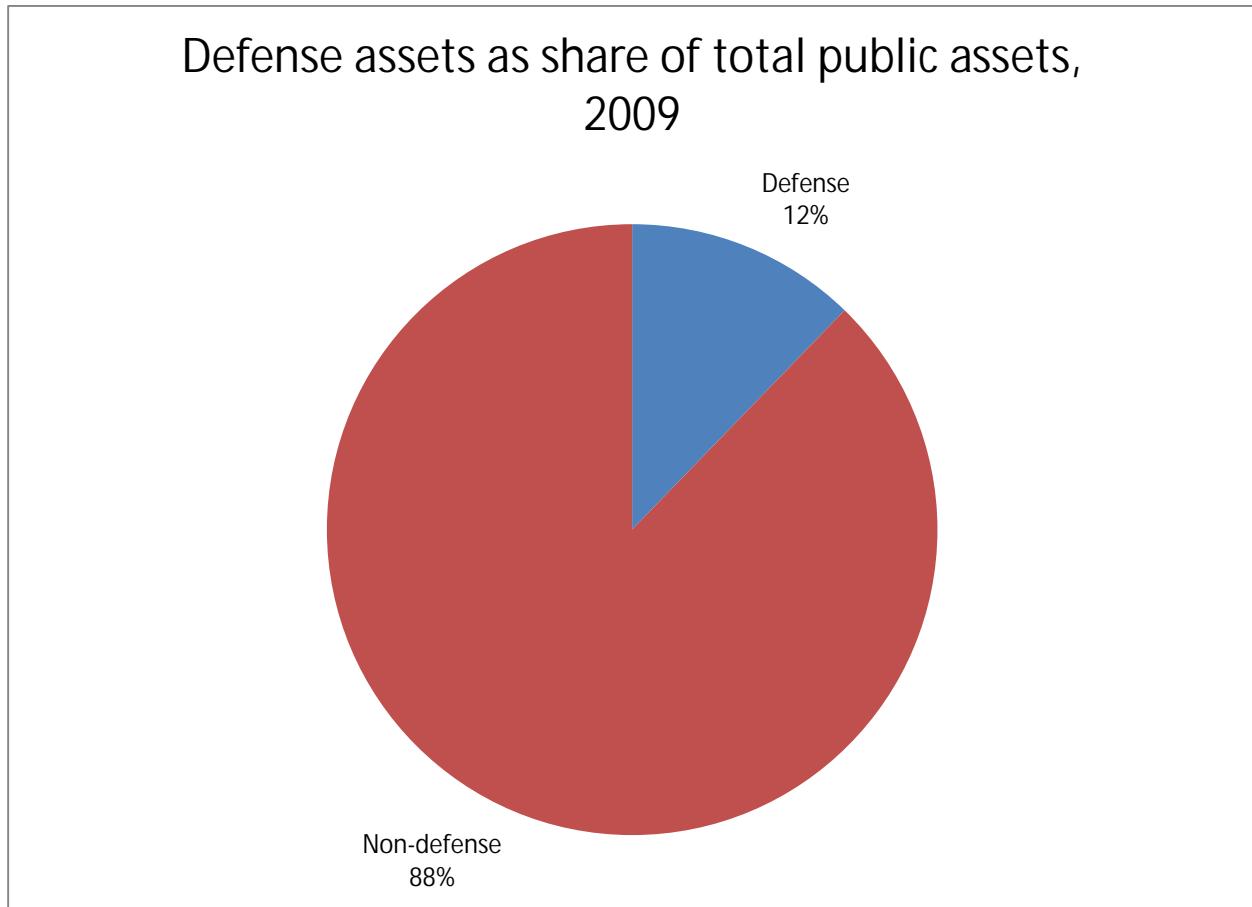
When we think of the public resources that are directed towards the military, we often think in terms of current budget expenditures – the federal defense budget and related items that recur year after year. However, there is another, related, category of public resources that is worth considering – the total value of public assets devoted to military uses. Public assets are the durable capital goods which the government owns. We typically think of public assets in terms of infrastructure: public buildings, roads, mass transit systems, water and sewer systems, public utilities, and recreation facilities. However, the military has a significant stock of government assets at its disposal: buildings, aircraft, ships, vehicles, computers, and weapons. These are public assets, albeit dedicated to military uses. Indeed, the oft-quoted phase 'swords into plowshares and spears into pruning hooks' literally refers to spending on assets - in this case, military assets versus productive assets.

The Bureau of Economic Analysis (www.bea.gov) estimates that, in 2009, the value of public defense assets totaled over \$1.2 trillion, expressed in current dollars and accounting for depreciation of those assets over time. This amounts to 12% of all public assets, including all state and local government assets in the U.S. (Figure 1). Twelve percent may seem like a relatively small share, but keep in mind, total public assets represents the value of all school buildings, public university buildings, roads, bridges, dams, public hospital buildings, water systems, waste treatment facilities, sewage systems, government offices, computers and office equipment used by government employees, and public utilities. Most of U.S. public infrastructure is delivered and maintained at the state and local level. Military assets accounted for a larger share of federal assets – 62 percent in 2009.

Investment in military assets over time has exhibited a distinct pattern. Figure 2 shows the growth rate of the stocks of public defense assets and compares this to the growth rate of state and local government assets. These growth rates represent changes in the real stock of public assets, adjusted for increases in the price of such investment goods over time. We use state and local government assets as a comparison, since they represent, to a large extent, investments in public infrastructure. The rate of investment in defense assets was at its highest level following World War II and during the Korean War, the 'rearmament of Europe', and the initial investments associated with the Cold War. The growth rate of defense assets fell steadily throughout the 1960s, reaching a low during the 1970s. However, in the 1980s, with the build-up of the military under the

Reagan administration, the rate of accumulation of defense assets recovered – at least until the end of the Cold War. In the 1990s, we see a marked slow-down in military investment until the September 11th attacks and the beginnings of the Afghanistan and Iraq wars.

Figure 1



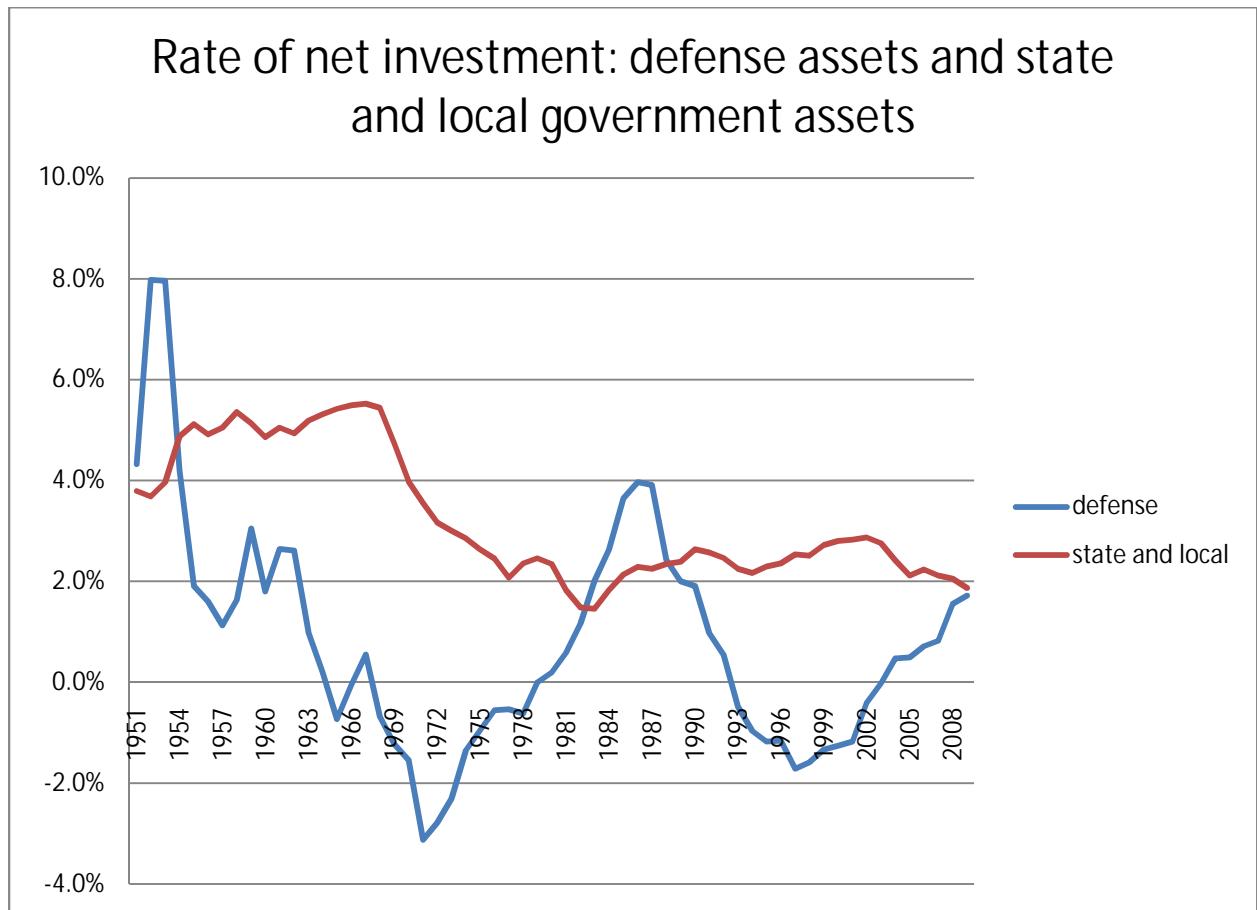
Source: U.S. Bureau of Economic Analysis.

Compare these trends to the rate of accumulation of state and local government assets. Public investment in these assets was strong throughout the 1950s, 1960s, and first part of the 1970s. In the mid-1970s, the rate of investment dropped significantly. Since that time, investment in state and local government assets has held steady, but at about half the rate of accumulation of the 1950s and 1960s.

Why is this comparison important? Research studies have suggested that investments in core infrastructure have a direct impact on the performance of the private economy (Heintz, 2010; Aschauer, 1989; Munnell, 1990). This is in addition to the direct

benefits that public investment confer to the population – i.e. roads help people get around as well as improving the efficiency of businesses. However, investments in defense assets do not show a similar positive effect on economic performance (Aschauer, 1989). To the extent that investment in defense displaces public investments in basic infrastructure, the productivity of the private sector suffers.

Figure 2



This is not to say that certain sectors of the private economy receive no benefits from defense spending on durable, physical assets – the arms industry and defense contractors being obvious examples. However, in these cases, the benefits are direct. There are no ‘spill-over effects’ in terms of the long-run productivity of the rest of the private sector.

Heintz (2010) found that a 1% increase in investment in ‘core infrastructure’ would increase the productivity of the private sector by up to 0.2%, considering the direct effects of infrastructure investments. These estimates can be used in a hypothetical illustration. If half of the investment which built up the current stock of defense assets

had been dedicated to building the core infrastructure of the U.S. economy, this would represent a 13.5% increase in the value of infrastructure assets – and a potential 2.7% boost to private productivity (worth over \$270 billion, based on current levels of private GDP).¹

Public assets should not be valued solely on the basis of the benefits they give to private businesses. Clearly, public assets also generate direct benefits for the population, even if their direct contribution to private productivity is limited. Elementary school buildings are essential for quality public education. Roads and public transit systems allow people to move around for a variety of reasons. One could argue that defense assets represent critical investments in the provision of national defense – another public good. This raises the question of priorities and whether the amount of money invested in defense is justified, particularly if it means under investment in other public goods.

Many argue that there has been systematic underinvestment in basic infrastructure in the U.S. for decades. The amount of investment needed to address the ‘infrastructure deficit’ in the U.S. is estimated to total between \$1.5 and \$2.6 trillion (Heintz, Pollin, and Garrett-Peltier, 2009; ASCE, 2009). It is useful to compare this to the total value of defense assets of \$1.2 trillion. Although the value of defense assets is not enough to fully address our infrastructure deficit, it does raise questions of whether the U.S. has been allocating its public investment resources in the best possible way. It also adds another dimension to an analysis of the social and economic burdens of war.

How much has been invested in military assets since September 11th, 2001, and the subsequent wars in Afghanistan and Iraq? In 2000, total military assets were valued at \$904 billion, rising to \$1,245 billion (\$1.2 trillion) by the end of 2009 - an increase of \$341 billion (valued in current dollars). Table 1 shows a breakdown of these investments by asset category.

If these investments had been made in core public economic infrastructure (transportation, roads, utilities, water systems, and sewerage) instead, this would represent a 7.4 percent boost to the current value of key public assets (providing an additional \$150 billion in benefits to the private sector in terms of increased productivity). Consider a second example: if these capital investments were made in U.S. education infrastructure, it would represent a 18.5 percent boost in terms of capital improvements nationwide - this would be more than enough to finance to all the investments in public school facilities required so that the country's schools would be

¹ This assumes that the private capital stock remains constant. If the higher levels of productivity encourage greater productive investments, the dollar value of the productivity effects would be greater. In addition, Heintz (2010) shows that an increase in the productivity of private capital can have additional positive indirect effects over time. If these effects were taken into account, the productivity effects would also be larger.

returned to good condition (Heintz, Pollin, and Garrett-Peltier, 2009).² The fact that these alternative investments have not been made and the productive benefits of such public assets have not been realized represent real costs of the wars that have been launched since September 11th, 2001.

Table 1. Change in public military assets, before September 11, 2001 to 2009.

	2000	2009	Change
	\$ billions		
Aircraft	\$ 110	\$ 130	\$ 19
Missiles	\$ 50	\$ 46	\$ (4)
Ships	\$ 108	\$ 146	\$ 38
Vehicles	\$ 17	\$ 32	\$ 15
Computers, software, electronics	\$ 30	\$ 54	\$ 24
Other equipment	\$ 98	\$ 163	\$ 65
Military facilities & buildings	\$ 492	\$ 675	\$ 183
TOTAL DEFENSE	\$ 904	\$ 1,245	\$ 341

Note: Data on public assets is only available annually. Therefore, the end of 2000 is used as a basis of comparing the situation before Sept. 11th to the most recent data available at the time of this writing.

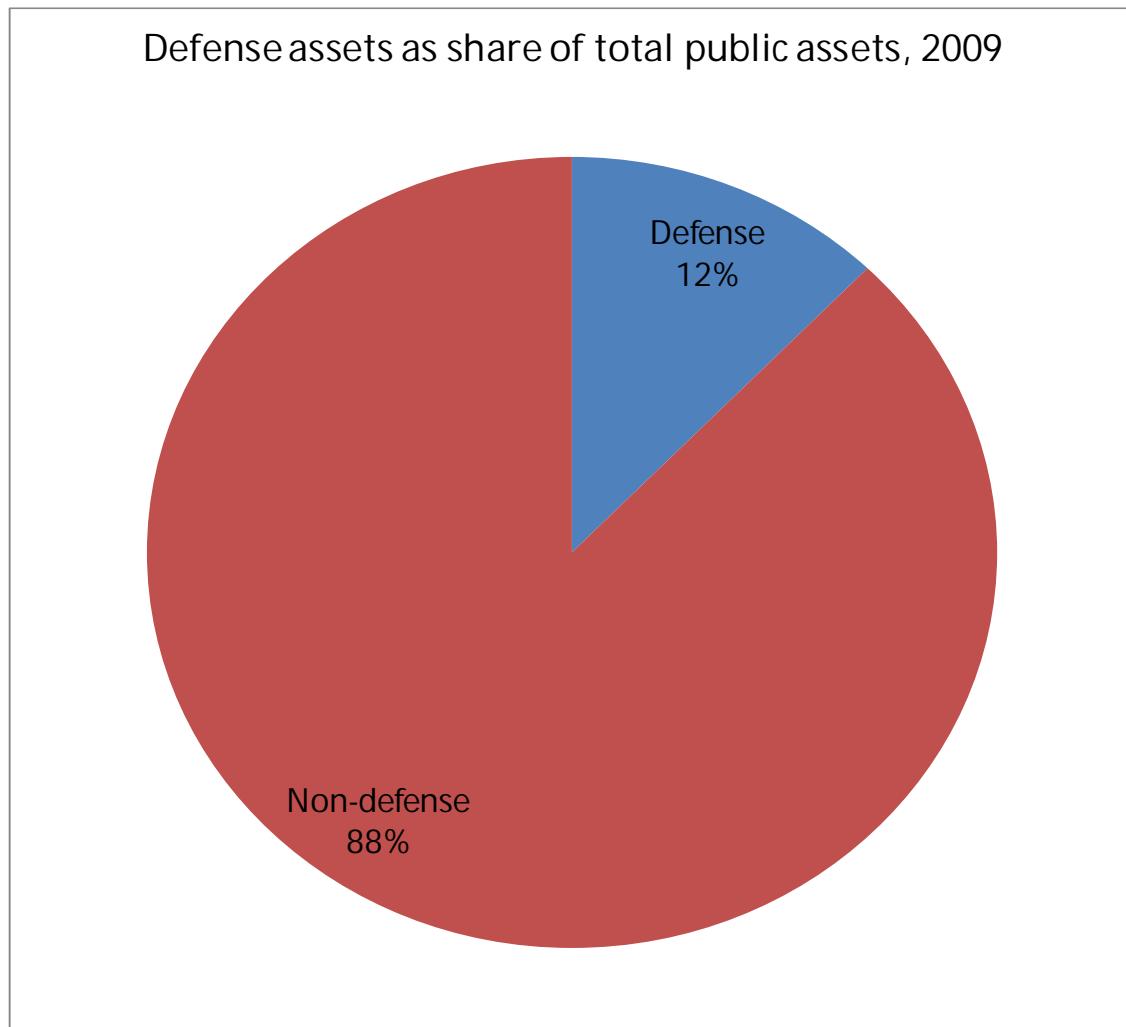
² In its recent survey of school conditions, the National Center for Education Statistics (NCES) asked respondents to identify school buildings and the features of those buildings (e.g. roofs) that are adequate, fair, poor, or in need of replacement and what investments would be needed in order for these facilities to be returned to 'good' condition (NCES, 2000).

References

- ASCE (American Society of Civil Engineers). (2009). *Infrastructure Report Card*. www.infrastructurereportcard.org.
- Aschauer, David A. (1989). Does public capital crowd out private capital? *Journal of Monetary Economics*, 24(2): 171-88.
- Heintz, James. (2010). The impact of public capital on the U.S. private economy: new evidence and analysis. *International Review of Applied Economics* 24(5): 619-32.
- Heintz, James, Robert Pollin, and Heidi Garrett-Peltier. (2009). *How infrastructure investments support the U.S. economy: employment, productivity, and growth*. Political Economy Research Institute, Amherst, MA.
- Munnell, Alicia H. (1990) Why has productivity growth declined? Productivity and public investment. *New England Economic Review*. Jan/Feb: 3-22.
- National Center for Education Statistics. (2000). *Condition of America's Public Schools, 1999*. U.S. Department of Education, Washington, D.C.

6/14/2011

Figure 1



6/14/2011

Figure 2

