COSTS OF WAR

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War Spending and Lost Opportunities

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Job Opportunity Cost of War

In 2017, the Brown University Watson Institute published a paper I wrote entitled, "Job Opportunity Cost of War." In this paper, I showed how federal war-related spending supported a high level of employment in defense and related industries, but that federal spending in other areas would have created many more jobs, and thus our economy suffered an opportunity cost. On average, in the period from 2001 to 2016 we lost the opportunity to create about 2 million jobs.

Updated Spending Estimates, FY2001-FY2019

Today, I will present new employment estimates based on updated spending numbers. In the November 2018 paper presented by Neta Crawford and published on the Cost of War site, we see that the cost of war since 2001 currently totals over $5.9 trillion, including expenses we have already incurred plus future obligations. Since I am concerned here with the employment that results from war-related spending and its alternatives, I will not include future obligations, but will instead focus on **spending and appropriations from FY2001 to FY2019**, which **total $4.933 trillion**. Table 1 in Neta Crawford's paper shows the details, but I will just briefly mention here that this includes OCO spending and appropriations, increases to DOD's base budget, medical and disability care for post-9/11 veterans, terrorism-related homeland security spending, and interest on debt incurred for OCO spending.

Per year, this amounts to about $260 billion. So for the past 19 years, we have spent $260 billion annually for war-related expenses. This is over and above the base budget for the Pentagon, and thus these are expenditures that could be shifted to other areas of the domestic economy if we were no longer at war. I will focus on this amount in presenting some findings regarding employment.

Estimating Economy-wide Employment Effects

All types of federal spending have ripple effects throughout the economy. As funds are spent on war, there is demand not only for soldiers and for DOD personnel, but for the goods and services that support these positions. Likewise, if we focus on a sector such as clean energy, spending that is channeled directly to an industry such as solar or wind also creates secondary effects, what we call indirect employment, in industries such as hardware manufacturing, electronics production, and trucking. To capture the full effect of any federal spending, then, we need to estimate not only the direct jobs that are created by any type of spending, but also the indirect jobs that are supported throughout the supply chain.

The level of job creation – both direct and indirect – is the result of three main factors. First, it is affected by how capital-intensive or labor-intensive an industry is. Thus, education, where most of the spending goes directly to salaries, produces more jobs for a given level of spending than the military, which is more capital-intensive. Secondly, job creation is affected by the amount of spending that stays within the domestic economy rather than "leaking" overseas. Again, military spending has less domestic content than some of the alternatives, such as healthcare, education, infrastructure, or clean energy, all of which have a higher proportion of domestic production. Finally, wages are the third factor. An industry with higher paying jobs will support fewer jobs per $1 million of spending in comparison to an industry with lower average pay. This is the third reason why military spending produces fewer jobs that many alternatives: workers for private contractors who produce goods for the military, on average, have much higher pay than those in the education industry, for example.

These three reasons - labor intensity, domestic content, and average wage – all explain the finding that $1 million of war-related spending supports

fewer jobs than that same amount spent on clean energy, healthcare, education, or infrastructure. Including both direct and indirect jobs, **the military creates 6.9 jobs per $1 million, while the clean energy industry and infrastructure each support 9.8 jobs, healthcare supports 14.3, and education supports 15.2**. So for the same amount of spending, clean energy and infrastructure create 40 percent more jobs than the military, healthcare creates 100% more, and education 120% more.

These numbers are drawn from public data. I used the Bureau of Economic Analysis's input-output tables which are freely and publicly available. These data are based on the Economic Census as well as IRS filings and other administrative records. These numbers are not produced by a sophisticated model. They are transparent, and they are based on actual expenditures in the economy – expenditures by businesses, by government, and by individuals.

Employment Estimates

Using these employment estimates, we can then calculate the effect of spending $260 billion per year on war-related expenses, and compare that to the alternatives. The annual average of $260 billion spent since 2001 has created approximately 1.8 million defense-related jobs (direct and indirect; see Table 1). *Alternatively, that same amount of spending could have created about 2.5 million jobs in clean energy or in infrastructure, or could have created 3.7 million jobs in healthcare, nearly 4 million jobs in education broadly defined, and close to 5 million jobs if we spent the funds on primary and secondary schooling*. On average, if we include all four areas, the $260 billion spent on the war could have produced over 3 million jobs, and thus **we lost the opportunity to create 1.4 million jobs on average**. If we focus on the largest possible gap, that between defense and primary and secondary education, the lost opportunity is over 3 million jobs.

The costs of war are many, and go well beyond economic costs. Here I focus only on the lost opportunities to create jobs. By spending $260 billion on war-related expenses over the past 19 years, we have foregone the opportunity to create millions of jobs.

Table 1: Employment based on $260B annual spending

Employment	Direct	Indirect	Total
Federal defense	1,508,000	286,000	**1,794,000**
	-	-	**-**
Wind	1,248,000	936,000	**2,184,000**
Solar	1,664,000	806,000	**2,470,000**
Retrofits	1,560,000	1,196,000	**2,756,000**
Clean Energy (50% retrofits, 25% each solar and wind)	1,508,000	1,040,000	**2,548,000**
	-	-	**-**
Elementary and Secondary Schools	4,316,000	676,000	**4,992,000**
Higher ed	2,158,000	754,000	**2,912,000**
Education (average of above two)	3,250,000	728,000	**3,978,000**
	-	-	**-**
Infrastructure	1,586,000	962,000	**2,548,000**
	-	-	**-**
Healthcare	2,990,000	728,000	**3,718,000**
Average Clean Energy, Education, Infrastructure, Healthcare			**3,198,000**