

***We Get What We Pay For:
The Cycle of Military Spending, Industry Power, and Economic Dependence***

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Summary

Military spending makes up a dominant share of discretionary spending in the United States; military personnel make up the majority of U.S. government manpower; and military industry is a leading force in the U.S. economy. As a result, other elements and capacities of the U.S. government and civilian economy have been weakened, and military industries have gained political power. Decades of high levels of military spending have changed U.S. government and society – strengthening its ability to fight wars, while weakening its capacities to perform other core functions. Investments in infrastructure, healthcare, education, and emergency preparedness, for instance, have all suffered as military spending and industry have crowded them out. Increased resources channeled to the military further increase the political power of military industries, ensuring that the cycle of economic dependence continues – militarized sectors of the economy see perpetual increases in funding and manpower while other human needs go unmet.

The following key findings of this report show some of the primary economic distortions that have come at such a high cost to the more balanced functioning of the U.S. federal government:

Almost half of the U.S. federal discretionary budget² is allocated to the Department of Defense (DoD) (\$849 billion out of \$1.82 trillion in FY2023),³ and more than half of the

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² Discretionary spending is the part of the budget that is decided upon each year by Congress, unlike mandatory spending, which is set by rules and regulations. See page 6 of this report for further discussion on this issue.

³ OMB Historical Tables, Tables 5.1 for total defense Budget Authority, Table 5.6 for DoD budget authority and total discretionary budget authority. These levels include both regular and “emergency” funding, such as spending on the Ukraine conflict. The White House, Office of Management and Budget. *Historical Tables*. <https://www.whitehouse.gov/omb/budget/historical-tables/>

discretionary budget goes to “defense” overall, which includes not only the DoD but also nuclear weapons programs within the Department of Energy and additional defense spending in other departments. The total allocated to national security is about 55% of discretionary spending when funding for the Department of Homeland Security (DHS) and Veterans Affairs is included.

Out of Department of Defense spending itself, over half is channeled to military contractors. While the total contract spending of about \$400 billion in FY2021 was distributed among thousands of contractors and subcontractors throughout the U.S., the “Big 5” firms received almost 30% of all DoD contract dollars: Lockheed Martin (\$39 billion), Boeing (\$23B), Raytheon (\$20.6B), General Dynamics (\$16.6B), and Northrop Grumman (\$14.7B). These firms have enormous political power and a vested interest in continuing high military spending.

The federal government workforce is comprised of about 3.5 million workers, if we include both civilians and uniformed active-duty personnel. Of this, about 72 percent is defense-related employment, including Department of Defense civilians, uniformed military personnel, and those working in Veterans Affairs. By comparison, the Department of Health and Human Services made up 4 percent of federal employees, and the Department of State only 1 percent. This is another indicator of the degree to which the U.S. economy is skewed towards overdependence on the military, giving more political power to defense companies, which use the fear of job losses to maintain high defense spending, as the cycle of reliance on military industries and growing military industry power is perpetuated.

It doesn’t have to be this way. This report further shows that reducing military funding and increasing funding to areas like healthcare, education, infrastructure, or clean energy, will create jobs. Dollar for dollar, these alternative areas of federal spending create between 9 percent and 250 percent more jobs than the military. And a “Just Transition” is possible in order to ease the transition for workers and communities that are dependent on military spending, as investments are made and jobs are created in other industries.

Introduction

There is a Native American parable in which a grandfather tells his grandson about the two wolves living inside each of us. One wolf is evil, the other is good, and they are constantly battling. The grandson asks, “Which wolf wins?” and the grandfather responds, “The one that you feed.”

In line with this parable, economists understand that how a government directs public resources — which wolf it feeds — can strengthen or weaken different segments of the economy. The U.S. devotes more than half of its discretionary budget to the military. An

economy like this will suffer from two related phenomena: First, the military industrial sector will continue to grow at the expense of other, more generative economic sectors; and second, a strong military sector that gets the lion's share of the budget will only gain political power, ensuring that it will continue to be allocated an overabundance of resources, further exacerbating the problem of diminished resources in other sectors.

Relatedly, the "Matthew Principle" or "Matthew Effect" is a term coined by Merton (1968) to describe the scenario in which scientists who are the most well-known or the most highly funded then continue to get additional visibility and funding, further widening the gap between notable and less notable scientists.⁴ In other realms, a related idea is that the rich get richer and the poor get poorer. Inequality grows because the strongest get the best resources and grow faster, while the weaker get fewer resources and continue weakening. There is a cumulative effect to all of these trends: resources beget more resources.

Military spending, and public spending more generally, suffers from the same problem of compounded distributional disparities. As discussed by Rosa Brooks in *How Everything Became War and the Military Became Everything*, Americans have increasing trust in the military and decreasing trust of other parts of government, and as a result, "Americans increasingly treat the military as an all-purpose tool for fixing anything that happens to be broken."⁵

In the post-9/11 era, as military spending grew and State Department budgets were cut in Iraq and Afghanistan, the military started taking on more roles that had traditionally been the purview of the State Department or USAID, such as overseas agricultural programs and infrastructure reconstruction.⁶ Then, the DoD, with increased responsibilities and greater manpower than State or USAID, received more funds in subsequent rounds of funding and even less went to State and USAID, since these were now performing fewer tasks and had less manpower. As Brooks put it, "Higher military budgets force us to look for savings elsewhere, so we freeze or cut spending on civilian diplomacy and development and domestic social programs. As budget cuts cripple civilian agencies and programs, they lose their ability to perform as they once did, so we look to the military

⁴ Merton, R.K. (1968). *The Matthew effect in science: The reward and communication systems of science are considered*. *Science*, 159(3810), p.56-63.

⁵ Brooks, R. (2016). *How everything became war and the military became everything: Tales from the Pentagon*. Simon and Schuster, p. 20.

⁶ In Afghanistan, for example, reconstruction activities that had typically been primarily in the purview of USAID, and training of national security forces that had been under the Department of State, both ended up being primarily provided by the Department of Defense. See for example, Sopko, J. F. (2019). *Afghanistan Reconstruction: Lessons from the Long War*. 8(2). https://ndupress.ndu.edu/Portals/68/Documents/prism/prism_8-2/PRISM_8-2_Sopko.pdf?ver=2019-09-17-231049-013 ; United States Government Accountability Office. (2005, July 28). *Afghanistan Reconstruction: Despite Some Progress, Deteriorating Security and Other Obstacles Continue to Threaten Achievement of U.S. Goals*. GAO Report to Congressional Committees. Security and Other Obstacles Continue to Threaten Achievement of U.S. Goals," GAO Report 05-742, <https://www.govinfo.gov/content/pkg/GAOREPORTS-GAO-05-742/html/GAOREPORTS-GAO-05-742.htm>

to pick up the slack, further expanding its role in both foreign and domestic activities and further straining the volunteer force. This requires still higher military budgets, which continues the devastating cycle."⁷ The gap in the distribution of resources (military vs non-military) grows even wider.

This paper uses various federal data sources – including from the Office of Management and Budget, USASpending.gov, the Government Accountability Office, the U.S. Department of Defense Manpower Data Center, and others – to analyze military spending over time in comparison to other types of federal spending, as well as how much federal employment has been devoted to the military and related departments. The author, a macro economist who has written many reports on employment and federal spending, also analyzes the employment impacts of military spending in comparison to other types of federal spending.

When evaluating U.S. public budgets and how much we spend on the military, or on any other sector to which a significant portion of federal or local funds are allocated, we must ask the important questions of whether we are feeding and funding the industries and institutions that we want to grow, and which other industries or institutions are being weakened by our allocation choices. Furthermore, does the choice to prioritize military spending leave the economy vulnerable, or turn it into a garrison state? How might spending decisions and industrial development be different if the military did not consume such a big chunk of the budget?

It is important to note at the outset that sometimes officials present a false choice between military spending and alternatives. While smaller countries may be more hampered by a budget constraint because of difficulty in securing loans, the United States, despite its massive debt (that totals nearly \$32 trillion as of May 2023), is likely to be able to continue securing loans from the public and from other countries. The real tradeoff happens when there is a debt or spending limit in which increased spending in one sector necessitates reductions in another. For instance, the Budget Control Act of 2011, also known as “Sequestration,” required cuts to both military spending and non-military federal spending over a ten-year period, in order to reduce deficits and slow the growth of the national debt. (The Department of Defense was, however, able to circumvent some of these cuts by using “emergency” funding known as Overseas Contingency Operations, or OCO, which was not subject to the budget caps.⁸) As of the writing of this paper in May 2023, congressional leadership in the House of Representatives and the White House have struck a tentative spending deal for Fiscal Year 2024, which includes an agreement to freeze non-defense discretionary spending at Fiscal Year 2023 levels while raising defense spending.

A budget constraint implies that increased military spending comes at the cost of cutting other federal spending. Yet even without a budget constraint, military spending

⁷ Ibid, p.21

⁸ Congressional Research Service. (2019, September 6). *Overseas Contingency Operations Funding: Background and Status*. <https://sgp.fas.org/crs/natsec/R44519.pdf>

comes at a cost if a government is operating with deficits, such as the U.S. federal government has since Fiscal Year 2002. When this is the case, increases in the military budget are financed through debt. A 2020 paper by this author documents the costs of debt due to military spending, in particular from spending on the post-9/11 wars.⁹ The cost of war-related debt had, by 2020, already reached nearly \$1 trillion in accumulated interest alone and was projected to rise to over \$6.5 trillion by 2050.

Payments for net interest already account for nearly eight percent of U.S. federal spending as of FY2022 (\$476 billion out of \$6.2 trillion). Over the next ten years, that figure will increase significantly: The Office of Management and Budget has projected that by 2033, nearly 15 percent of all federal spending will go to interest payments, with \$1.44 trillion being spent on interest alone.¹⁰ Growing debt has a compounding effect, as greater debt results in higher interest rates, raising the level of interest payments owed. The Government Accountability Office finds that interest will be the largest federal expense by 2050.¹¹ As an ever-growing portion of the federal budget is required to pay interest on public debt, a smaller portion remains available for both military and non-military spending. Thus, increased military spending must either come at the expense of budget cuts to non-military programs now, or will further exacerbate the public debt, entailing greater interest payments and larger spending cuts in the future.

This paper demonstrates how the U.S. government is feeding one wolf -- the militarized economy -- to the detriment of others, including areas of federal spending and public investment needs such as healthcare, education, infrastructure, and clean energy. The author calculates the amount of federal spending that supports the military and the militarized economy, along with the size of the federal workforce that is militarized. Furthermore, the author estimates needed investments in other economic sectors, as well as the potential for job creation in those alternative areas in comparison to military industries.

The data show a clear picture: U.S. taxpayers have gotten what they've paid for, which is an economy that is devoted to the military, both in terms of spending and in terms of jobs. While federal spending could have created a more economically diverse and environmentally sustainable economy, with greater employment opportunities, the U.S. government has instead devoted the bulk of its resources to the military. This has created a vicious cycle in which resources beget more resources: military solutions crowd out diplomatic solutions; military workers do the jobs that the State Department or USAID used to do in conflict areas; military contractors become more profitable and politically powerful; and when budget negotiations take place on Capitol Hill, military funding is seen

⁹ Peltier, H. (2020, January). *The Cost of Debt-financed War: Public Debt and Rising Interest for Post-9/11 War Spending*. Costs of War, Watson Institute, Brown University and Pardee Center, Boston University.

¹⁰ Calculations based on, Congressional Budget Office. (2023, May). *An Update to the Budget Outlook: 2023 to 2033*. <https://www.cbo.gov/system/files/2023-05/59096-Budget-Outlook.pdf>

¹¹ United States Government Accountability Office. (2021, March). *The Nation's Fiscal Health*. <https://www.gao.gov/assets/gao-21-275sp.pdf>

as too essential to cut, while programs for health, education, energy, and other priorities are frozen or reduced.

Economic Dependence on the Military and the “Camo Economy”

How dependent is the United States economy on the military? We can assess the level of dependence through two channels: money and jobs. In terms of spending, one measure to look at is the portion of the federal budget that is allocated to the military in comparison to other sectors and programs. Another monetary measure of the military’s dominance is to look at how much a state or regional economy depends on military spending as a percentage of its total economic activity. Secondly, we can assess the dependence on the military and related industries by looking at employment, specifically at how much federal employment is devoted to the military and related sectors as opposed to other programs and areas such as health, education, or energy.

First, when assessing the U.S. federal budget, note that this has two parts: mandatory spending and discretionary spending. Mandatory spending is set by rules and regulations and covers programs such as Social Security, Medicaid, and Medicare, among others. Discretionary spending is decided upon each year by the U.S. Congress and includes funding for the military, as well as energy, housing, education, diplomacy, and various other programs. As of FY2022, mandatory spending totaled just over \$4 trillion while discretionary spending totaled about \$1.7 trillion.¹²

The U.S. allocates almost half (44% in FY2022) of its discretionary budget to the DoD. The total allocated to national security is about 55% when funding for the Department of Homeland Security (DHS) and Veterans Affairs is included. That leaves less than half of the federal discretionary budget (\$820 billion out of \$1.79 trillion) for programs like food and housing security, clean energy and environmental programs, transportation, agriculture, food safety, education spending and other programs that provide productive resources or social assistance to businesses and individuals. While DoD is allocated 44% of discretionary budget authority, the Department of State gets only 2% and the Environmental Protection Agency 1%, as shown in Figure 1, below.¹³

Discretionary funding for the security state amounted to over \$1 trillion in FY2022 (\$776 billion for DoD, \$112B for Veterans Affairs, \$79B for Homeland Security, \$36B for the

¹² Congressional Budget Office. (2023, May). *An Update to the Budget Outlook: 2023 to 2033*.

<https://www.cbo.gov/system/files/2023-05/59096-Budget-Outlook.pdf>

¹³ A 2023 report released by the National Priorities Project states an even higher amount of militarized spending: \$1.14 trillion in FY2023. The NPP report includes not only DoD, Veterans Affairs, and Homeland Security, as we do here, but also federal law enforcement and mass incarceration. Koshgarian, L; Lusuegro, A.; Siddique, A. (2023, May 24). *The Warfare State: How Funding for Militarism Compromises our Welfare*. National Priorities Project. <https://www.nationalpriorities.org/analysis/2023/warfare-state-how-funding-militarism-compromises-our-welfare/>

Department of Justice), while the Department of State, the main agency for diplomacy, received less than \$36 billion.

The National Defense Authorization Act (NDAA) is the legislation authorizing defense spending for the Department of Defense as well as defense programs in the Department of Energy (atomic programs) and other departments. For FY2023, the NDAA authorizes \$858 billion in spending for defense, of which about \$817 billion is for the DoD.

Figure 1: Discretionary Budget Authority by Agency (based on OMB Table 5.4)

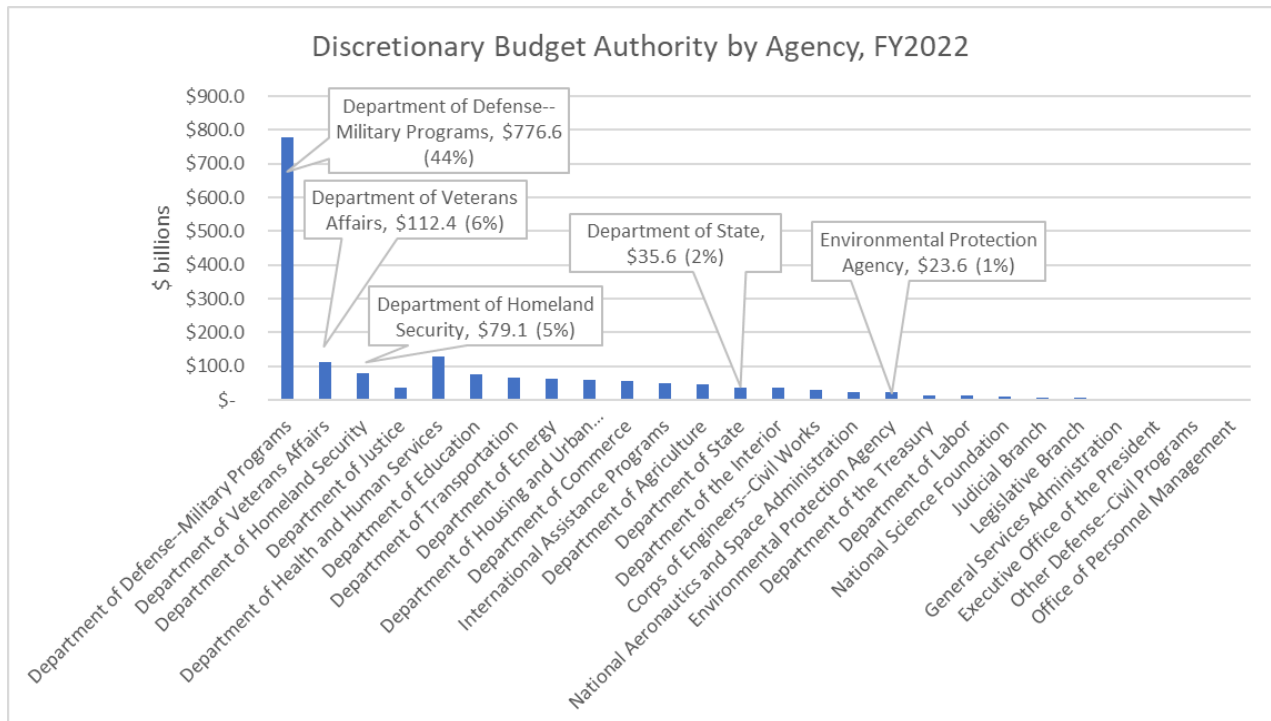
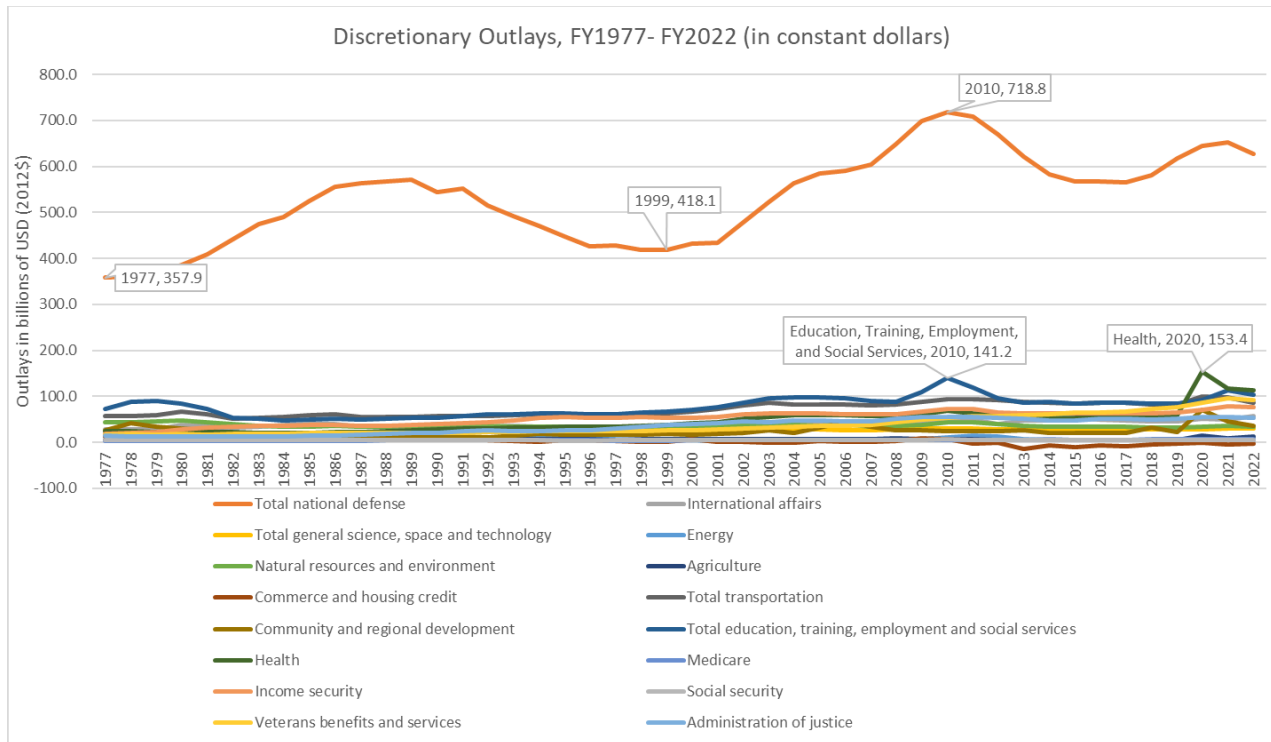


Figure 2: Discretionary Outlays by Agency (based on OMB Table 8.8)



If we look at outlays (spending) over time, we see that spending levels for DoD far surpass levels for all non-defense discretionary programs, as shown in Figure 2, above.¹⁴ DoD spending rose to about \$570 billion (in constant FY2012 dollars) at the height of the Cold War in 1989, fell throughout the 1990s, and rose again with the post-9/11 wars, to a height of about \$719 billion in 2010. At that point, when military spending was at a peak, and social spending also peaked due to the stimulus package known as the American Recovery and Reinvestment Act (ARRA) following the Great Recession of 2007-2009, defense outlays were nearly five times as high as the next category of spending — education, training, employment, and social services (\$141 billion in 2010).¹⁵ In 2020, we see a spike in discretionary spending on health, as funding for COVID-19 programs surged; yet still, spending by the Department of Health and Human Services was less than one-quarter of the amount of the DoD that year.

¹⁴ Note here that we focus on discretionary funding and not mandatory spending, since almost all of DoD spending is discretionary.

¹⁵ The reader should keep in mind that this chart (Figure 2) is in constant (inflation-adjusted) 2012 dollars. While this is useful for comparing spending levels over time, the values in this chart would need to be converted into current dollars if they are to be compared to other budget or spending amounts in current dollars, such as those in Figure 1.

Employment in the Federal Government

The federal government provides for the defense and national security of the U.S. population, as well as providing economic security, social protections, and various public services. Federal employees include military personnel and civilians working in the DoD, as well as civilians working in all other branches of the government. Above we saw that over half of the federal discretionary budget is allocated to the military (defense and veterans), and here we see that the departments of Defense and Veterans Affairs account for more than half of federal employment; closer to three-quarters when we count active-duty personnel.

In 2022, the Department of Defense accounted for 34 percent of the civilian federal workforce, and Veterans Affairs made up another 20 percent, so that more than half of federal civilian employees are devoted to the military and veterans. Homeland Security accounted for an additional 10 percent of federal employment. By comparison, the Department of Health and Human Services made up 4 percent of federal employees, and the Department of State only 1 percent.

Table 1: Federal Civilian Employment, FY2022

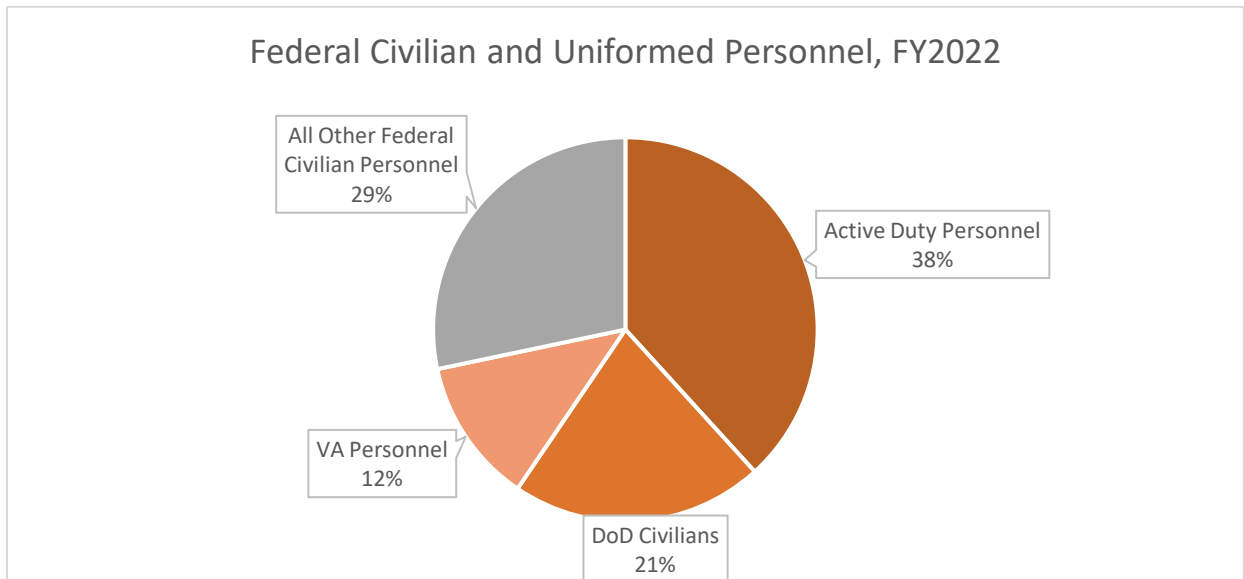
	Employees (U.S. and abroad)	% of all agencies
Department of Defense	746,101	34%
Department of Veterans Affairs	429,224	20%
Department of Homeland Security	212,490	10%
Department of Agriculture	93,210	4%
Department of Commerce	46,491	2%
Department of Justice	116,372	5%
Department of Labor	14,348	1%
Department of Energy	14,816	1%
Department of Education	4,199	0%
Department of Health and Human Services	88,729	4%
Department of Housing and Urban Development	8,099	0%
Department of the Interior	67,446	3%
Department of State	12,825	1%
Department of Transportation	53,390	2%
Department of the Treasury	97,136	4%
<i>Total, Cabinet Level Agencies</i>	2,004,876	92%
<i>Total, All Agencies</i>	2,169,629	100%

Source: Data extracted from Fedscope.opm.gov on May 22, 2023

Table 1, above, shows the numbers and percentages of federal employees who are civilian. However, the complete federal workforce also includes uniformed military personnel, both those who are on active duty as well as reserve forces. As of September 2022, active-duty personnel totaled 1,343,794 individuals (of which 1,172,058 are based in the U.S. and the remainder overseas). Adding reserve personnel, that would be an additional 772,910, of which almost all are in the U.S.¹⁶

The federal civilian workforce includes roughly 2.1 million people. This grows to about 3.5 million individuals if we include active-duty military personnel (but not reserves). Of this combined civilian plus uniformed federal workforce, DoD civilians and active-duty military account for about 60 percent. If we also include employees in Veterans Affairs, we can say that about 72 percent of the total federal workforce are defense personnel, as shown below in Figure 3.¹⁷

Figure 3: Federal Civilian and Uniformed Military Workforce, 2022



Sources: Active Duty Personnel from DMDC; Civilian Personnel from Fedscope. See footnotes 16 and 17.

Military Industry and Military Industrial Employment

When defense spending and employment in the defense sector make up significant portions of a state or regional economy, this creates two problems. First, any economy that

¹⁶ Active duty and reserve personnel statistics are from the September 2022, DMDC report, *Military and Civilian Personnel by Service/Agency by State/Country*. [https://dwp.dmhc.osd.mil/dwp/api/download?fileName=DMDC Website Location Report 2209.xlsx&groupName=milRegionCountry](https://dwp.dmhc.osd.mil/dwp/api/download?fileName=DMDC%20Website%20Location%20Report%202209.xlsx&groupName=milRegionCountry)

¹⁷ Civilian manpower numbers (defense and non-defense) are from Fedscope.opm.gov, while active duty manpower statistics are from DMDC, as cited in previous footnote.

is overly dependent on one industry or set of industries is vulnerable to that industry's shrinking or closure, whether for changes in demand or other reasons. Secondly and relatedly, if an industry or set of industries is integral to a local economy, that industry gains political power, as communities become increasingly dependent on it and worry about the loss of jobs and economic activity if the industry declines or departs. This can leave some communities, such as defense-dependent ones, feeling they have no other good options beyond the defense industry. The cycle continues as defense spending becomes entrenched and defense companies use the fear of job losses to maintain high defense spending, which means military industries are protected and other alternatives aren't pursued, and defense dependence continues.

Every state and nearly every county in the U.S. receives some amount of defense spending, which has employment effects in military-related industries, in addition to the civilian and uniformed personnel employed by the federal government. Over half of Department of Defense spending is channeled to contractors, and those firms are located in every state and almost every congressional district.¹⁸

At the state level, DoD tracks spending that is paid to contractors as well as to military personnel. According to the most recent (October 2022) report, which compiles FY2021 data:

DoD contract obligations and payroll spending in the 50 states and the District of Columbia totaled \$559 billion, which is 2.3 percent of the country's gross domestic product (GDP). If the total spending were divided across every U.S. resident, it would amount to \$1,684 per U.S. citizen. Of those funds, \$398.7 billion (71 percent) were spent on contracts for products and services, while the remaining \$160.3 billion (29 percent) paid the salaries of DOD personnel.¹⁹

As shown by Rebecca Thorpe in *The American Warfare State*, the share of an industry in its regional GDP closely tracks with political action: the more dependent a state is on defense spending, the more its politicians will advocate for increased defense budgets.²⁰ In other words, the political pressure to maintain or increase military spending not only results from the total dollars of defense spending that a community receives, but how reliant that community is on that spending and how few other alternatives the community has for employment and economic production. As employment in the

¹⁸ DoD contract award obligations totaled \$424 billion in FY2022, according to USASpending.gov (as of May 23, 2023), compared to about \$777 billion in budget appropriations that year.

¹⁹ U.S. Department of Defense. (2022, October 20). *DOD Releases Report on Defense Spending by State in Fiscal Year 2021*. <https://www.defense.gov/News/Releases/Release/Article/3194361/dod-releases-report-on-defense-spending-by-state-in-fiscal-year-2021/>

²⁰ Thorpe, R.U. (2014). *The American warfare state: The domestic politics of military spending*. University of Chicago Press.

manufacturing sector in the U.S. has declined – a reduction of 30 percent from 1980 to 2023 – military manufacturing has gained a more vaulted place in the American psyche as a source of decent jobs, and sometimes as the only source of manufacturing employment.²¹

Funding to the Department of Defense supports both military and civilian employment in that branch of the federal government, and also flows to military contractors who produce weapons and other goods for the military as well as provide various services such as lodging, dining, security, transportation, and others, on and off the battlefield. I refer to military contractors as the “Camo Economy” – these businesses receive about half of the DoD’s budget, yet we know surprisingly little about how they spend these funds, what kinds of jobs and pay are supported, which sub-contractors are paid and how much. The use of contractors in warzones also obscures the number of people injured or killed by war, as records for contractors are not nearly as rigorously maintained or publicly shared as those for military personnel. The practice of contracting has grown significantly in the post-9/11 era with multiple reports finding that 30-40% of contract dollars are lost to waste, fraud, and abuse.²²

In FY2021, total DoD contract and personnel spending to states amounted to nearly \$560 billion. The top recipients for DoD spending were Virginia (about \$63 billion), California (\$57 billion), Texas (\$47 billion), New York (\$31 billion), and Florida (\$30 billion).²³ In terms of how defense spending relates to the state’s GDP, or in other words how dependent a state is on defense spending, Virginia tops the list, as defense spending on contracts and personnel made up 10.2% of the state’s GDP in FY2021. Virginia is followed by Hawaii, the District of Columbia, Connecticut, and Alaska. On average for the fifty states plus D.C., defense spending accounted for about 2.3 percent of a state’s GDP in FY2021. The table below shows the twenty most defense-dependent states.

Virginia, at the top of the list, is where many large military contractors are headquartered or located, including Huntington Ingalls, Leidos, Northrop Grumman, General Dynamics, and CACI. These companies receive billions of dollars in contracts to produce military equipment, weapons, and vehicles, and to provide services such as engineering or IT. Military contractors in both goods and services are located in all 50 states plus DC, making up at least 2.3 percent of the GDP of the top 20 states.

²¹ Manufacturing employment data extracted on May 30, 2023 from the U.S. Bureau of Labor Statistics. *Employment, Hours, and Earnings from the Current Employment Statistics survey (National)*. <https://data.bls.gov/timeseries/CES3000000001>

²² See, Peltier, H. (2020, June 30). *The Growth of the “Camo Economy” and the Commercialization of the Post-9/11 Wars*. Costs of War, Watson Institute, Brown University and Pardee Center, Boston University. <https://watson.brown.edu/costsofwar/files/cow/imce/papers/2020/Peltier%202020%20-%20Growth%20of%20Camo%20Economy%20-%20June%2030%202020%20-%20FINAL.pdf>; Also see, for example, the 2021 SIGAR report: *What We Need to Learn: Lessons From Twenty Years of Afghanistan Reconstruction*. (2021, August). Special Inspector General for Afghanistan Reconstruction (SIGAR). <https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>

²³ According to Table 12 from U.S. Department of Defense. *Defense Spending by State – Fiscal Year 2021*. <https://oldcc.gov/dsbs-fy2021>

Table 2: Ranking of States by Military Spending as a Percentage of GDP in FY2021

State	Rank FY2021	Percent of State GDP FY2021
Virginia	1	10.2%
Hawaii	2	8.3%
District of Columbia	3	6.3%
Connecticut	4	6.2%
Alaska	5	6.2%
Alabama	6	6.1%
Maryland	7	5.8%
Kentucky	8	5.7%
Mississippi	9	4.3%
Maine	10	4.1%
Arizona	11	3.4%
Missouri	12	3.3%
Massachusetts	13	3.2%
Oklahoma	14	2.9%
New Mexico	15	2.9%
Colorado	16	2.8%
Washington	17	2.7%
Utah	18	2.7%
Rhode Island	19	2.4%
Florida	20	2.3%

Source: Extracted from Table 13 from U.S. Dept. of Defense <https://oldcc.gov/dsbs-fy2021>

Dependence Creates Power

Military contracts are distributed to every congressional district²⁴ and nearly every county in the U.S. This is not by accident, but rather the result of politically savvy and powerful contractors who understand that spreading out contracts means buying and gaining political support: more areas with defense contracts means more constituents and more politicians fighting to win or maintain those contracts for the sake of jobs. This dynamic gives political support for military industries, while making it harder for other industries to compete for federal funding and to increase their production and employment.

In addition, large defense firms are able to use political pressure (including lobbying and campaign contributions) as well as personal relationships and past performance in order to secure increased resources, which in turn increases their future ability to gain

²⁴ McGarry, B. ; Kamarch, K. (2022, December 9). *Defense Spending and Your District*. Congressional Research Service. <https://crsreports.congress.gov/product/pdf/IF/IF12274/2>

more resources. This is the Matthew Principle. Within the military industry, or what we call the “Camo Economy,”²⁵ we see with contractors, in particular, that as they grow (from lucrative contracts) their profitability allows them to spend more money on lobbying, which then gives them more contracts and more power. According to FY2021 data from the DoD’s Office of Local Defense Community Cooperation (OLDCC), which was formerly called the Office of Economic Adjustment, the defense contractors receiving the greatest number of contract dollars were what are called “The Big 5”: Lockheed Martin (\$39 billion), Boeing (\$23B), Raytheon (\$20.6B), General Dynamics (\$16.6B), and Northrop Grumman (\$14.7B). While the total contract spending of about \$400 billion was distributed among thousands of contractors and subcontractors throughout the U.S., these five firms accounted for almost 30 percent of all DoD contract dollars in FY2021.²⁶

According to OpenSecrets.org, an initiative of the Center for Responsive Politics, which publishes lobbying expenditures and campaign contributions, Raytheon Technologies spent over \$15 million on lobbying expenses in 2021, followed closely by Lockheed Martin with over \$14 million in lobbying expenses.²⁷ Boeing spent about \$13.5 million in lobbying that year, while General Dynamics spent over \$11 million, and Northrop Grumman rounded out the top five at about \$10.7 million. The defense-related companies spending the most on lobbying in recent years are Lockheed Martin, Boeing, General Dynamics, Northrop Grumman, and Raytheon.²⁸ These are the same five firms that the DoD’s OLDCC reports receiving the greatest number of contract dollars.

Table 3: “The Big Five” – Contract Funding and Lobbying Expenditures

	FY2021 Contracts	2021 Lobbying Expenditures
Lockheed Martin	\$38,921,094,726	\$14,401,911
Boeing	\$23,197,950,790	\$13,450,000
Raytheon Technologies	\$20,611,792,865	\$15,390,000
General Dynamics	\$16,588,721,379	\$11,107,444
Northrop Grumman	\$14,661,680,694	\$10,673,000

Source: FY2021 contract spending from OLDCC FY2021 report; 2021 lobbying expenditures from Opensecrets.org company profiles (accessed May 24, 2023).

²⁵ See, Peltier, H. (2020, June 30). *The Growth of the “Camo Economy” and the Commercialization of the Post-9/11 Wars*. Costs of War, Watson Institute, Brown University and Pardee Center, Boston University.

²⁶ U.S. Department of Defense. Office of Local Defense Community Cooperation. (2019). *Defense Spending by State, Fiscal Year 2019*. <https://oldcc.gov/defense-spending-state-fiscal-year-2019>

²⁷ See, *Lobbying Data Summary*. (2023, April 24). OpenSecrets.org, a website of the Center for Responsive Politics, Washington, D.C. <https://www.OpenSecrets.org/federal-lobbying/>

²⁸ Auble, D. *Sector Profile: Defense*. (2023, January). OpenSecrets.org, a website of the Center for Responsive Politics, Washington, D.C. <https://www.opensecrets.org/federal-lobbying/sectors/background?cycle=2020&id=D>

Firms such as Lockheed Martin, Northrop Grumman, Raytheon, General Dynamics, and Boeing, spend millions of dollars in lobbying each year and use their political capital to secure monopoly-like contracts with the Department of Defense. For contracts in 2020, about 10% of “prime awards” to Lockheed Martin Corporation were subject to competition, while close to 90% were not competed or not available for competition. “Lifetime service agreements” and other non-competitive contracting arrangements yield monopolistic conditions, with attendant high profits, for large firms with political pull.²⁹

It's All About the Jobs

One of the main tactics used by the military industry to continue securing high levels of contracts is to claim that reductions in military spending will not only threaten national security but will harm jobs. Military spending, they say, is necessary to support the economy and to keep decent employment opportunities. This falls under the doctrine of “military Keynesianism”: the belief that federal spending on war and military activities will create jobs. Of course, federal spending on a number of things could create jobs. This paper, as well as past research by this paper’s author, shows that in fact a greater number of jobs can be created through alternative spending – in areas such as healthcare, education, infrastructure, and clean energy.³⁰

Any investment, public or private, will lead to job creation. Federal spending on the military or on healthcare will lead to jobs directly in the military or in healthcare facilities, and will also lead to indirect jobs, the jobs that are created through the supply chain, in industries that supply goods and services to the military or to the healthcare sector. In this paper, the author estimates the number of direct and indirect jobs created for each \$1 million worth of spending on the military and compares that to alternatives, including federal non-military spending, healthcare of various types, education at different levels, infrastructure investments, energy efficiency, and renewable energy including wind and solar.

This paper illustrates that all the alternatives create more jobs than the military, given the same level of spending.

Figure 4 and Table 4, below, show the comparison of direct (in blue) and indirect (in orange) jobs. Military spending supports 6.1 jobs per \$1 million of spending, while

²⁹ For more on these issues, see Peltier, H. (2021, December 15). *Working Paper: Arms, Tanks, And Munitions: The Relationship Between Profits and Monopoly Conditions*. Security in Context.

<https://www.securityincontext.com/posts/arms-tanks-and-munitions-peltier>

³⁰ See, for example, Peltier, H. (2019). *War Spending and Lost Opportunities*. Costs of War, Watson Institute, Brown University.

<https://watson.brown.edu/costsofwar/files/cow/imce/papers/2019/March%202019%20Job%20Opportunity%20Cost%20of%20War.pdf> or Peltier, H. (2017, May 24). *Job Opportunity Cost of War*. Costs of War, Watson Institute, Brown University.

<https://watson.brown.edu/costsofwar/files/cow/imce/papers/2017/Job%20Opportunity%20Cost%20of%20War%20-%20HGP%20-%20FINAL.pdf>

healthcare creates almost twice as many jobs (11.6 per \$1 million), and the greatest job creation is in primary and secondary education, with 21 jobs per \$1 million. Education at all levels creates an average of 17.1 jobs per \$1 million, almost three times as many as the military. Wind and solar create 9 to 14 percent more jobs (6.9 jobs in solar and 6.6 jobs in wind, compared to 6.1 jobs in the military).

Figure 4: Job Creation in the Military and Alternative Areas

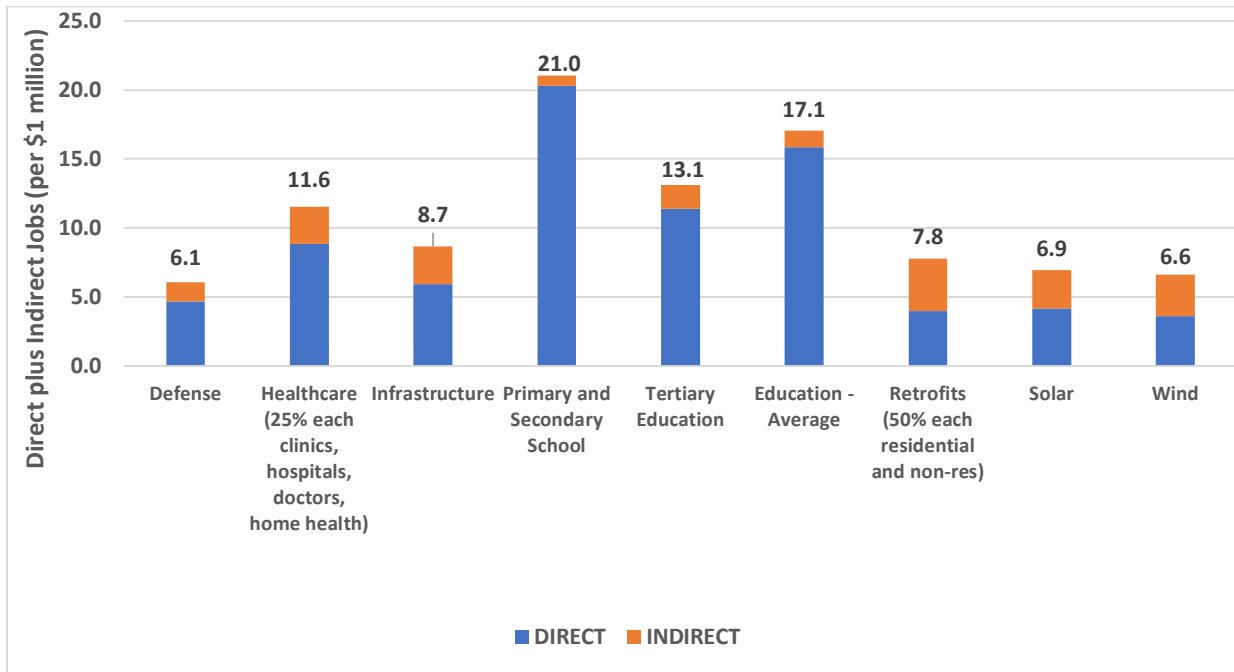


Table 4: Direct and Indirect Jobs per \$1 million federal spending

	Direct plus Indirect Jobs per \$1M	Compared to defense jobs per \$1M
Defense	6.1	--
Healthcare (25% each: clinics, hospitals, doctors, home health)	11.6	+91%
Infrastructure	8.7	+43%
Primary and Secondary School	21.0	+247%
Tertiary Education	13.1	+116%
Education - Average	17.1	+181%
Retrofits (50% each residential and non-res)	7.8	+28%
Solar	6.9	+14%
Wind	6.6	+9%

To estimate the number of direct and indirect jobs, the author used an input-output model.³¹ Input-output (I-O) models are based on purchase and sales data between businesses, individuals, and government. They enable users to estimate the jobs that are directly created in any industry when spending increases in that industry, as well as the indirect jobs created through that industry's supply chain. In the U.S., input-output tables are compiled by the Bureau of Economic Analysis using data from the Economic Census, tax filings, and other administrative data.

Why is it that any area of public spending would outperform another in terms of job creation? There are essentially three reasons: (1) labor intensity; (2) wage levels; and (3) domestic content. Labor intensity refers to the proportion of total spending that is payment for labor (i.e., salaries, wages, benefits) as opposed to payment for capital (rent or other building expenses, purchases of equipment, etc.). Industries with high labor intensity (such as education) will need more employees than industries with low labor intensity (such as oil refining). This goes hand-in-hand with the second factor: wages. When wages are lower, more people can be hired for the same amount of total spending. Industries with higher labor intensity often tend to have lower wages, so that a greater number of people are employed but they are paid lower wages than in capital-intensive industries.³² The third factor is domestic content, which refers to how much of the total spending remains in the domestic economy (spending in the U.S., for example) as opposed to paying for imports. Higher domestic content – for example in construction, where most jobs are local – results in greater job creation effects.

Military spending tends to have lower labor intensity (also known as higher capital intensity), higher wages, and lower domestic content than many other industries, all three of which lower the job-creation effect of military spending in comparison to industries like education, healthcare, infrastructure, or clean energy.

As noted at the beginning of this section, one of the obstacles faced by those wishing to reduce military spending is the notion that the military is a good source of jobs, and that cuts to military spending will entail job loss. Knowing the potential for job creation is thus an important rebuttal to this argument, and as shown above, there are multiple opportunities to create more jobs than would be lost, if spending is appropriately targeted to industries of interest. In crafting industrial policy, targeted investments can be made to areas that would be hardest hit by military-related job losses, such as in areas where bases are closed or where defense contractors are concentrated. Public support – in the forms of

³¹ For the analysis in this paper, we use IMPLAN, which is a data and software package built by the Minnesota IMPLAN Group based on BEA data and other sources, with 2021 U.S. data.

³² Compare, for example, Industry A in which \$700,000 out of each \$1 million spending (70%) is for wages, and earnings average \$35,000 per person, to Industry B in which \$400,000 out of each \$1 million spending (40%) is for wages, and earnings average \$100,000 per person. Industry A is a high-labor-intensity/low-wage industry that will employ 20 people per \$1 million total spending, where Industry B is a low-labor-intensity/high-wage industry that will employ 4 people per \$1 million. Somewhere in between might be industry C, with high labor intensity (\$700,000/\$1M for wages) and high wages (\$70,000 per person), resulting in 10 jobs per \$ 1 million.

grants, loans, and tax subsidies – can stimulate the creation of green manufacturing industries in those areas where there might be job losses with overlapping occupations, including manufacturing of weapons systems and ammunition, or navigation systems and other electronic equipment. This type of support could reverse some of the Camo Economy brain-drain by creating labor demand for similar occupations, giving those with relevant credentials (engineers, logistics managers, and technicians, for example) options for careers outside of the military industry.

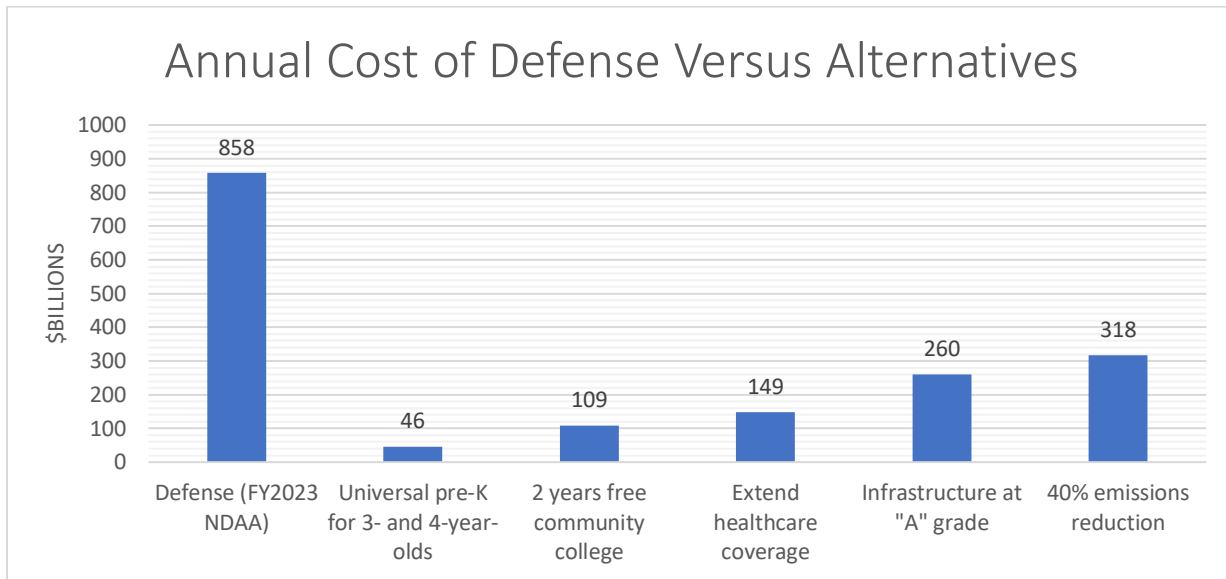
Alternatives to Military Spending

While a fuller discussion of the various alternatives to military spending is outside the scope of this paper, this topic merits at least a mention here.³³ As shown in the job creation estimates, spending that is shifted from the military to alternatives such as healthcare, education, infrastructure, or clean energy, will lead to a net increase in jobs: more jobs are created than lost. Furthermore, while the notion of “security” often invokes images of weapons-based security, the federal government is tasked with providing many types of security, including not only militarized security but also economic security. Genuine security could be more properly understood as people having the fundamentals needed to live a decent life, including access to education and healthcare, social and economic protections from job losses and economic downturns, and the surety of having safe bridges and highways on which to travel to and from work and other places.

Here, the costs of a few of these spending alternatives in comparison to military spending are outlined. For FY2023, the National Defense Authorization Act (NDAA), the legislation that authorizes DoD spending as well as nuclear programs in the Dept. of Energy and defense spending in other departments, authorizes \$858 billion in spending for defense, of which about \$817 billion is for the DoD.

³³ For more discussion and estimates of trade-offs and alternatives, see various publications by and the website of the National Priorities Project, including, Koshgarian, L.; Lusuegro, A.; Siddique, A. (2023, May 24). *The Warfare State: How Funding for Militarism Compromises Our Welfare*. National Priorities Project. <https://www.nationalpriorities.org/analysis/2023/warfare-state-how-funding-militarism-compromises-our-welfare/>

Figure 5: FY2023 Defense Authorization in Comparison to Possible Alternatives



Sources: See text for sources of each cost estimate

For a fraction of this funding, the U.S. government could instead fund increased access to early childhood education or offer other educational stipends or programs for primary or secondary schooling or for higher education. As an example, the cost of providing universal early childhood education (pre-K) to three- and four-year-olds in the U.S. is projected to range from about \$20 billion per year to \$46 billion per year.³⁴ Another alternative would be to fund two years of community college (junior college) for all students for \$109 billion per year.³⁵

Healthcare is a sector with a wide (and contentious) range of possibilities for increased funding – whether that’s “Medicare for All,” universal healthcare coverage, single payer healthcare, or simply increased access to healthcare for children or people with low incomes. As one example, a 2020 study published in *The Lancet* found that changing the national healthcare system in the U.S. to a single-payer system would actually save money compared to current spending; an alternative estimated by that study’s authors would be

³⁴ The lower estimate comes from the Washington Center for Equitable Growth’s analysis of The American Families Plan proposal in 2021. (2021). *A cost-benefit analysis of The American Families Plan’s proposed investment in a nationwide public preschool program*. <https://equitablegrowth.org/a-cost-benefit-analysis-of-the-american-families-plans-proposed-investment-in-a-nationwide-public-preschool-program/> while the higher estimate also includes construction of new facilities and is produced by an analysis by the University of Pennsylvania’s Wharton Budget Model. (2022, June 2). *Total Cost of Universal Pre-K, Including New Facilities*. Penn Wharton, University of Pennsylvania, Budget Model. <https://budgetmodel.wharton.upenn.edu/issues/2022/6/2/total-cost-of-universal-pre-k#:~:text=We%20estimate%20a%20U.S.%20nationwide,two%20years%20of%20the%20policy.>

³⁵ This estimate and many other examples and estimates of public funding for higher education can be found in Hanson, M. (2022, November 13). *How Much Would Free College Cost?* EducationData.org. <https://educationdata.org/how-much-would-free-college-cost>

to extend the current system to cover uninsured and under-insured people at a cost of \$149 billion annually.³⁶

When it comes to infrastructure, the opportunities for improvement are nearly boundless. The American Society of Civil Engineers, which publishes a “Report Card” each year on the state of U.S. infrastructure, gave the country a C- overall in 2021.³⁷ Of the 17 categories it analyzed, the weakest were transit, roads, levees and dams, followed by aviation and schools. In assessing the condition and the needed repairs and upgrades to restore infrastructure to an “A” rating, the ASCE estimates the “Funding Gap.” In 2021, the greatest funding gap was for surface transportation, which would require an additional \$1.2 trillion over current funding levels; this was followed by drinking water and water treatment, which needs an additional \$434 billion; and then schools, with a funding gap of \$380 billion. Combining all categories of infrastructure, the total funding gap is about \$2.6 trillion over 10 years, or about \$260 billion per year to fund investments that would restore U.S. infrastructure (air, land, water, electricity, parks, schools, and other) to an “A” rating.³⁸

Another area for public investment with an even greater need is funding for clean energy to reach targeted emissions reductions in order to mitigate climate change. Cost estimates vary, depending on the level and types of energy efficiency and renewable energy deployed. One estimate by the Political Economy Research Institute (PERI) is that an annual investment of 1.2 percent of GDP would reduce emissions by 40 percent over 20 years.³⁹ As of May 2023, U.S. GDP is \$26.5 trillion,⁴⁰ and 1.2 percent of that would be \$318 billion. While the PERI report suggests that total funding could be a mixture of private and public, the upper bound we use here for federal spending would be \$318 billion per year to reduce carbon emissions by 40 percent over the next two decades.

None of these estimates is comprehensive, yet they give us a sense of some alternative uses for federal spending. While it would be possible to fully fund all of the programs above by using the full defense budget, the author is certainly not making that suggestion here. Instead, the aim is to provide various scenarios in which some reduction

³⁶ Galvani, A.; Parpia, A.; Foster, E.; Singer, B.; Fitzpatrick, M. (2020, February 15). *Improving the prognosis of health care in the USA*. *The Lancet*, 395(10223) p.524-533.

[https://doi.org/10.1016/S0140-6736\(19\)33019-3](https://doi.org/10.1016/S0140-6736(19)33019-3)

³⁷ American Society of Civil Engineers. (2021). *A Comprehensive Assessment of America's Infrastructure*.

https://infrastructurereportcard.org/wp-content/uploads/2020/12/National_IRC_2021-report.pdf

³⁸ *ibid*.

³⁹ Polin, R.; Peltier, H.; Heintz, J.; Hendricks, B. (2014, September 18). *Green Growth: A U.S. Program for Controlling Climate Change and Expanding Job Opportunities*. Political Economy Research Institute.

<https://peri.umass.edu/publication/item/585-green-growth-a-u-s-program-for-controlling-climate-change-and-expanding-job-opportunities>

⁴⁰ Bureau of Economic Analysis. (2023, May 25). *Gross Domestic Product (Second Estimate), Corporate Profits (Preliminary Estimate), First Quarter 2023*. <https://www.bea.gov/news/2023/gross-domestic-product-second-estimate-corporate-profits-preliminary-estimate-first>

in defense spending could be targeted to other important areas of the domestic economy, particularly in ways that both meet urgent and growing needs and that create jobs.

A Just Transition for Military Workers

While the net change in jobs from the military to any of these alternatives is beneficial in the aggregate – many more jobs are created than lost – there would be cases of job losses for individuals and a decline in economic activity for defense-dependent communities, at least in the short term. Therefore, policymakers should consider “Just Transition” policies to cushion the blow for workers and communities dependent upon military industries.

“Just Transition” is a concept dating to the 1990s in which labor unions and environmentalists together outlined a set of strategies that would ease the transition for workers and communities dependent on fossil fuel jobs as the country moves toward cleaner alternatives. A Just Transition (JT) implies protecting workers and communities from the financial harm that would occur as policy forces a shift away from their industry, resulting in job loss and the loss of spending and taxes on which the community depends. JT policies are being considered and implemented within the United Nations Framework Convention on Climate Change, to promote decent jobs in the green economy and facilitate a just transition for workers and communities dependent on fossil fuels.⁴¹

Similarly, the framework of JT could be invoked in the context of military-civilian conversion, in which the individuals and communities most likely to face job losses (directly or indirectly) from military spending reductions would receive support in the form of (1) unemployment compensation; (2) retraining and relocation assistance; (3) community-level financial support; and other measures that would enable a softer transition for those communities that are heavily dependent on military industry.

For individuals working in the military or military industries, the loss of a job will have different implications if they are near retirement age or not, which is why JT policies often include payment for early retirement for older workers or financial assistance for retraining and, if needed, relocation for younger workers. For communities dependent on spending by military workers, or the tax revenue from military industries, transitional policies can include grants or other community-level financial support. Another policy measure that softens the blow to communities facing job losses, and that can ultimately be beneficial, is to target new investments (such as for clean energy manufacturing facilities) to areas that are expected to see job losses from a decline in military spending.

⁴¹ United Nations Framework Convention on Climate Change. (2020, April 21). *Just Transition of the Workforce, and the Creation of Decent Work and Quality Jobs*. Technical Paper. <https://unfccc.int/sites/default/files/resource/Just%20transition.pdf>; see also the ILO’s work on this: International Labour Organization. (2016, February 2). *Guidelines for a just transition towards environmentally sustainable economies and societies for all*. https://www.ilo.org/global/topics/green-jobs/publications/WCMS_432859/lang--en/index.htm

Recent work by Miriam Pemberton, including a book, *Six Stops on the National Security Tour: Rethinking Warfare Economies*, as well as a 2023 paper published by Costs of War, shows examples of successful military-civilian conversions at manufacturing plants, as well as provides political reasons why some attempts at conversion have failed.⁴² Relatedly, a survey of defense industry workers in the U.K. and U.S. was summarized in a 2023 Costs of War paper by Karen Bell, showing that at least some workers in these countries would prefer non-defense work, including jobs in the clean energy economy, if those alternatives were available.⁴³

In short, it is possible to pursue opportunities for conversion away from a military-centered economy, towards other sectors that create jobs and contribute to other sources of well-being. But the transition will not happen without action and without political will. Policymakers would need to intentionally devote resources to non-militarized sectors of the economy, which will require reducing spending to the military and reducing federal military-related employment. Overall, more jobs can be created than lost. While some workers will embrace the chance to find decent employment in clean energy or another sector not related to weapons and war, there will also be workers and communities who will not be so eager to change and who will need financial and other assistance to ensure a just transition.

Conclusion

Federal spending on the military and on veterans makes up more than half of the federal discretionary budget. Employment in the federal government is dominated by civilian defense workers and uniformed military personnel. Because the majority of taxpayer dollars and federal resources are devoted to the military and military industries, and most government jobs are in the defense sector, the political power of this sector has become more deeply entrenched and other alternatives have become harder to pursue. Instead of having a federal government that addresses various national priorities – including the health and education of its population and the sustainability of its infrastructure and environment – the U.S. has a government that is largely devoted to war and militarism.

U.S. taxpayers and policymakers should ask if this is the way we want to use our resources. Is this the wolf we want to feed? By increasing resources to the military, that sector grows and becomes the only sector well-resourced enough to handle certain issues:

⁴² Pemberton, M. (2022, July 18). *Six Stops on the National Security Tour*. Routledge.; Pemberton, M. (2023, January 26). *From a Militarized to a Decarbonized Economy: A Case for Conversion*. Costs of War, Watson Institute, Brown University.

<https://watson.brown.edu/costsofwar/files/cow/imce/papers/2023/Pemberton%20-%20Military%20Conversion%20Costs%20of%20War%20-Final.pdf>

⁴³ Bell, K. (2023, January 26). *U.K. and U.S. Defense Worker Views on the Environmental Costs of War and Military Conversion*. Costs of War, Watson Institute, Brown University.

<https://watson.brown.edu/costsofwar/files/cow/imce/papers/2023/Karen%20Bell%20-%20Final%20.pdf>

reconstruction activities in foreign countries are pursued by the Department of Defense rather than by USAID or the Department of State; public health emergencies such as the COVID-19 pandemic are staffed by military personnel; and diplomacy is crowded out by war.

One of the ways that military spending is maintained at high levels, and grows even when the U.S. is not at war, is by military contractors and members of Congress stoking fears of job losses. Military spending cannot be cut, officials tell the public, because this will threaten security and weaken the economy;⁴⁴ people will lose their jobs. But the economic reality, as shown here, is that there are important areas of investment in the U.S. domestic economy in which more jobs would be created than would be lost through reductions to the military budget. Clean energy creates about ten percent more jobs than the military, for the same level of spending, while healthcare creates almost twice as many jobs, and education on average supports almost three times as many jobs as the military, dollar for dollar.

Reducing the military budget and funding other priorities such as healthcare, education, clean energy, and infrastructure, will help increase other forms of security – the kinds of meaningful human security rooted in good health, good living conditions, and a productive and well-educated society – while also increasing employment nationwide.

⁴⁴ See, for example, Tankersley, J. (2023, May 25). *Military Spending Emerges as Big Dispute in Debt-Limit Talks*. The New York Times. <https://www.nytimes.com/2023/05/25/us/politics/debt-limit-military-spending.html>