An Econometric Measure of the Post -9/11 Growth of the Defense Budget: Quantifying the Military-Industrial Complex's Growing Influence Over the Pentagon

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Abstract

The United States has long boasted the most powerful armed forces on the planet. Since the end of the second world war, the US has consistently had the largest military budget, both by percent of GDP and raw dollar amount. Furthermore, the US military routinely produces the most modern and cutting-edge equipment, often years if not decades ahead of its rivals. But who makes these leaps and bounds in technology and production? The federal government does not manufacture its military assets. That role falls to hundreds of companies that make up the United States military-industrial complex, the collection of companies that keep America's arsenal of democracy always stocked.

Of the hundreds of companies that supply the US armed forces, five outperform all others year after year. Those five are Lockheed Martin Corporation, The Boeing Company, Raytheon Technologies Corporation, Northrop Grumman Corporation, and General Dynamics Corporation. These five companies consistently profit more from national defense and security than the other hundreds combined.

In this project, I will analyze the growth of these five companies based on the following financial factors: total revenue and revenue from defense, negotiated backlog, cash flow, market cap, as well as how much money they have invested in lobbying efforts, and how many lobbyists they employ. By analyzing these economic factors, I can show how as an industry, rather then individual companies, have influenced the Department of Defense's budget. I will do this by comparing various financial factors gathered from public 10K forms against the US military's budget reporting.

Introduction

"...we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex." These famous words spoken by President Eisenhower at his farewell address was the first time Americans had heard of the military-industrial complex. It was undoubtedly one of the first times the government had directly warned Americans of the potential of outside influences on the government. Since his farewell in 1961, Eisenhower's words have rung true with only two specific federal laws regulating lobbying ,if you can even call it regulation. With very little attention from the public, big business has been able to work its way slowly and surely into the hearts, minds, and pockets of US policy and law makers, as well as gaining influence in and over various departments of the US government.

The Department of Defense (DoD) is no exception to this. Since the start of the Cold War, and more recently, the terror attacks on 9/11, the five biggest US military-industrial companies have grown wealthier and more powerful as they work to make sure that America's arsenal of democracy remains stocked and ready to be used across the globe.

But the question is not how these five companies have grown, but how as an entity, they have acquired influence over the DoDs' budgeting and budget breakdowns to benefit these companies.

With the end of the Cold War, the United States entered the third era of its military-industrial complex (MIC). The companies that make up the MIC have worked to consolidate their assets resulting in fewer bigger companies. Additionally, in this third wave, the United States economy has become tied closer and closer to the success of these top military suppliers.

In this project, I examine these companies' growth measured by seven economic factors. The factors I use are total revenue, which is a company's total income at the end of a year, revenue from defense which is specific to the MIC as a large percentage of these companies' revenue is from the defense. Therefore, this metric is simply a measure of how much of their yearly sales is from defense-related projects. I also use negotiated backlog, the dollar value of orders for which work has yet to be performed. Backlog generally converts into sales, meaning that backlog allows one to predict how much sales a company will generate in the future. I also look at cash flow, a measure company's net cash flow from operating activities, indicating if any additional cash came into or went out of the business. This metric allows one to see how much money moves into and out of a company over the year. I also use market capitalization, the total market value of a publicly traded company's outstanding shares. It is used to measure how much a company is worth. Finally, I examine how much money they have invested in lobbying efforts and how many lobbyists they employ.

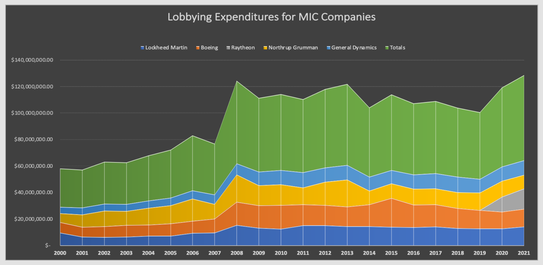
I chose these variables as they demonstrate the direct and indirect effects of lobbying on the government. All these factors can be closely, if not directly, tied to the company's success and, therefore, the relative wealth of those invested in it. Furthermore, the Department of Defense data that I use paints a clear picture of how much money goes into the continued operation of our armed forces, in both raw dollar amount and as a percent of GDP and total government spending. Combined, these two data sets demonstrate how our government is not as accountable as it once was and how even our most vital government institutions have fallen victim to the effects of lobbying efforts.

Materials

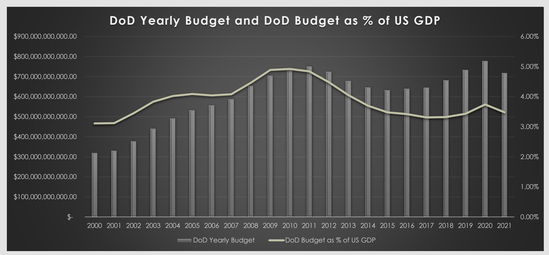
For this project I gathered negotiated backlog, cash flow, total revenue, revenue from defense, market cap as well as how much money they have invested in lobbying efforts as well as how many lobbyists they employed from publicly available 10k reports, opensecrets.org, a nonpartisan, nonprofit that tracks the movement of money throughout the government as well as defense reporting websites that track how much money these companies make yearly. I gathered Department of Defense data on Research, Development, Test and Evaluation, operation and maintenance, procurement, total DoD budget, as well as military expenditure as a percent share of GDP and total government spending. I gathered this data from publicly available data tables from the White House's Office of Management and Budget which is the office responsible for creating and executing the executive branch's budget.

Methodology

For this project I gathered data from publicly available 10K forms, defense news reporting, and non-partisan government watch dog sites to gather data on total revenue and revenue from defense, negotiated backlog, cash flow, their market cap as well as how much money they have invested in lobbying efforts and how many lobbyists they employ from 2000 to 2021. I gathered the Department of Defense data from publicly available sources including the White House's Office of Management and Budget (OMB) and the Stockholm International Peace Research Institute (SIPRI). To analyze the data, I put it into an Excel sheet and categorized it by year, company and variable, after which I was able to make visual representation of it as well as run an Excel supported correlation coefficient on the combined lobbying expenditures of the five companies I gathered data on and the Department of Defense's yearly budget.



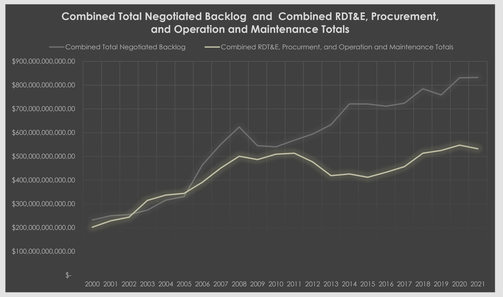
The graph above shows the individual lobbying expenditure as well as the combined lobbying expenditure for the five MIC companies. In 2008 and again in 2020 the combined lobbying expenditure exceeded 60 million dollars. The graph below illustrates how much money the DODs' yearly budget in both dollar amount and as a percent of the United States GDP has been increasing by year. Both graphs show a clear increase in lobbying spending as well as the DoDs budget as the DoD works to face new threats to US national security.



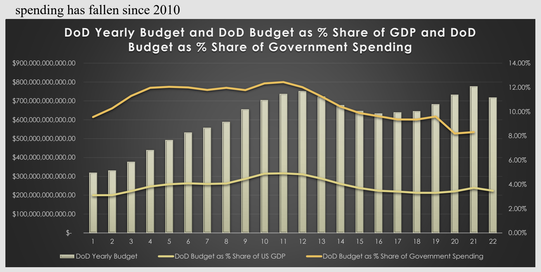
Results and Discussion

While all of data from this project shows the increase in the DoDs' budget as well as a rise in the lobbying efforts of the companies, I analyzed the influence the Department of Defense through the rise on their combined lobbying expenditure which have hit an all time high since 2009. The graphs also show how combined, these companies have increased their negotiated backlog as the US turns to face near peer threats such as China and Russia. However, the increase in the DoDs' budget is often considered common knowledge due to it being under constant scrutiny by the media, congress, and the American public. However, while the DoDs rising budget may not come as a surprise, the correlation between the total combined lobbying expenditure and the Department of Defense's yearly budget is shocking. After running my correlation coefficient, it returned with an R-value of 0.906389871, a near perfect fit. After seeing this R-value there can be no doubt the amount of money these companies spend lobbying can be said to have a near-direct impact on the DoDs' yearly budget. This data can eliminate any doubt that lobbying is a benign thing that does nothing more than exist in Washington, lobbying is a very real thing, and this data proves how lobbying has a direct effect on the actions of the government. Often people know what lobbying is but don't see its effects. This project demonstrates that when large companies work side by side, they can cause real changes in government policy and directly influence the spending and therefore the actions of the most powerful government and military in the world.

The graph showing combined lobbying expenditure and the DoD budget has an R-value of 0.91 which indicates that the combined lobbying total is nearly perfectly correlated with the resulting DoD budget.



Graph showing the rise in negotiated backlog and the combined cost for the DoDs' RDT&E, procurement and operation and maintenance shows that its increasingly expensive to run the armed forces. The graph below shows that the DoDs budget as a percent share of government spending has fallen since 2010



Conclusion

The data from this project shows a surface-level glimpse of the impact of lobbying from a handful of specific companies on a single US government department. It is important to remember why working to bring data like this to light and allowing the public to see data like this is vital to the functioning of a healthy democracy. With rising global tensions, the US military has been hard at work to reaffirm itself as the world's police force and be able to counter all near peer threats like China, Russia and Iran. However, to do this, the US needs a strong military that is equipped with the latest tech and troops who have functioning equipment. Developments such as the USAF's new B21 Raider, a new long-range strategic stealth bomber, the Bell V-280 being selected to replace the Sikorsky UH-60 Black Hawk, and Lockheed working on the USAF's Next Generation Air Dominance Fighter (NGAD) and the new JAGM missile that will replace the famous Hellfire missile, are clear examples of how the DoD is working to counter these near peer threats. However, to acquire this tech the DoD must have a higher budget. However, these leaps in technology can not be presented with news such as how the DoD failed its fifth consecutive audit in which only 39% of its assets were accounted for. Additionally, the US sending 68 billion dollars with another proposed 37.7 billion dollars to the war in Ukraine with little to no oversight force us, the citizens of the United States, to ask what we can do to hold our government accountable. While the numbers presented in this project a clear indication that the people of the US need to pay more attention to who is putting money into the government and how that money is affecting the decisions of the government, but that is not the only thing that this project should make the average US citizen more aware of. The companies that make up the military-industrial complex have become ingrained in the US government and the US economy, and while they say they are sole interested in defending the security of the United States by nature of their huge size and importance, how can the average American work to keep them accountable and from overstepping their bounds as the providers of American freedom.

Recommendations and Future Research

This project shows only a surface level look at the effect on lobbying on a specific department of the US government. As company 10-K data and US financial reports are often not put side to side for comparison future iterations of this project could examine other cabinet level departments such as, the treasury, or education. By looking at companies that supply these departments it could be possible to see the effects of lobbying and private industry gaining leverage over other branches of the government. Additionally, expanding the scope of the project to see the growth of the military-industrial complex since the end of World War II and the start of the Cold War would allow one to see a larger trend. Lastly, looking at company's tax data could give further insight into how lobbying effects how much they pay to the government. I would recommend to anyone looking to further study this topic, that using more efficient tools to better find, gather, and visualize this data would allow for much larger data sets to be used allowing for one to analyze larger historical trends. Furthermore, accounting for inflation could allow for a more in-depth and accurate analysis, as could using more financial data compared to the DoDs reports would allow for a more complete analysis of the effect of lobbying on the DoDs budget the MIC companies profits.

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