# Procuring the Cross of Iron:
# The Effect of Congressional Approval on the U.S. Defense Budget

By

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**Procuring the Cross of Iron:**

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By Chris Higginbotham

*Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and not clothed. This world in arms is not spending money alone. It is spending the sweat of its laborers, the genius of its scientists, and the hopes of its children. This is not a way of life at all in any true sense. Under the cloud of threatening war, it is humanity hanging from a cross of iron.*

**Dwight D. Eisenhower in a speech before the American Society of Newspaper Editors, April 16, 1953**

## Abstract

*Understanding why we spend is an essential step in controlling and justifying the U.S. defense budget. This dissertation examines the impact of congressional approval on U.S. defense spending through time series analysis of the period 1970 - 2015. The interaction between public approval and congressional action is viewed through the lens of Punctuated Equilibrium Theory.*

*The defense budget represents over half of all discretionary spending, and produces economic impacts in every state and virtually every congressional district. The scale, salience and extensibility of the defense budget offer a tempting target for Congress to provide quick stimulus to the electorate on a scale impossible with any other single appropriation. Whether motivated by fear of potential foreign enemies, nationalistic pride, concern for service members, or economic advantage, the defense budget is as close to a bipartisan priority as can be found in U.S. society. The defense budget is a useful tool for Members of Congress to influence individual and institutional public approval and one that is regularly utilized both within and without time of war or economic extremis to garner constituency support.*

## Acknowledgements

*One must come through the shadows to reach the morning.* ***- J.R.R. Tolkien***

This dissertation has been a labor of love to me, yet one not always fully requited to those who supported me in the process. I am grateful for my academic advisor, Professor Alesha Doan, and her unyielding confidence and steadfast belief that joy can be found in even the most disparaging circumstances. I would likely never have completed this work without the patient guidance in time series analysis received (most painfully on my part) from Professor Clayton Webb. The entire staff of professors and graduate students at the University of Kansas played a role in encouraging this old sailor to learn a new way of thinking about the world. To all of these thoughtful, intelligent and compassionate scholars I offer my sincere thanks.

Lastly, and most importantly I cannot possibly express the debt I owe my wife Jenn and my children Matthew, Alexander and Abigail. They suffered through countless deployments and separations during my 26 years in the Navy, and as that career finally closed and they might have expected a reprieve, they were asked to endure another four years of late nights and "study filled weekends." Through every step of my life they have repeatedly taught me the meaning of unconditional love. I fear my efforts here will prove a poor reward for their undying support, but they are the reason I greet each day with a smile and faith in a brighter future.

## Table of Contents

Abstract ..... iii
Acknowledgements ..... iv
Table of Contents ..... v
List of Figures and Tables ..... vii
Preface ..... 1
I. Introduction ..... 3
A. The Problem with Defense Spending. ..... 7
B. Hypotheses. ..... 9
C. Summary. ..... 11
II. Literature Review and Critique ..... 13
A. Lack of Pluralism. ..... 13
B. Contemporary Approaches. ..... 13
Threat Model ..... 15
Leadership Model ..... 17
Military Keynesian Model ..... 23
Follower Model ..... 26
Relativity Model ..... 28
C. Gaps in the Literature. ..... 29
D. Theory of budgeting: Incrementalism vs. Punctuated Equilibrium. ..... 42
E. Summary ..... 49
III. Defense Budget Process ..... 51
A. DoD Budget Process ..... 54
B. Appropriation Categories ..... 65
C. Congressional Budget Process ..... 74
D. Congressional Committees ..... 80
E. Earmarks or "Pork" ..... 86
F. Summary ..... 90

IV. Defense Budget Stakeholders ..... 91
A. Defense Industry PACs and Lobbyists ..... 91
B. Benefit to States ..... 120
C. MoC and Incumbency ..... 130
D. Summary ..... 138
V. Methods and Results ..... 139
A. Introduction and Note on Time Series ..... 139
B. Punctuation in Budgets ..... 140
C. Measuring Defense Spending ..... 145
D. Congressional Approval ..... 150
E. Control Variables ..... 151
F. Model Selection ..... 154
G. Results ..... 156
H. Alternative Explanations ..... 160
VI. Discussion ..... 163
A. Defense spending as a tool for MoC ..... 163
B. Next Steps ..... 166
Post Script ..... 169
Reference ..... 170
Appendix A: Data Sets ..... 188

## List of Figures and Tables

Figure I-1: Discretionary vs. Mandatory Spending ..... 4
Figure I-2: Growth within Discretionary Spending ..... 5
Figure I-3: Defense Spending Growth ..... 8
Figure III-1: Budget Comparison ..... 52
Figure III-2: DoD Statistics ..... 53
Figure III-3: Components of the Defense Budget Process ..... 55
Figure III-4: DoD Budget Timeline ..... 58
Figure III-5: DoD PPBE Process ..... 59
Figure III-6: PPBE Program and Budget Review ..... 62
Figure III-7: Appropriation Categories ..... 65
Figure III-8: Availability and Burn Rate of Appropriations ..... 67
Figure III-9: U.S. Budget Trends ..... 75
Figure III-10: Discretionary Spending ..... 76
Figure III-11: Congressional Budget Process ..... 79
Figure III-12: Defense Committee Seats ..... 82
Figure III-13: Defense Spending by State ..... 82
Figure III-14: President's Budget vs. Congressional Appropriation ..... 85
Figure III-15: Ear Marks ..... 89
Figure IV-1: Defense Iron Triangle ..... 93
Figure IV-2: Defense Industry Consolidation ..... 96
Figure IV-3: Defense Exports ..... 99
Figure IV-4: FMS Agreements and Waived Costs ..... 101
Figure IV-5: FMS vs Defense Exports ..... 102
Figure IV-6: Foreign Military Financing ..... 103
Figure IV-7: Defense Industry Tax Rate ..... 106
Figure IV-8: Top Defense Contractors ..... 107
Figure IV-9: Top 5 Defense Contractor Stock Performance vs Defense Budget ..... 108
Figure IV-10: Defense Capital Goods Spending ..... 110
Figure IV-11: Boeing Coverage ..... 113

Figure IV-12: Boeing PAC ..... 115
Figure IV-13: All Defense and Boeing PAC Party Disbursements ..... 118
Figure IV-14: Defense Lobby ..... 120
Figure IV-15: Top States for Defense Spending ..... 122
Figure IV-16: DoD Personnel by State ..... 123
Figure IV-17: Defense Appropriation Type Growth ..... 124
Figure IV-18: State Spending By Appropriation Type ..... 126
Figure IV-19: Defense as a Percentage of Missouri GSP ..... 127
Figure IV-20: Top Missouri Counties and Districts for Defense Spending ..... 129
Figure IV-21: DoD Budget vs VA Budget ..... 133
Figure IV-22: Veteran Population ..... 135
Figure IV-23: DoD and Veteran Population ..... 136
Figure IV-24 Incumbency and Congressional Approval ..... 137
Figure V-1: Punctuation in Defense Spending ..... 142
Figure V-2: Punctuation of Discretionary Budgets ..... 144
Figure V-3: Medicare Budget Punctuation ..... 145
Figure V-4: Deployed Troops and Casualties vs. Defense Spending ..... 161

## List of Tables

Table V-1: Dependent and Independent Variables ..... 140
Table V-2: Candidate Models ..... 155
Table V-3: Model Results ..... 158
Table V-4: Effect of Congressional Approval on Non-Defense Budgets ..... 159

# Preface

My personal experience with defense budgets is based upon a 26-year military career as an officer and aviator in the United States Navy. In addition to operational tours (including nine combat deployments), I spent considerable time in Washington DC. For three years, I had the honor of serving as the Commanding Officer of the Navy Presidential Honor Guard for both Presidents Bush and Obama (2006-2009). In this capacity I worked on a daily basis with (and observed) principals and staff at the White House, Congress and the Pentagon (as well as visiting foreign leaders) in a dizzying array of public and private settings. I served a further 3 years on the Staff of the Chief of Naval Operations in the Pentagon (2009-2012). During that time, I was assigned as both a Resource Sponsor and Requirements Officer for a portfolio of Navy and Joint weapon systems while participating in three budget cycles. My duties led me to work extensively with the Military Services, Joint Staff, Department of Defense (DoD), congressional and executive branch principals and staffs. In the performance of my duties, I was regularly called to provide requirement, program and budget briefs and testimony on a variety of topics to diverse military, White House and congressional audiences.

These experiences did not make me an expert on the defense budget. I am inclined to believe that there is no such thing, and that even those most wise in the ways of the Pentagon are, in the end, but journeyman-apprentices to the amorphous process. With the immense, complex and ever shifting requirements of defense budgeting, it seems doubtful that any one person could ever come to command a complete grasp of the whole. Whether that is by design or an evolutionary accident, I could not say for certain.

However, I can say with conviction that my participation in the budgeting process left an indelible mark upon my personal life and professional career. It awakened in me a desire to

better understand the colossal pecuniary beast that drives both military and political agendas on a staggering scale. It is impossible to describe the mix of fatalistic terror and childish glee that takes hold when landing an aircraft on the heaving and twisting deck of an aircraft carrier at night in a high sea state. Similarly, I can hardly relate the intense incredulity experienced when blithely handed responsibility for a multibillion-dollar portfolio after a one-day turnover at the Pentagon. Both are sublime and yet sobering as the Shamal winds in the Al-Hajarah desert of Iraq. There are no civilian equivalencies (at least none that I have found).

The intent of this dissertation is not to unlock all the secrets of the U.S. defense budget, or even to clarify how it interacts with all facets of government and industrial power. Rather, this but the opening salvo in what I hope proves a long academic journey to better understand one of the most complex governmental systems in the history of the world. To this end, I hope the reader will grant indulgence for some exuberance on a topic that is less than stimulating to many. If, the reader gains even a little more visibility into the relationship between congressional actions and defense spending then I will have proven successful. Even a miniscule contribution to the academic study of defense budgeting is a prize worth pursuing.

In the course of this study I discovered much, but to my frequent surprise, not always what I expected to find. As J.R.R. Tolkien reminded us in the Hobbit, “There is nothing like looking, if you want to find something. You certainly usually find something, if you look, but it is not always quite the something you were after.” I hope the reader will consider the “something” I found in this dissertation to be useful.

# I. Introduction

*"War is a matter not so much of arms as of money."*

**– Thucydides, History of the Peloponnesian War**

Defense spending has long been a priority of national government, and that is unlikely to change in the 21st century. The world, from an American perspective, has grown neither more peaceful nor unified over the last 40 years. What has changed is the scale of defense spending, the extensibility with which it permeates the American economy and the transparency with which citizens can now examine that spending. The staggering amounts of money spent. The decentralization of the defense industry into subcontractors in every state and congressional district. The sheer volume and detail of defense budget-related information accessible via social media, and the insistence by many politicians and pundits that defense spending is the only safeguard against a hostile world, have all led to increased salience of the defense budget with the American electorate.

The U.S. Federal budget is composed of two general categories of expenditures. The mandatory spending budget is composed of those programs mandated by law and supported by congressionally established trust funds. Examples of these would be Social Security, Medicare and Temporary Assistance to Needy Families (TANF).[1] These programs do not require annual authorization; the number of eligible participants, or changes to the laws that establish their respective funding formulas determines appropriation and expenditures. As such, these are not subject to the normal fiscal budget cycle, and cannot be easily altered.

The second type is discretionary spending. Discretionary programs are funded through 12 major annual authorization and appropriation bills that must be debated and passed (or not) for

[1] TANF makes up one part of a series of income support programs commonly referred to as Welfare.

each new fiscal year. For example, Defense, Education, Transportation, Justice, Interior, Labor, Agriculture and Health and Human Services are departments largely funded by discretionary spending.[2]

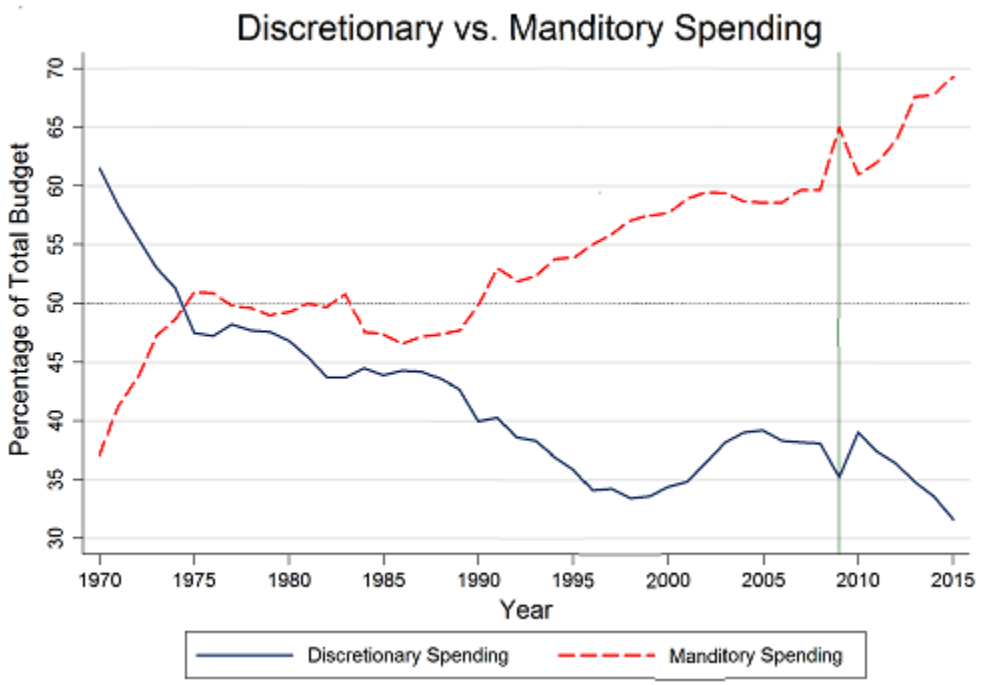


*Figure I-1: Discretionary vs. Mandatory Spending*
*Source: Congressional Budget Office*

Over the last 40 years, the lion's share of U.S. Federal spending has shifted from discretionary to mandatory budgets (see Figure I-1 above). As the number of people qualifying for mandatory programs has grown and services provided have increased, so has the overall mandatory budget. As mandatory spending increased, discretionary spending, as a portion of the total budget, has been squeezed. As the largest part of the shrinking discretionary pot of money, defense spending has necessarily garnered greater attention from Congress.

[2] This list is not exhaustive, but merely meant to represent a sample of the largest discretionary budgets.

In comparison to other discretionary budgets, even in time of relative peace, defense spending has maintained or exceed the growth rate of the majority of its competitors (see Figure I-2. below). Highly salient with the electorate, targeted toward the most popular U.S. institution (the U.S. Military)[3] and consuming over 50% of the discretionary budget, the defense budget has evolved into the largest, most assessable and salient congressional lever for rapid change in government spending.

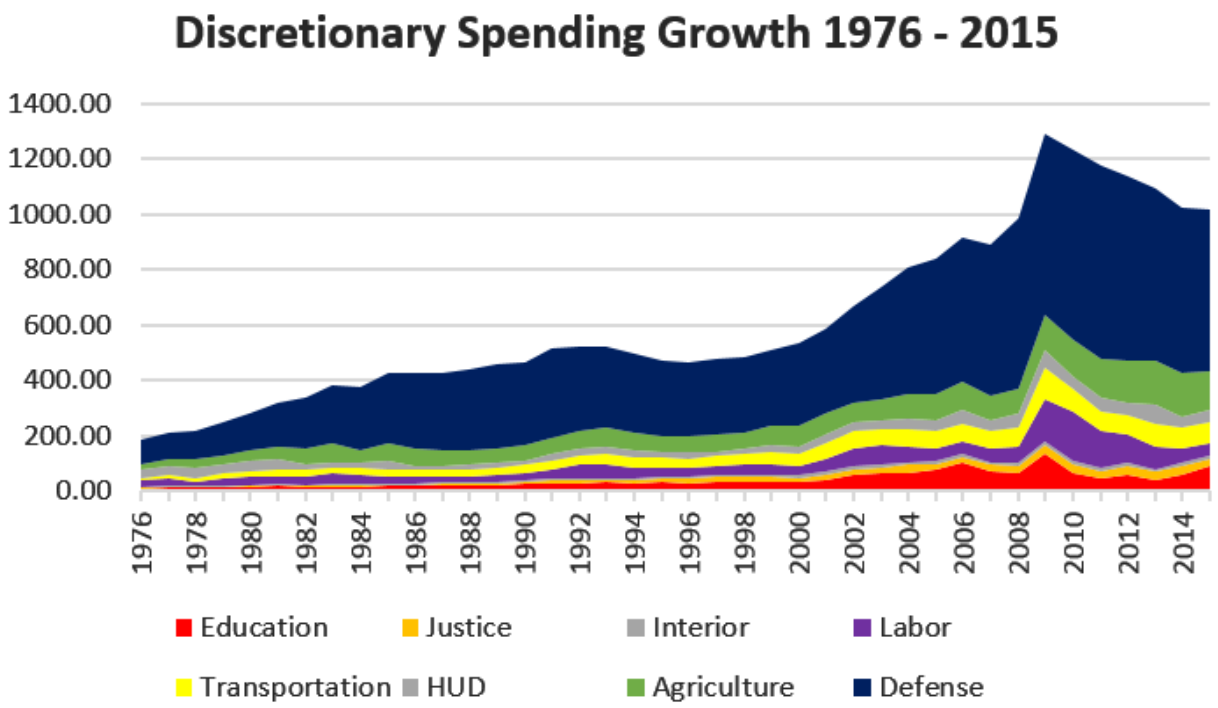


*Figure I-2: Growth within Discretionary Spending*
*Source: DoD Greenbook 2017*

[3] Since 1975, Gallup polling has consistently shown the military as the most popular U.S. institution (by a wide margin).

Congress is constitutionally charged in Article 1, Section 9, Clause 7 (Appropriations Clause),[4] with providing appropriations for all money to be drawn from the treasury. The power to craft the final version of a $3.7 trillion-dollar budget (2015) is the power to set priorities and determine, in large part, the political and economic fortunes of the states and businesses operating within them (Janowitz, 1974; Hays et.al., 1997). However, this power was not granted without institutional constraint.

By design Congress is a divisive and slow moving organ of government, answering to millions of masters in the form of the electorate. Never a popular institution, the requirement to reach at least a rough consensus in order to pass legislation has often led to gridlock and partisan division (Fenno, 1978). When compromise does occur on important legislation, it naturally pleases no one completely and thus sets the stage for the next confrontation. With the twin, and equally unpopular, options of gridlock or compromise, it is not surprising that Congress consistently suffers the lowest approval rate of any government institution.[5]

How then is an endemically unpopular institution to obtain popular reelection of its members? One answer lies in finding a bipartisan lever large enough to give some common ground to members of the institution, regardless of party, state or district. The defense budget is that lever, and it is regularly, if not always successfully, employed by Congress. In this dissertation, I argue that the defense budget is used by Congress as a tool to address perceived negative public approval, and I will also examine how and why this tool is employed.

[4] No Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law; and a regular Statement and Account of the Receipts and Expenditures of all public Money shall be published from time to time.
[5] As determined by Gallup and GSS polling.

### A. The Problem with Defense Spending.

In 2015, national defense accounted for over 55% of discretionary spending and approximately 19% of the U.S. federal budget.[6] As President Eisenhower warned in his 1961 speech about the dangers of the "Military Industrial Complex," the political and industrial inertia that develops behind such huge expenditures can be enormously powerful and induce far-reaching and often-unintended effects.[7] Although the U.S. Department of Defense (DoD) base budget has decreased since its wartime peak in 2010 of nearly $713 billion, total Defense expenditures in 2015, even after the implementation of the Budget Control Act (BCA) of 2011,[8] still exceed $610 billion.[9]

The staggering sum of $610 billion dollars would be sufficient to purchase over 500lbs of rice for every man woman and child in Africa, and surpasses the defense budgets of the ten next largest national militaries in the world combined.[10] Given these figures, it is easy to see how other nations might stand in awe of the enormous expenditures of the United States Military, and why many Americans question the sustainability of such huge security investments (see Figure I-3 below).

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[6] This includes DoD base budget ($610B), Veterans ($178.2B), Foreign Military Aid ($13.2B) and Foreign Economic Aid ($33.3B) for a total of $834.7B.

[7] President Eisenhower farewell address, January 17, 1961. From the Dwight D. Eisenhower Presidential Library collection.

[8] BCA did not take effect until 2013, and even then compromises were made to increase domestic and defense spending by equal amounts over the legally mandated caps. Enacted in 2011 to resolve the crisis that summer about raising the debt limit, P.L. 112-25, the Budget Control Act of 2011 (BCA) required annual reductions in discretionary spending (compared with a projected spending baseline) totaling about $2.1 trillion through FY2021, in return for raising the debt limit by the same amount. For each year in the decade FY2012-FY2021, the BCA caps require roughly equal reductions (from the projected baseline) in appropriations for defense agencies and non-defense agencies. For any year for which appropriations for either category exceed the BCA cap, appropriations are reduced to the level of the cap by a process of sequestration (CRS Defense: FY2015 Authorization and Appropriations, January 28, 2015).

[9] FY15 budget figures were retrieved from the Congressional Budget Office (CBO) and includes $530B base budget and $79.4B Overseas Contingency Operations funding.

[10] 2015 World Bank data reflects the reported, not necessarily the total defense expenditures of nations.

*Figure I-3: Defense Spending Growth*
*Source: Comparative Agenda Project*

Today, as in 2015, over 25% of American income tax dollars go toward paying for National Defense.[11] As an example, in 2015 the average American household earned roughly $55,000 dollars and paid somewhere in the neighborhood of $5,000 in taxes, with $1,000 being income tax.[12] Twenty-five percent of that income tax, or roughly $250 went toward defense, or over seven times more than was directed to support education.

If we accept that quantity has a quality all of its own, a simple look at the number of people involved with DoD is instructive. In 2015 there were over 1.4 million active duty, 1.1 million reserve members, 861,000 DoD civil servants and over 22 million veterans (over 2 million receiving benefits).[13] DoD is the single largest employer in the country, beating out even

[11] This does not include Social Security Taxes which are separate from income tax.
[12] According to the American Community Survey (ACS) and IRS estimates. These numbers are rounded for ease of use in this example, but are accurate in order of magnitude.
[13] Veteran's benefits are included in discretionary funds but are not part of the baseline defense budget.

retail giant Walmart in scope and scale. Nor is DoD's influence confined to government employees. Conservative estimates place over 4 million Americans working directly or indirectly in the defense industry.[14]

Couple these numbers with the relative ease of manipulating defense appropriations and it becomes apparent why the defense budget promises potentially great rewards in relation to the political effort required to obtain them. Anecdotally, in 2013 when sequestration enactment forced baseline defense spending to hit its lowest point since 2006, congressional approval rates similarly hit their lowest point in modern history (11% as an aggregate of national polls).[15] Since then, defense spending and subsequent congressional approval have both slowly been rising.[16]

### B. Hypotheses.

Much has been written about the mixed economic impacts of defense spending (Bobrow and Hill Barro, 1991; Ross, 1991; Rundquist, 2002; Fordham, 2003; Carroll, 2006; Borch, Casey and Wallace, 2010; Heo, 2010; Wallace and de Rugy, 2013; Whitten and Williams, 2015). Similarly, a much smaller body of work has engaged the impact of public opinion on the sufficiency of defense spending on congressional action (Russet and Hartley, 1992; Higgs and Kilduff, 1993; Hartley, 1994; Rundquist and Carsey, 1999; 2002; Eichenberg and Stoll, 2003; Cox and Duffin, 2008). However, no real rigor has been applied to the relationship between defense spending and congressional approval.

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[14] Figure is an estimation based upon the publicly reported workforce and defense related revenues of the top 20 U.S. defense firms. However, the number of jobs depending upon the defense industry estimated by the Pentagon in 2011, was reported at over 7 million. The budget numbers are based upon self-reporting and DOD Comptroller public documents.

[15] Interestingly, this number fluctuates depending upon how the question is asked. Job approval rating was 11%, while trust in Congress was recorded in the single digits (as low as 6%).

[16] Although total defense spending has decreased since 2010, the baseline defense budget has steadily increased. Decrease in Overseas Contingency Operations spending (OCO) has masked base budget increases.

My thesis is that significant increases in negative congressional approval induce members of Congress (MoC) to increase discretionary spending on defense. Defense spending provides the quickest and least electorally risky way to stimulate the economy across all states, and the majority of districts, while providing a "quick win" with constituencies, industry and interest group supporters of the largely bipartisan defense appropriation (McCaffery and Jones, 2004).

In support this of thesis, four hypotheses are tested:

**H1: Negative approval rates of congress are inversely related to military budget growth.** I expect to see Congress increase defense spending quickly, operating outside the normal parameters of the defense budgeting cycle and interfering with the Pentagon budget planning process. A lag of less than two years from change in approval rating to change in defense spending would indicate disruptive change.[17] This decision to take immediate and potentially disruptive action is driven by the perception of loss of electoral support and the desire to mitigate this through a quick increase in discretionary spending.

**H2: Public opinion on the level of military spending is positively related to military budget growth.** I expect to see Congress manipulate defense spending in response to significant and consistent public opinion supporting increased or decreased spending. However, without a perceived direct electoral threat, I expect this to take place within the normal budgeting cycle (two to three-year lag) with no disruption to the DoD budget preparation process.

**H3: The strength of the U.S. economy is positively related to military budget growth.** I expect to see defense spending increase when GDP growth is strong. When GDP growth is weak, I expect defense spending to become sluggish, unless prompted by a significant increase in

[17] Any action taken to increase defense spending within two years from the FY start would interrupt the DoD defense budget planning cycle of 18 months to two years.

unemployment. I expect unemployment to stimulate defense growth as a perceived form of economic stimulant.

### C. Summary.

Since the end of the Cold War, little has been written exploring the causal drivers of U.S. Defense Spending. Without a better understanding of the causal drivers of U.S. Defense Budgets, we cannot determine appropriate levels of funding, nor justify the resultant impacts to the U.S. and world economies. It is long past time to renew the study of the causal drivers in defense spending. My dissertation contributes to the existing body of research by investigating the connection between congressional approval and defense spending.

Understanding why we spend, is an essential step in controlling and justifying the U.S. defense budget. Renewed study may grant perspective on the journey U.S. defense spending has taken over the last 40 years and provide clues to what lies ahead. This dissertation examines the impact of congressional approval on U.S. defense spending through time series analysis of the period 1970 - 2015. The interaction between public approval and congressional action is viewed through the lens of Punctuated Equilibrium Theory (Jones, 2001) and is a departure from classical incrementalism (Key, 1940; Wildavsky, 1964, 1975, 2004) traditionally associated with budgets. Other key drivers, such as public opinion on the sufficiency of the defense budget, the presence of war and economic health are included in the model to isolate causation and interaction, but the focus is on the significant impact of congressional approval to punctuations in defense spending both during and outside periods of war and severe economic turmoil.

The defense budget produces economic impacts in every state and virtually every congressional district. The scale, salience and extensibility of the defense budget offers a

tempting target for Congress to provide swift stimulus to the electorate on a scale impossible with any other single appropriation. Whether motivated by fear of potential foreign enemies, nationalistic pride, concern for service members or economic advantage, the defense budget is as close to a bipartisan priority as can be found in U.S. society. I contend that the defense budget is an indispensable tool through which Congress can influence individual and institutional approval in a multi-lateral sense, and it is regularly exercised.

## II. Literature Review and Critique

*Desultory reading is delightful, but to be beneficial, our reading must be carefully directed.*

**– Lucius Annaeus Seneca**

This literature review and critique will perform five specific functions: First, it will seek to identify how the contemporary literature has addressed defense spending and how some subtle perception problems have led to gaps in the extant research. Second, a brief review will be made of a set of five general scholarly approaches regarding the drivers of defense spending. Each approach will be viewed through the lens of how they have influenced the overall understanding of defense budgeting, and specifically how they have guided my research. Third, specific gaps in the literature will be addressed in the context of how this research will help in our understanding of defense spending, with a particular focus on the effect of congressional approval. Fourth, I will examine the theoretical foundation for this research with a review of what the literature on Punctuated Equilibrium Theory (PET) has to say about budgeting. Specifically, it will demonstrate where my research augments the existing framework. Fifth and finally, it will conclude with a brief summary of the contemporary research and what remains to be done.

### A. Lack of Pluralism.

Political scientists have traditionally taken a back seat to economists and public policy scholars in attempting to explain defense budgeting. Economists aptly calculate the metrics of defense budgeting, while policy scholars describe the tangible effects of defense policy. Political scientists, when they do enter the fray, tend to give brief lip service to these contributions and focus on individual or groups of political drivers of the budget process. Each of these approaches

has value. However, to borrow loosely from the Aristotelian concept of the "four causes,"[18] they provide us with only the practical mimeses (imperfect images) of the whole process of defense budgeting. In Aristotle's langue, economists give us insight into the second cause (material), which describes the basic components of the process, while policy scholars provide us with the fourth cause, (telos), which explores what is produced. By bridging the gap between these two with the third cause (agency), we gain appreciation for the hidden catalysts in the process. Only through a pluralistic approach can we can reveal the first (formal) or true cause and gain an actual blue print of the "tooth to tail" defense budget process. What follows is a discussion of what the contemporary literature has provided and what still remains to be determined.

### B. Contemporary Approaches.

There are two principal themes in defense spending addressed in the literature. The first relates to the primary drivers identified by authors to explain expansion and contraction of defense budgets. To better synthesize the existing literature on drivers, I have grouped them into five distinct categories based upon the approach authors took to defense spending, or closely related phenomenon.[19] From these I have derived five simple explanatory models of inquiry. There seems little doubt in the literature (or anecdotally) that the presence of war (threat) is a powerful driver of defense spending; therefore, the primary focus of this review will be upon the other significant drivers.[20] The categories I will examine in more detail are: Elite interpretation

[18] In his work, "*Poetics*," Aristotle advanced Platonic ideas relating to the imitation of objects or concepts through art, literature, etc., in the natural world.
[19] Generalized research into the influence upon public opinion or the motivations of Congress not specifically related to defense.
[20] I do consider the presence of war in relation to other drivers. In other words, to what degree does the presence of war impact or mitigate other drivers. It is possible war obscures other underlying processes, or makes them appear more impactful than they might actually be. To address this, the presence of war was included as an independent variable in the time series models to test for interaction effects.

of need (Leadership Model); Public opinion (Follower Model); Perceived military threat (Threat Model), Economic stimulus (Military Keynesian Model); and a combination of these factors, with the critical driver determined by changing relative opportunities and stimuli (Relativity Model).

The second important theme in the literature involves whether defense spending is incremental or punctuated. From a theoretical perspective, this is an important distinction in fully understanding the influence of public opinion on defense budgets. If budgets were strictly incremental, there would be very little room for public opinion effects to register, and even less evidence of their impact. Fortunately, the general consensus is that although defense spending displays incremental characteristics, in practice it behaves in a punctuated manner.[21] A punctuated response related to changes in public opinion would track with observations of significant changes to defense outlays when other drivers appear absent or marginal. To this end, we will briefly explore what the literature has to say about Punctuated Equilibrium Theory (PET) and military budgets (Baumgartner and Jones, 1995).

### *Threat Model*

This is perhaps the simplest and most generally accepted driver of defense budget change.[22] Adherents to this conceptual approach assume that when a perceived military threat comes to dominate the public imagination, no amount of cueing or ideological persuasion is necessary to push leaders (elites) and followers (public) toward agreement on the need to alter defense spending.[23] Accepting the absolute threat of war as a prime driver, this model also

[21] At least in budget literature from roughly 2000 onward.
[22] There is effectively no argument in the literature that obvious threat does not drive defense spending. The argument is only that it does not explain all the variance when an obvious threat is not apparent.
[23] This model also accepts a reaction to economic threats as well. For example, if the country faces a severe economic downturn, then resources would be withdrawn from the defense budget to address the economic threat (a bank bailout for instance). This is separate from the Keynesian Military Economic model discussed later, in that

addresses less severe foreign policy events (short of war), such as the Iranian Hostage Crisis in 1979, the dissolution of the Soviet Union in 1991, or the conflicts in the former Yugoslavia (1993-1999). The basic logic follows that in times of perceived threat, aggregate public opinion forms quickly and decisions in defense spending are made in reaction, rather than in calculation.

Some scholars believe that the U.S. simply adjusts its defense spending in relation to international tension (Ward, 1984). Jeffrey Knopf wrote that public opinion on defense spending was driven by response to significant events and was both measured and prompt. He claimed there was no disconnect between politician and electorate, and significant budgeting decisions were typically timely and relatively bipartisan (Knopf, 1998). Larry Bartels similarly suggested that public reaction to significant events led to the 1981 defense spending increase, and that Congress responded to the public's recognition of the threat of the Soviet Union, regardless of any potential electoral threat to themselves. Members of Congress, regardless of whether their districts directly profited, tended to vote in support of increased defense spending (Bartels, 1991). Nurcan Metin reached a similar conclusion when examining significant threats from 1945 to 2007. He found that the defense budget reacted to perceived threats and war, irrespective of other mitigating factors (Metin, 2012).

Although appealing as a concept, the threat model by itself can only explain a relatively small portion of defense spending changes. It has been observed that political and economic factors often induce higher levels of defense spending than are necessary for national security (Mintz, 1985 and 1988; Mintz and Ward, 1989). For instance, the threat model is useful in understanding initial reactions to horrific situations such as the Japanese naval attack on Pearl Harbor on December 7, 1941, or the terrorist actions on September 11, 2001. However,

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there is no attempt to use the defense budget and deficit spending to prime the economic pump, but rather it is a simple question of shifting resources to the greatest threat (military or economic).

thankfully, history produces few events so innately dramatic and unifying. In short, it does not explain the fluctuation in defense spending when there is no obvious threat, or continued high levels of spending once a threat has passed. In conjunction with other models, the threat-based approach has utility, but as a lone causal driver it is incomplete.

### *Leadership Model*

Elites, or leaders, in this model are not seen as operating outside of democratic government, but rather as a necessary part of maintaining a healthy democracy. For our purposes elites are defined as persons (or organizations of persons) who are politically, materially or economically invested in the outcomes of defense budgets and have direct means (either through formal position or communication access) to influence the budget (Bachrach, 1962). There are many flavors of elites depending upon your classification criteria (Mills, 1956; Truman, 1959) and for our purposes we will group them into three categories: political, material, and economic elites.[24] We will briefly discuss each group, but the focus of this paper will be congressional (political) elites and the effect of public opinion on their actions.

Political elites include professional politicians,[25] academics, the media and political leadership interest groups (533 political leadership PACs provided nearly $48M to political candidates during the 2016 election cycle alone).[26] These elites may be motivated by the desire to further a political career, a policy, or issue related to defense (or funded by the defense budget).[27] Relevant actors include those directly involved in defense funding or the foreign and

[24] There are many variations that could be used. For my purposes these three should be sufficient to group elite types from the literature by rimary motivation related to defense (those who seek political or issue furtherance, physical practitioners of defense, and those who profit economically from defense spending).
[25] We are concerned with national level politicians; however, there is some interaction with state level legislatures and executive branches.
[26] Political leadership interest groups are defined as those championing political issues, rather than specific populations or industries.
[27] The defense budget funds billions of dollars toward programs not directly tied to the DoD (i.e., $1,067,115,000 for 27 earmarks for health and disease research under the Defense Health Program in FY2015 DoD Budget).

domestic politics which drive defense budgets, such as formal alliances, international interventions, critical industry support,[28] or base realignment decisions. The common ground among these elites is that defense related policy is the primary vehicle of debate and discussion; and defense funding, which benefits partisan or ideological preference, may be of greater concern than procuring warfighting capabilities aimed at deterring or defeating a specific threat.[29]

Material elites include military service members and civil servants (active and retired) working in defense or foreign and domestic policy areas affected by defense budgets.[30] These elites are materially impacted by defense budget decisions either in carrying out their missions or in procuring support and services for themselves and their families. Their influence derives from practical experience in the military or civil service. The common denominator is that successful execution of the military mission (in terms of capability, sustainability and support) is the chief vehicle of debate and discussion. In other words, the concern is with the ends (greater capability and sustainability) rather than the means (policy) of achieving their goals. Examples include players such as the Chairman of the Joint Chiefs, individual service chiefs, civilian Pentagon leaders and retired members serving as consultants for defense (or foreign policy) think tanks or military associations and federal service unions.

Economic elites are business leaders and industry interest groups that have direct (or indirect) economic ties to the defense budget. These elites depend (at least in part) on defense funding for their business or economic success. They include defense related industries and their

[28] DoD supports what it perceives as critical defense industries through minimum order quotas and by allowing defense companies to factor pension costs into procurement contracts (GAO-13-158).
[29] This has been proposed as one explanation for "pork barrel" spending that adds specific programs or platforms which are not requested by DoD, but benefit a particular partisan, economic (district or industry) or ideological position.
[30] Defense budgets, as a function of National Security, provide funds to many government agencies outside of the Department of Defense (Energy, Homeland Security, State Department, Education, etc.)

interest groups (Lockheed, Boeing, Northrup Grumman, Raytheon, and 53 other defense industry PACs provided nearly $17M to political candidates during the 2016 election cycle),[31] as well as community organizations concerned with the economic stimulus provided by military bases or facilities. These elites may demonstrate a preference toward the specific weapon system produced by their industry or base supported by their community, rather than a particular partisan policy or general military capability.

The belief that elite preference is the most important factor in defense budgeting growth or decline is not a new concept. In fact, it is in line with the views of many authors (Converse, 2000; Lodge and Taber, 2013; Kuklinski and Quirk, 2000; Chong and Druckman, 2010). In essence, the elite model predicts that the public requires help to understand complex issues and that elite cueing is the mechanism to both guide and transform public opinion. It presupposes that elites attempt to lead opinion; however, when public approval is lacking they are often prepared to make defense funding decisions in defiance of electorate preference. The motivations for elite cueing may derive from desired influence, electoral gain, ideological underpinnings, or perceived economic benefits. Unlike the Keynesian approach (discussed below), the leadership model does not imply that defense spending provides any large-scale benefit (or detriment) to the economy as a whole. The economic effects of defense spending are viewed more as locally collateral or additional factors, [32] rather than those of national design. The only stipulation in this approach is that the primary decision motor is elite interest and cueing rather than threat, Keynesian or follower drivers.

[31] According to publicly accessible FEC filings.
[32] Here we are using the military definitions of: collateral = unintended and negative, and additional = unintended and positive.

James Morrow introduced the idea that defense budgets could also be used by elites as a foreign policy tool, wielded by Congress to influence opponents and allies. His primary example was in using defense budgets to force the Soviet Union to the bargaining table (Morrow, 1991). In such cases, the public did not need to understand why they were being cued to support defense spending. In fact, it was often better that they not know, leading to a justification (of sorts) to exaggerate the threat in order to amplify the public response.

Davis Barrow and Stephen Hill continued the approach from the standpoint of international alliances and the multitude of political and economic ties involved in defense spending. They viewed such issues as only understood by the elite, who, for good reason, most often leave the details out of public discourse. Such details may be confidential and are almost inevitably beyond the interest or comprehension of the general public (Borrow and Hill, 1991).

Charles Ostrom and Robin Marra looked at defense spending during the Reagan years and concluded that elite opinion and intentional overestimation of Soviet strength were the key drivers in the dramatic military buildup in 1981 (Ostrom and Marra, 1986). Christopher Witko, similarly commenting upon the Cold War, described the complexity of defense issues as beyond the keen of the average citizen. How could a layperson possibly understand how much spending was required, unless the rationale for investment was quantified by knowledgeable elites (Witko, 2003)? Benjamin Fordham took a similar approach in describing the average voter as having little understanding or interest in the details of defense spending. These matters were best left to the elite to expound upon in their ceaseless competition for electoral attention (Fordham, 2002). In other words, congressional elites play their own shell game in committee and on the floor of Congress, dividing the spoils, rather than being concerned about the aggregate opinion of the masses (Stockton, 1995).

Some scholars have argued that Congress provides little strategic oversight and focuses primarily on using the defense budget as a form of social welfare to promote projects in their own districts (Art, 1985; Lindsay, 1990; Mayer, 1993 and Lee, 2010). Paul Stockton proposed that most congressmen care little for the greater strategy or concerns of the public at large, but rather are motivated to garner constituent support for defense programs and spending that benefits their own districts (Stockton, 1995). Micky Tripathi took this into the realm of defense PAC contributions. In flush times funds were freely distributed, but during lean budgets PACs tended to focus more on committee chairmen (Tripathi, 2000).[33] He noted that business and political elites acquired similar spending preferences when constituency funding was threatened.

Other scholars have (Kriesburg, Louis, and Klein, 1980; Lee, 2010) looked to the effects of ideology and the long-standing debate between "hawks and doves." Russett (1991) found that most people share mixed opinions and that spending shifts based solely upon elite ideology were neither great nor prolonged. John Zaller, echoing these views, argued that the effects of values and awareness on political attitudes are not automatic but depend on elite cues for motivation. Zaller believed that only the most aware citizens could have a consistent ideology or belief system (Zaller, 1992).

These research findings have led several scholars to question whether defense issue categories such as defense "hawk" and "dove" still apply to elite motivations to changes in the defense budget. Some scholars are particularly skeptical about the ability of elite driven issue based ideology to breach partisan divides (Cox and McCubbins, 2004). In an era of increasing polarization, the idea of "us against them" often encourages specific issue ideology to be bundled together under more simplistic partisan ideology umbrellas. In other words, if the average citizen

[33] It would be interesting to note if this has changed with the decline of committee power.

accepts that their party's ideology will include most of the issues they care about, they no longer have to devote energy to understanding specific issues and can trust the party to represent their beliefs by proxy (Fiorina, 1981).

Such partisan-driven issue apathy should be of considerable interest to students of defense spending, as it upsets the traditional perception of defense spending as a bipartisan issue not overwhelmingly dominated by either party.[34] Extreme polarization, where each party must dispute the position of the opposition party threatens this long-standing common ground. On one hand, a belief that the opposition party could not possibly represent any common policy areas leaves partisan elites with near electoral impunity to challenge the other party; but on the other, it provides little electoral allowance for compromise, even when it is advantageous to both sides. Such developments potentially call into question current understandings of elite ideological direction driving defense spending (Abramowitz and Saunders, 2008). In other words, even when changes to defense spending might be advantageous to both parties, partisan voter expectations to block opposition legislation, under the belief that anything the other side wants must be bad, could lead to failure to enact legislation deemed necessary by bipartisan elites.

Taken on whole, the leadership model has merit. Although undeniably un-democratic in tenor, defense matters are highly complex, in terms of not only military strategy and technical detail, but in the byzantine nature of the government budgeting process itself. In addition to promising a simple solution to the potentially irrational whims of the public, this model has limitations. However, the model is not without merit; it could serve as a powerful driver for

[34] Neither party has a statistical advantage when it comes to approving defense spending. It has depended entirely upon the conditions existing when a given party was in power. Critics point to defense drawdowns in the late 1970s and early 1990s under Democratic presidents and increases in the early 1980s and 2000s under Republican presidents. However, this overlooks the events that were occurring at these times (drawdown from end of Vietnam and Cold war and the heating up of the cold war and the war on terror). Democratic and Republican majorities in Congress alternatively increased and decreased defense budgets.

defense spending, particularly when potential threats to national security are unknown to the public, or technical foreign policy issues are complex. Gaining a better understanding of the inner workings and interactions of elite cueing with other drivers is important to understanding the whole defense spending process.

### *Military Keynesian Model*

Named after the economic theories of John Maynard Keynes,[35] this model explores the relationship between military spending and economic stimulus. In essence, it argues that defense budgets can be used along with deficit spending to prime a failing economy, and from time to time, defense spending should be increased to create both impact and multiplier effects.[36] Falling in and out of favor since the 1930s, this theory has long been used to justify, what some would call, the 'perpetual war footing' maintained by the U.S. since WWII (Custers, 2010).[37] Unfortunately, most scholarly work on this theory has remained in the world of economics, and a more extensive cross-discipline review is long overdue.[38]

Casey Borch and Michael Wallace provide a recent and relatively comprehensive synopsis of scholarship in this vein. The authors point to the reality that many lawmakers subscribe to Keynesian theory and that it has been in practice (to varying degrees) for over 70 years. Although they concede some proof that states with high levels of military spending are

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[35] Keynes himself never directly endorsed defense spending as an economic catalyst. Author Peter Custers claims that Polish Economist Michal Kalecki first formulated the idea behind the model in 1935 while looking at Nazi Germany's spending on armaments (two years prior to Keynes).

[36] Multiplier effects traditionally refer to the propensity of the working class to spend more when they make more. Thus, when government pumps money into the economy to increase worker wages and employment, there is an impact effect of the jobs created, but there is also a multiplier effect when workers turn around and spend the majority of their new earnings in the economy. He estimated that labor would spend 5/6 of their extra earnings and save 1/6 (John Maynard Keynes, *The General Theory of Employment, Interest and Money*). Multiplier effect is also considered in crossover technology invented for the military, but appropriated for civilian use. Such as the invention of the flat screen monitors (precursor to flat screen TV's and Computer screens) as part of a DoD display system program in the 1980s.

[37] Drawing influence from Thomas Hobbes' Bellum omnium contra omnes in "Leviathan."

[38] This is also the topic of political theory, but it is long overdue for greater inclusion into current American and policy theories.

better suited to survive economic downturn, they conclude that the utility of a Military Keynesian approach may be diminishing (Borch and Wallace, 2010). With the shift from industrial to digital production, fewer and fewer jobs are required to produce and employ modern weapons. Claims by the Congressional Budget Office (CBO) in 1983 that every billion-dollar increase in defense spending was equivalent to 25,000 to 55,000 jobs can no longer be sustained (Mintz, 1992).[39] The reduction in labor footprint diminishes the impact of military priming on the greater economy.[40] However, Borch and Wallace warn that the powerful combinations of governmental and industrial forces involved in military production are far easier to coax into action than to restrain (Borch and Wallace, 2010).

Many recent scholars echo these sentiments (Fordham, 2003; Fordham and Walker, 2005; Carrol, 2006; Foster, Holleman and McChesney, 2009). Using a mix of new modeling techniques, Heo and Bohte (2012) found no evidence that defense spending affects the economy positively or negatively. Going even further, Barro and de Rugy (2010) argued with the basic logic of Keynes on multiplier effects when examining defense-spending drawdowns. Their study determined that in actuality every $1 cut in defense spending was equivalent to an increase in private spending by $1.30 (Barro and de Rugy, 2010).

However, not all agree. Several authors claim that although macro-economic effects may be overestimated, the micro-economic effects on targeted states and congressional districts can be considerable (Brace, 1993; Rundquist, 1999; Levitt and Snyder, 1997; Schmit, 2000). Luca Pieroni in an aptly named paper, "Can we declare Military Keynesianism Dead?" argued that

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[39] *The Political Economy of Military Spending in the United States*, 1992 edited by Alex Mintz. Chapter 2 "Elections, business cycles, and the timing of defense contract awards in the United States," by Kenneth R. Mayer, p, 17.

[40] Particularly concerning multiplier effects, since the number of laborers who could spend additional money has been reduced.

there is a positive economic impact from defense spending; however, not always in clear macroeconomic terms (Pieroni, d'Agostino and Lorusso, 2008). Some scholars suggest that members of Congress are keenly aware of the impacts to their state or district, even if the effect were somewhat muted to the country at large (Rundquist and Carsey, 2002 and 2009). Todd Sadler and Keith Hartley looked at profit margin among different businesses and determined that defense firms returned higher profit margins than non-defense related industries, thus providing greater economic stimulus on the state level. This in turn incentivized MoC to fight for greater general defense spending with the understanding that even if they could not control specific contracts, the geographic proximity of large defense companies or bases within their districts or states would mean potential increased tax revenue and potential job growth for their constituents (Sadler and Hartley, 1995).[41]

The Military Keynesian model offers an enticing explanation for continued high levels of military spending in peacetime, as well as a rationale for military spending fluctuations during economic downturns. In the end, as Custers (2010) suggests, it may matter less if Military Keynesian theory actually works, than if politicians believe it does. On the district and state level there is little doubt that defense spending is significant, and as this is the area of greatest attention to MoC, it is reasonable to see why they would subscribe to Keynesian theories even if they have little macroeconomic impact.[42] Alone, the Keynesian model may be flawed, but in conjunction with the leadership and follower models, its explanation of macro and micro-

[41] The type of defense spending desired by a particular MoC (Procurement, R & D, manpower or construction) depends upon the infrastructure (Defense related industry, R & D Universities or bases) located within the district or state. This will be discussed more in depth in the chapter on the defense budget process.

[42] Macro-economic prosperity is as much a matter of normative faith as it is empirical fact. A nation that believes itself to be in a recession may stop spending money and soon find itself in one (whether it began that way or not). This is not to ignore real economic disaster brought on by poor investment, national infrastructure failure or natural disaster. Merely, it accepts the reality that self-fulfilling prophecies are particularly dangerous in economics (Felin and Foss, 2009).

economic (local district and state economic impacts) drivers could help explain much of the flux in defense spending.

### *Follower Model*

The follower model holds that, in the absence of war, public opinion is the most significant driver of congressional action on defense, and that MoC react to significant and sustained public opinion by raising or lowering defense expenditures. Although there is a tentative consensus in the literature that public opinion matters to MoC, there is a general lack of fidelity as to how it works in practice on particular budgets or policies. In other words, some authors have found that defense spending (along with other policies) is affected by public opinion, but few have ventured to detail exactly how and when it functions as a primary driver in defense budgets.

Several scholars stand by the claim that the will of the people is the single most important factor in defense spending behavior (Parker, 1981; Patterson, Ripley, and Quinlan, 1992; Gilens and Page, 2014). Whether out of respect for the will of the governed or out of fear of electoral repercussions, public opinion is critical in the decisions of MoC. Put differently, even if elite cueing and coaching is present, national leadership makes defense spending decisions based upon public opinion when the electorate has a strong and persistent view on the issue.[43]

Thomas Hartley and Bruce Russett argued that in the 1980s, defense spending increases were directly attributable to public opinion, and that there was no evidence of any other significant variables factors at work. They claimed the Soviet threat was clear and that the public and Congress responded in unison, without the need for cueing or coaching (Hartley and Russett, 1992). Echoing these findings, Robert Higgs and Anthony Kilduff performed a statistical

[43] When the public does not have a strong opinion, MoC are free to act as they see fit.

analysis of a large number of public opinion polls during the 1980s and determined that public opinion and defense spending tracked well in most cases. They further observed that MoC are reliant upon constituent support for reelection and partisan dominance, and once public opinion has crystalized in one direction or another, there is no recourse but to follow suit. In the end, they concluded that public opinion alone was the most powerful predictor of change in defense spending (Higgs and Kilduff, 1993). These conclusions have largely been upheld in subsequent studies (Mangi, 1995; Derouen and Heo, 2000; Torres-Reyna and Shapiro, 2002; Eichenberg and Stoll, 2003; and Duffin, 2008; and Simon and Lovrich, 2010), even though most acknowledged at least some role for elite cueing.

Robert Durr, on the other hand, speculated that public opinion was primarily influenced by a general sense of economic wellbeing. In other words, threats become less salient and elite cueing less important if the public is sufficiently worried about the economy (Durr, 1993). This dovetailed somewhat with Mordecai Lee's supposition that, in the 1950s, the Pentagon leveraged a time of relative prosperity to control the public relations war and encouraged defense spending while exaggerating the threat of the Soviet Union (Lee, 2012). However, Jonathan Nagler argued that public opinion typically only responds to reinforcement of previously held ideas. Barring irreconcilable evidence to the contrary, if one is predisposed to oppose defense spending, they will always do so, regardless of the economic conditions or elite cueing (Nagler, 1990).[44]

Despite the passionate defense of many authors, several empirical holes remain in the claims that public opinion is the most powerful driver of defense budgets. One galling problem is the non-uniform time lag in defense spending as a reaction to public opinion. For example, although defense spending increased in accordance with public opinion in 1981, it continued

[44] Although this may be generally true, it suggests that people are simplistic and unable to hold complex and often contradictory ideas subject to situational change (i.e. threat, economy, etc.).

(and accelerated) to rise long after public opinion reversed.[45] If public opinion about the adequacy of spending is the strongest driver, why was the defense budget so slow to react (to both increase and decrease)? Are there circumstances when reactions will be faster, either in conjunction with or in the absence of correlating public opinion? Does public opinion on the competence of Congress affect defense budgets? The existing literature is mostly silent on the subject.

### ***Relativity Model***

Perhaps the most interesting, and least documented, approach is the relativity model. In essence, it assumes that all the aforementioned models are potential drivers in defense spending, but that each takes precedence at differing times and under relative (rather than absolute) conditions. This allows for a confluence of causal factors to provide direction to defense spending under those circumstances that are most conducive to particular stimuli. Of course, the drawback to this approach is that it lacks predictive power. With complex combinations of factors reacting to various exogenous and endogenous inputs, under situationally independent conditions, how can a definitive model be established?

In 1980, Louis Kriesberg and Ross Klein proposed a list of external, societal and personal factors that could influence preference for defense spending. They found that in differing circumstances, a large number of stimuli could affect both individual and aggregate public opinion. They concluded that the presence of a credible military threat, perception of national power, economic health, ideology, confidence in the military and reaction to world events could all increase or decrease both public and elite opinion on defense budgets (Kriesberg and Klein, 1980). Their work was fascinating, but it never evolved to provide a more extensive framework

[45] See Gallop polling

to describe scenarios where particular factors might prove dominant. Thomas Hartley took up the challenge in examining the factors effecting defense spending during the Cold War, and he concluded that at various times different factors drove increases or declines in defense spending, but that no one overarching factor was always dominant (Hartley, 1994).

David Gold when looking at the post-Cold War and Pre-9/11 period from 1989 – 1998 generally supported these conclusions (Gold, 2008). Guy Whitten and Laron Williams (Whitten and Williams, 2011) expanded the argument to 19 democracies using a time-series analysis beginning at the end of WWII. They concluded that economic, threat, elite cueing and public opinion factors were all situationally responsible for driving defense budgets at different periods and under varying stimuli.

A drawback to the relativity model is that it is decidedly untidy. Without a clear set of conditions under which particular drivers would be favored over others, the approach can be descriptive at best. However, what it lacks in parsimony it makes up for in explanatory power and it offers a promising pluralistic model from which to continue research. Much more work is needed, but for now, it provides a somewhat convenient 'catch all' when other models fail.

### C. Gaps in the Literature.

In order to pull their weight in the pluralistic study of defense budgets, political scientists must take a deeper look at the underlying political drivers that influence defense budgets. If "war" and economic health were the only drivers, then our problem would be simple. The defense budget could be seen as a simple supply and demand relationship. However, such a facile explanation would constitute a fundamental mischaracterization of the defense budget process, resulting in a dangerous ignorance of the underlying politics of defense spending.

As Carl von Clausewitz expressed in his famous work, "*On War*," the competing forces of emotion, chance and reason dictate that war is a natural and omni-present reality of our world.[46] This threat requires some level of national self-defense, and thus the defense budget should simply be a product of the perceived threat and the resources reasonably available to mitigate the threat. If that were all there was to it, we could stop right now. Unfortunately, there is more to the story.

Defense budgeting is more complicated than the simple supply-demand threat perspective suggests. The reality is that states spend on defense for a number of reasons, resulting in punctuated, non-incremental defense budgets even in times of relative peace. These investments often reflect a public willingness to support defense budgets out of proportion to apparent need. The current literature is not sufficient to explain why this occurs.

Since the end of the cold war, little political science scholarship has been produced on the causal drivers of U.S. Defense Budgets. Many scholars of the time were attempting to understand the budgetary implications of transition from major wars of survival (WWI and WWII) to a cold war defined by regional conflicts such as Korea and Vietnam. The Reagan era military buildup was seen as a funding anomaly predicated on political strategy, rather than military necessity (Ostrom and Marra, 1986; Fordham, 2002; Metin, 2012). Much of the research was directed toward explaining the drivers of Reagan's massive defense expenditures and attempting to predict the direction budgets might take with the fall of the Soviet Union and the ostensible end of the Cold War. Although valuable in the greater historical perspective, few followed up to validate their predictions and prescriptions.

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[46] "Wunderliche Dreifaltigkeit or "Fascinating Trinity." … Composed of primordial violence, hatred, and enmity, which are to be regarded as a blind natural force; of the play of chance and probability within which the creative spirit is free to roam; and of its element of subordination, as an instrument of policy, which makes it subject to reason...." (Section #28 in Book 1, Chapter 1, of Clausewitz's *On War)*.

The rather sporadic and disjointed nature of research on defense spending over the last 15 years may have been influenced by the events of September 11, 2001 and the subsequent shift in attention to the Global War on Terror. The emergence of a significant new military conflict likely could have rendered questions of politically or economically motivated defense spending moot. For example, few academics devoted time to examining the effects of public opinion on war spending during WWII.[47] The U.S. spent what was necessary to win. People were concerned with spending wisely, but few at the time questioned the underlying motivation behind increased defense expenditures during a perceived war of survival.[48] Given that the Global War on Terror began with the first successful large-scale mass casualties attacks to be perpetrated on U.S. soil (state or territory) since Pearl Harbor, it is reasonable to expect a similar pubic and elite acceptance of the perceived costs associated with the need to retaliate and ensure public safety. However, as direct U.S. involvement has waned and the perceived direct threat to the public has declined,[49] public and elite critiques of defense spending have resumed more historically normal levels.[50]

Sadly, there is effectively no body of literature examining the relationship of congressional approval on the defense budget beyond establishing that public approval matters to MoC.[51] In fact, the entire notion of representative democracy is based on the presumption of the legitimacy of its institutions and the approval of the electorate (Parker, 1981). Unless Congress

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[47] WWII was the last war of national survival fought by the United States and began (from the perspective of direct large scale us involvement), only after the attack by the Empire of Japan on U.S. naval forces and facilities in Pearl Harbor HI on December 7, 1941.
[48] See explanation of war variable methods section for definition of war.
[49] Although concern over terrorist attacks did rise during the run up to the 2016 U.S. Presidential Election, overall public concerns have declined since 2001 (Gallup poll 23 Mar, 2016).
[50] As evidenced by Gallup polling of public opinion on the adequacy of defense spending and the increased acrimony in congressional debate on defense spending levels (Gallup poll 2 March 2017).
[51] For our purposes, congressional approval is the rate at which the electorate (when scientifically surveyed) expresses support or frustration with the integrity of the institution of Congress or its ability to meet popular job expectations.

represents the desires of the people, representative democracy is at best a form of biased pluralism (Gilens and Page, 2014).[52]

If this sounds like empty hyperbole to the contemporary political scientist, it was apparently serious to the founding fathers. In formulating the U.S. Constitution, popular support of the legislature was a critical concern. James Madison wrote, "The House of Representatives is so constituted as to support in the members a habitual recollection of their dependence on the people."[53] Without popular support, the legislative process risks both rejection by the electorate and a lack of incentives for legislators to be productive (Patterson, Ripley, and Quinlan, 1992).

One of the normative foundations of representative Democracy is that those who are chosen to create our laws should be responsive to the public's expectations (Schattschneider, 1960; Dahl, 1971; Grant and Rudolph, 2004). However, this neglects the reality that much of the electorate carries an imperfect understanding of how the U.S. political system works. The self-selection of information in accordance to partisan or ideological preference can form biased and unfounded expectations about the ability of Congress, or individual MoC, to bring about desired legislation or change (Kimball and Patterson, 1997).

The Constitution envisioned regular elections as the people's lever for ensuring a responsive Congress. Federalist Paper #57 explained it as,

> "Before the sentiments impressed on their minds by the mode of their elevation can be effaced by the exercise of power, they will be compelled to anticipate the moment when their power is to cease, when their exercise of it is to be reviewed, and when they must

[52] "Theories of biased pluralism generally argue that both the thrust of interest-group conflict and the public policies that result tend to tilt toward the wishes of corporations and business and professional associations. Characterized by E.E. Schattschneider as a heavenly chorus with an "upper-class accent."
[53] Federalist Paper #57

descend to the level from which they were raised; there forever to remain unless a faithful discharge of their trust shall have established their title to a renewal of it."[54]

To put it more simply, the threat of being held accountable for their actions (or inactions) and the dependency upon electoral support to be reelected drives congressional behavior. Of course, in order for the people's electoral lever to function citizens must be able to accurately attribute blame for failure and credit for success.

Congress is much more complex than either the Executive or Judicial Branch. Unlike the Presidency, where blame (or accolades) can easily be focused on an individual (or a small group of individuals in the case of the Judiciary), it is more difficult to apportion responsibility between 535 disparate MoC. The difference in scale alone necessitates compromise and deal making by MoC in drafting legislative actions (and reactions to world events) rather than quick unitary movements of the body as a whole.

Public approval of Congress is a reflection of how voters understand the role and activities of the intuition. It also reflects their perception of the institution's success or failure in achieving desired outcomes such as a prospering economy or national security (Ramirez, 2013). The electorate judges the sitting Congress against the record of its predecessors (retrospective) and the expectation (prospective) of future success (Fiorina, 1981; Rudolph, 2002). Additionally, voters are aware of the party in control and tend to blame (fairly or not) that party for any perceived failure to deliver a desired outcome. Outcomes are more tangible to the average citizen than specific legislation (Lebo, 2008), and hence, Congress is judged more for the quality of conditions rather than on the quantity of laws produced.[55]

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[54] Federalist Paper #57

[55] A starving person is more concerned with feeling full than with the mechanics of bread making.

Congressional approval appears to be heavily influenced by the public's perceptions of economic conditions. However, rather than holding individual MoC accountable for the national economy, congressional responsibility tends to take a more personal tenor due to the association of a specific MoC with a district or state (Box-Steffensmeier and Tomlinson 2000; Chanley, Rudolph, and Rahn 2000; Durr, Gilmour, and Wolbrecht 1997; Rudolph 2002). There are a number of individual strategies available in computing the arithmetic of responsibility and assigning blame in personal voting behavior. These are impacted upon the scale of worldview (local, regional or societal) and a preference for inductive or deductive reasoning. A voter may infer that their personal situation reflects what must be happening to the rest of the country (egotropic or personal centered voting). For example, if I am out of work I may perceive that unemployment is high, even if the national rate of unemployment is falling (Singer and Carlin, 2013).The voter can also assign regional bias (communotropic or regional community centered voting), sharing a widespread opinion based upon events believed to be unique to the specific community or region. For example, if I live in the U.S. "rust belt,"[56] I may subscribe to a regionally prevalent belief that manufacturing jobs were eliminated due to globalization-encouraging policies of government rather than by automation and profit optimization measures of industry (Rodgers, 2014). Alternately, a voter may perceive the state of the nation, as reported by a trusted source of information,[57] as being more important than personal or regional conditions (sociotropic or society centered voting). For example, the candidate that my social group (political party, ideological association, or religious denomination) favors claims that the

[56] Parts of the northeastern and Midwestern U.S. that are characterized by declining industry, aging factories, and a falling population. Steel-producing cities in Pennsylvania and Ohio are at its center.

[57] It is beyond the scope of this paper to delve into biased sources of information. Cultural changes, such as polarization within the media and the technological ability of social media to provide self-selection of idea reinforcing (biased or fake) information, are complicating factors in providing for balanced public opinion. However, they do not change the importance of public opinion to politicians. If anything, they provide tools (though not always precise) to shift public opinion rapidly on an issue or policy.

national economy is failing (or thriving), therefore I accept that economic change is necessary despite any personal or local experience to the contrary (Kinder and Kiewiet, 1981; Kiewiet, 1983).[58]

Individual citizens may rely on overall congressional approval when voting in congressional elections. A particularly negative pubic opinion of Congress may not be enough to result in a switch from one party to the other in a particularly partisan district or state. However, it may very well mean the undoing of an incumbent to a more conservative or liberal member of their own party in a primary election (Hibbing and Tiritilli 2000; Jones and McDermott 2004). If the primary motivation of a MoC is staying in office (Mayhew, 1974), then electoral survival should outweigh partisan loyalty.[59] Congressional constituencies evolve over time and MoC must evolve with them to remain relevant because failing to remain relevant to issues of interest to constituencies (district or state) leaves voters with disincentives for personal or partisan loyalty to a particular MoC (Fenno, 1978). The challenge for a MoC is therefore both their image within the district and the perception of them as an agent of successful partisan change (or resistance to change) in the institution of Congress.

Fenno pointed out that each Congressman answers to a different electorate,[60] and what is good for one constituency is not always favorable to another (Fenno, 1978). A MoC cannot always afford grand legislative gestures that appeal to a national majority, since the district or state electorate they depend upon may be in the minority on any given issue. Instead, they must

[58] For the purposes of this paper, I am adapting the terms egotropic, communotropic and sociotropic to show how they relate to public opinion in general, rather than specific voting motivation.
[59] Of course, it has also been argued that party support may be essential to be reelected because it provides politicians with benefits such as financing, messaging, or campaign speakers.
[60] As well as constituencies within each electorate (geographic, reelection, primary, and personal constituencies)

tread a fine line of careful messaging, which is informed by public opinion, particularly from those constituents most likely to notice and vote.

MoC have admitted that their approval ratings matter (Lipinski, 2004; Dancey 2010; Cooper 1999; Parker 1981) and are more likely to retire when public esteem for the institution is low (Wolak, 2007; Maestas et al., 2006; Fowler and McClure 1990). Low approval implies a potential threat to incumbency and the ability to pass personally desirable legislation. Incumbency is imperiled for the reasons stated above, but legislative impetus is also limited by lack of social capital (Hetherington, 1998). Unpopular but necessary legislation can only be undertaken safely (electorally speaking) when MoC feel they have sufficient support from constituents to allow a momentary deviation from their preferred outcomes, including either ideological or economic agendas (Putnam, 1993). A record of success on the behalf of constituents creates positive social capital. Building trust takes work, and negative approval rates can make such work harder and more exhaustive. As with Fenno's discussion of rebuilding core constituencies, for some MoC the effort required to rebuild social capital or political trust is simply too great, particularly late in a career (Fenno, 1978). Therefore, the ability to achieve desired policy outcomes can be compromised and the attraction of continued service as a MoC may be lessened.

Of course, if individual MoC seek only to establish public approval in their own constituency, why worry about the reputation of the institution as a whole? One clue to this lies in an examination of incumbency rates in relation to congressional approval rates. Although there is no question of the magnitude difference between the low approval of Congress and the high rate of incumbent reelection, it is significant to note that in all but one year (2004) between

1970 and 2015, a negative vector in approval rates was reflected in a negative shift in either House or Senate incumbency rates (Born, 1990; Jones, 2010).[61]

Congress is not a homogeneous body with a uniform desire to be more popular (Mayhew, 1974; Durr, Gilmour and Wolbrecht, 1997); however, they do need at least localized popular support to achieve reelection goals. Low levels of institutional support decrease the reelection rates of incumbents and members of the majority party (Jones and McDermott 2009, 2011; Hibbing and Tiritilli 1997; Hibbing and Theiss-Morse 1995; Mann and Ornstein 1994; Born, 1990). Lower approval rates also tend to attract higher-quality challengers and reduce the chances for successful re-election (Fowler and McClure 1990).

There are many reasons why changes in approval could be of more or less importance to individual MoC. Electoral vulnerability or the perception of a serious challenge in the next election can drive more concern about the overall approval of Congress. This is particularly true if economic conditions, scandal or unpopular legislation can be tied (fairly or not) to the incumbent (Gordon, Huber, and Landa, 2007; Cox and Katz 1996; Jacobson and Kernell 1983; Fiorina, 1981; Kramer, 1971). Proximity to reelection is also of continuing concern. For representatives, with election always looming within two years, it is a continuous factor of concern. For Senators with six-year terms, the proximity of a reelection bid should add urgency to such considerations (Bender and Lot, 1996). Redistricting may also be a significant factor. The loss of core constituencies and the need to rebuild the "personal vote" adds pressure and expense, regarding both personal time and money to reelection efforts. With a new electorate, the challenge to distinguish the incumbent from the typically unpopular institution starts over from

[61] The shifts were not always of the same magnitude as public opinion changes, but they were significant enough to warrant notice. After all, within an institution composed of 535 individuals competing individually for reelection, every election is significant to the officeholder in question.

scratch (Born, 2016; Ansolabehere, Snyder and Stewart, 2000). Finally, local or regional economic conditions can have a significant impact if the electorate blames the incumbent's party for a lack of economic success (Rudolph, 2003). Although not an exhaustive list, the above factors briefly highlight how many factors could situationally contribute to the importance of approval ratings of the institution of Congress to individual MoC.

Despite the supposed self-evidentiary relationship between representative government and public support, some academics have struggled to find definitive evidence connecting congressional approval with meaningful action by the Congress (Stokes and Miller, 1962). There are many reasons why this may be the case, but most are rooted in the structure of Congress. A number of authors suggest that this lack of support, particularly in comparison to the high marks given to individual representatives by their constituents, results from the nature of the legislative process. The painfully slow and combative nature of congressional action can lead to the perception that it is inefficient and unproductive (Durr, Gilmour and Wolbrecht, 1997). Thus, the core of the popularity problem of Congress may lie within its very institutional design. It must necessarily produce a compromise out of the competing demands that are inevitably voiced; the more far-reaching the legislation, the greater the conflict. Rarely (if ever) are both sides completely satisfied with the outcome. The passage of most major, and impactful, legislation produces winners and losers. The inherent compromises required to achieve passage inevitably mean that many constituents will be unhappy with the outcome and may blame their MoC for a failure to fight for their perspective (Davidson and Parker, 1972; Fenno, 1975). If Congress does nothing, it is seen as lazy. If it passes compromise legislation, it is unfaithful to its base. As such, low congressional approval rates may simply be a reaction to Congress doing its job (Parker, 1981).

Another aspect of the problem lies in the overall low esteem in which most people tend to hold Congress as an institution. Since its inception, and perhaps by design, Congress is demonstratively the most unpopular of the three branches of U.S. government (Parker 1981; Patterson and Magleby 1992). Public approval is influenced by the widespread belief that Congress is corrupt, lazy, unresponsive and out of touch with the electorate (Hibbing and Theiss-Morse 1995, 96-100; Patterson and Barr 1995; Gallop, 2015). John Adams is said to have once famously remarked, "In my many years I have come to a conclusion that one useless man is a shame, two is a law firm, and three or more is a congress,"[62] a sentiment reflected in the words of House Speaker, Nicholas Longworth in 1925 when he stated, "We (Congress) have always been unpopular." Similarly, Wisconsin Senator William Proxmire in 1987 offered,

> "No one and I mean nobody ever defends the Congress. In more than 30 years in Congress, and in literally tens of thousands of conversations back in my State with people of every political persuasion I have yet to hear one kind word, one whisper of praise, one word of sympathy for the Congress as a whole." [63]

Even Mark Twain, well known for interpreting with humor the prevailing temper of the country, took a dim view of Congress. In his words, “Suppose you were an idiot. And suppose you were a member of Congress. But I repeat myself.”[64] Alternatively, it may be as simple as Gary Jacobson described when he claimed that the public resents backroom politics and public argument. They want the “sausage” that is democratic compromise without having to see how it is made (Jacobson, 2004). As long as Congress is an institution that argues with itself, the public will not

[62] Attributed to President John Adams, but not specifically sourced.
[63] Cited in Patterson, Samuel C. and Gregory A. Caldeira. 1990. Standing Up for Congress: Variations in Public Esteem since the 1960s." Legislative Studies Quarterly 15(1):25-47.
[64] Mark Twain, a Biography.

have much respect for it. If all this is true, and everyone dislikes Congress, what difference could a few percentage points in approval ratings in either direction really make?

Rationales for this assumed ambivalence or distain range from the difficulty in holding any single member of Congress responsible for governmental failures as compared to a unitary target like the President (Durr, Gilmour, and Wolbrecht, 1997; Hibbing and Theiss-Morse, 1995; Jones and McDermott, 2002; Kimball and Patterson, 1997; Parker, 1977; Patterson and Caldeira, 1990; Patterson, Ripley, and Quinlan, 1992). As Fenno observed long ago, many MoC run for office by running against Congress' dismal approval (Lipinski 2004; Farnsworth 2003; Patterson and Magleby 1992; Parker 1981; Cook 1979; Fenno 1978). Consequently, if Congress' own members are constantly criticizing the institution, who would possibly defend it (Mayer and Canon 1999)? Perhaps the most damning argument is the simple observation that although congressional approval has averaged 30% over the last 40 years (with notably much lower approval ratings in recent years),[65] the incumbency rate for the same period has averaged an impressive 85% (combined Senate and House).[66] With six out of seven MoC reelected regardless of the popular standing of Congress, it is easy to see their point. It is difficult to justify how Congressmen could be concerned about congressional approval when at best it might help reelection (Fenno 1975; Parker and Davidson 1979), and at worst it appears to make little difference. However, this would be too simplistic a view.

Although on the surface congressional ratings may not seem to have had much dramatic effect, this ignores evidence that public appraisals of individual MoC are, in some cases, influenced by public approval or Congress (Born, 1990). MoC who are vulnerable in reelection,

[65] Average of Gallop polling from 1974 – 2015.
[66] This is a conservative estimate, based upon the total number of senators and representatives, who ran for reelection (from 1970 – 2014) and were returned to office. Some estimates only look at those who survived primary elections, or do not account for those who chose not to run again.

either in the primary or general election, due to changing demographics in their district/state, significant economic or political events in their district or state, divisive legislation or political missteps (in word or deed) are all susceptible to being painted with the broad brush of congressional ineptitude. It is perhaps a testament to the survival instincts of most MoC that they avoid such pitfalls. However, what of the 15% who do not succeed in reelection? Did congressional approval ratings negatively affect them?

David Jones has argued that the overall approval rate of Congress does significantly affect the incumbency advantage, particularly in the majority party (Jones and McDermott, 2009). Congressional competence (scandal, public feuds), congressional processes (gridlock), congressional policy orientation (partisanship), and national conditions (economic, war, and cultural unrest) all contribute to the public's perception of Congress (Jones, 2014). Further, the public seems to expect the majority party to be successful in creating outcomes favorable to its partisan preference, and when it fails to do so it is held accountable. Heightened polarization exacerbates this by providing clearer distinctions between parties and positions and makes it easier for the public to assess blame (Abramowitz, 2010). As such, congressional approval affects incumbency as well as the brand or the favorable image of the party in power (Jones, 2015). In the end, as with most things in political life, it may be less important that these efforts are successful than that MoC believe them to be. As the philosopher Epictetus cautioned long ago, "It's not what happens to you, but how you react to it that matters."[67] The fact that incumbents seem to be reelected by an overwhelming majority regardless of the overall approval of Congress does not preclude the possibility that MoC may be altering their behavior in response to those approval ratings to increase their odds of being reelected.

[67] Enchiridion or Manual of Epictetus.

This is where my research fills a critical gap in two ways. First, by providing new insights into the effect of public opinion on defense budgets. In most cases, public opinion interacts situationally with other drivers to produce significant change in defense spending. However, even at times when elite opinion is split, imminent threat is low and economic resources are questionable, significant and sustained public opinion provides a convincing rationale for defense budget changes. I suggest that negative congressional approval rates provoke a more significant and immediate response in defense spending than general public opinion on overall spending levels alone. When these distinct prongs of public opinion align, the congressional reaction can be even more responsive.

Second, this study furthers the general study of PET as a descriptive and proscriptive framework of budget behavior. Specifically, it directly contributes to the work of Jones, Zalanyi and Erdi (2014) and their Disrupted Exponential Incrementalism (PET based) general theory of budgetary allocations. Congressional approval consistently contributes to budget punctuations in the defense budget even within periods of relative stasis. This result provides some relief for Disrupted Exponential Incrementalism theory's current weakness in explaining small punctuations occurring both inside and outside of major external events.

### D. Theory of budgeting: Incrementalism vs. Punctuated Equilibrium.

We have dealt in some detail with the potential drivers of defense spending, but we have not considered the overarching theoretical budget system within which those drivers operate. It is not my intent to rehash the entire history of budget theory, but a limited discussion of budget theory is essential to understanding how public opinion and defense budgets interact within the budget process.

At least since 1940, when V. O. Key complained that no budget theory existed, scholars have struggled to define an empirical theory of budgeting (Key, 1940). The main reason for this is that budgets simply do not behave as they should. As briefly discussed before, in a perfect world any budget process would be a rational application of supply and demand. The demand reflects a specific problem and an identified solution, or set of solutions, requiring specific funding to implement. The supply would represent all financial resources available to address the problem and fund the solution.

Of course government has to deal with more than one problem. Each problem and its associated solutions and funding must be ranked against each other and then a rational apportionment made of available resources to address each in order of severity. Each year the list of problems is reexamined, some problems are fixed and dropped from the list and new ones added. Subsequent rankings occur and funding is reapportioned in response to the severity of the remaining legacy and new problems. Sounds simple…only in practice this isn't what happens, at least not exactly. The breakdown occurs when the reality of imperfect information, limited attention and political friction points are introduced, which will be discussed in more detail below.

Arguably, the first concerted effort at a theory was incrementalism.[68] Charles Lindblom, was frustrated by rational actor theories of administrative decision-making that assumed complete information and disregarded cognitive limitations and the time available to make the decision. He argued that this was not realistic, and that actual decisions are made by "successive

[68] Some would content that rational choice models of administrative decision making were the first attempt at a theory of budgeting. Typified in V.O. Key's discussion of marginal utility being unrealistic to how budgets actually work. According to rational choice, a budget should always prioritize items with the highest marginal utility; however, in public spending choices involve value judgements without a common denominator (Key, V.O. (1940) 'The Lack of a Budgetary Theory', *American Political Science Review*, p. 1143)

limited comparisons" (Lindblom, 1959). Lindblom believed that searches for information on alternative solutions are costly in time and resources, thus most decision makers limit themselves to a small number of considerations. Administrative decision making based upon these small limited comparisons mitigates large change and results in incremental decisions (Braybrooke and Lindblom, 1963).

Aaron Wildavsky took Lindblom's idea and applied it to the budgeting process. Specifically, he proposed that since most budgets are too large to be reviewed in their entirety each budget cycle, they are only incrementally adjusted. In other words, an incremental budget always considers the previous year's budget as a baseline, and all changes are incrementally made from that baseline (Wildavsky, 1964, 1992).

Utilizing this logic, some scholars concluded that defense budgets in particular were far too large to be anything but incremental (Crecine, 1971; Stromberg, 1970). Wildavsky expected that budgets would fluctuate, but he theorized that incremental changes prevented decision makers from having to fight the last year's battles every year. If political conflict was high on a particular issue, then there would be increased pressure to avoid making significant changes in the spending level, since greatly lowering or raising the amount would almost certainly trigger political conflict. He further felt that bureaucratization reinforced tendencies for incremental budgets. As the process became more routine, the path of least resistance would be to make budget decisions around the accepted baseline year to year, rather than starting from scratch (Wildavsky, 1992).

One of the major problems in this literature was conceptual; scholars could not quite decide what level of change constituted incrementalism. In fact, William Berry identified 12 different quantitative definitions of incremental change (Berry, 1990). Although researchers the

literature indulged in fierce debates over what constituted “small” or “large” changes, the theory progressed little (Robinson, 2007).

What was lacking in the literature was an overarching theoretical framework to tie together the appearance of long periods of incremental change punctuated by radical departures from the baseline. Although not originally intended for this purpose, Punctuated Equilibrium Theory (PET) provided some promise to explain how both are complementary and necessary conditions within the budget process.

PET, as originally envisioned, was intended to explain a problem found in the study of fossil records. Paleontologists Niles Eldredge and Stephen Jay Gould created PET in 1972 as a way to explain how the evolutionary growth of species is best represented by long periods of stasis interrupted by dynamic spasms of change brought on by the combination of internal genetic pressures and significant changes in environmental conditions (Eldredge and Gould, 1972).[69] The idea, and biological metaphor, of PET was appropriated by Frank Baumgartner and Bryan Jones in 1993. They saw it as a way out of the incongruity of incrementalism and punctuation (Baumgartner and Jones, 1993). If decision, or budget, changes were random then they should describe a normal distribution with an equal number of small, medium and large changes in accordance with the Central Limit Theorem (True, Baumgartner and Jones, 1999). PET, however, predicts a greater frequency of small and large changes, and a lesser frequency of

[69] In Punctuated Equilibrium Theory, species spend most of the time in a period of stasis. In stasis, small genetic differences are present but these changes do not greatly affect the structural characteristics of the organism. There are constant forces for change in these periods of stasis represented by genetic variation, but these forces do not overcome natural barriers to large changes, representing the difficulty of change. These periods of stasis are interrupted by rare episodes in which the forces for change override the barriers to change. This generally happens when pressures from the environment combine with internal genetic pressures for change. A punctuation may occur when changes in the environment make change necessary and the genetic variation randomly creates a competitive adaptation. These periods are called punctuations. The resulting process combining stasis with rare punctuations is punctuated equilibrium.

moderate change, since small incremental changes should be interrupted by sudden large changes at non-standard intervals (Robinson, 2007).

Baumgartner and Jones determined to test the falsifiability of PET by looking at budget decisions over time and plotting the distribution of annual change. By examining the level of kurtosis (peakedness of the distribution curve), they could determine if budget changes followed a normal or Pareto-Levy distribution (heavy tailed) distribution (True, 2000). For incrementalism to hold, the distribution of budget changes across time would have to be normally distributed. The results showed that empirical budget distributions were almost never normally distributed defense budgets in particular, but rather exhibited extreme leptokurtic distributions (Jones and Baumgartner, 2005).

Two of the central features of PET are disproportionate attention and bounded rationality. With limited physical ability to study all problems, policy makers tend to spend a great deal of time and attention on some problems and de-prioritized others. This goes hand in hand with bounded rationality. Since policy makers can't possibly look at all problems and all solutions simultaneously, they have to pick and choose what problems are important to them, and what solution sets they will entertain (Jones and Baumgartner, 2005). In budgets this sometimes leads to large funding increases or decreases on some programs and little change in others. These were also considerations in incrementalism, but as Lindblom saw limited attention and cognitive ability as drivers of incremental change, they can also be drivers of punctuated change in the areas that garner the most time and attention.

Thus, policy is characterized by long periods of stability, punctuated by large—though less frequent—changes due to large shifts in society or government. PET works in part by

incorporating various restraints into the policy making model.[70] It assumes that policy changes will become punctuated only when there are significant pressures to overcome these restraints to policy change. These environmental changes can be related to evens such as war, deteriorating economic conditions, changes in elite leadership or significant public opinion shifts. Thus, in our case long periods of relative stability can be punctuated by sudden and abrupt budget changes when resistance to policy restraints are overcome by changing conditions.[71] Without a measured way to release the pressures induced by these changes, policy outputs can resemble the tectonic plate in a fault line, slowing grinding against its restraints until eventually slippage occurs along with a resultant earthquake (Baumgartner and Jones, 1995).[72]

Jones and Baumgartner theorized that policy and budget punctuations would be more pronounced in organizations with complex decision processes involving many friction points produced by the interaction of internal and external stakeholders (Jones et al, 2003). This led to the creation of the General Punctuation Hypothesis. In its most basic form it states: "As all government institutions impose costs, we expect all outputs to show positive kurtosis. As decision-making costs increase – that is, as it is more difficult to translate informational inputs into policy outputs – the more leptokurtic the corresponding output distributions" (Jones and Baumgartner, 2005, p. 347). This would certainly seem to explain why DoD, as the largest department with the most expansive budget in the U.S. government, tends to produce much punctuated budgets.

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[70] Institutional cultures, vested interests and the bounded rationality of decision makers.

[71] Much like in our discussion of incrementalism there are information costs, but also cognitive costs to process information, decision costs representing difficulty in arriving at group consensus and transaction costs involving compliance and oversight (Jones, et al., 2003, 154).

[72] This has also been described as positive and negative feedback. Positive: political, economic, environmental, etc. force for change (works against the status quo). Negative: Maintains equilibrium in a system (resists change in the status quo). This leads to common Tectonic Plate or drops of sand analogies for PET.

A fascinating offshoot of PET has been the recent introduction of Disrupted Exponential Incrementalism Theory (DEIT). It draws heavily on its PET roots, but purports itself as a general theory of budgetary allocations (Jones, Zalanyi and Erdi, 2014). To test DEIT, Jones, et al. (2014) looked at all U.S. government expenditures from 1791 to 2010. They separated defense and non-defense budgets for study, as they expected defense budgets to be more susceptible to external influences. They determined that although budgets are not strictly incremental, they are exponentially incremental. That is to say they are influenced by previous budgets (path dependent) unless impacted by significant events. They describe these events as major wars or economic disruptions and test their premise by dividing the time span into periods of equilibrium (outside of major war or economic disruptions) and critical moments (periods where war or economic disruption exist). Jones et al. (2014) expected to find less extreme disruptions during periods of equilibrium (as measured by kurtosis) compared to the aggregate of the entire time period or during critical moments.

Their conclusions reflected three takeaways with particular relevance to this study. First, Jones et al. found that outside of critical moments, general budgets follow a path dependency trajectory in order to meet program expectations. Second, they determined significant and instantaneous shifts in the budget path are caused by wars or economic disruptions. Third, they concluded that local policy dynamics can cause minor shifts in the budget path that may appear significant at the time, but are small in comparison to the major budgetary shifts seen in critical moments (Jones, et al, 2014, p. 576).

DEIT is interesting as a theory of macro-budgeting, but it is also very useful from the perspective of public opinion-based defense budget drivers. There is little doubt in the literature that war and disruptive economic events can drive defense spending, but there is little agreement

about what happens in-between such extreme events. This study will provide at least a partial answer to what kind of local policy dynamics can lead to punctuated change within and between critical moments (Jones, et al, 2014, p. 577).

### E. Summary

The power of military spending to shape society is hardly a modern phenomenon. Thucydides cautioned us nearly 2500 years ago, "war is a matter not so much of arms as of money." If we accept a premise of the primacy of funding in defense politics, then we must also accept that in a modern democratic state, the support of the people is necessary to provide the revenue (taxes) and bodies (soldiers) required to procure a military force and wage war.

Whether garnered through elite cueing or popular consensus, popular support is a precursor to any significant growth in defense expenditure or extended engagement.[73] The extant literature has provided a sturdy foundation upon which to build. The next step is to determine the political dynamics that affect defense spending both during and between significant military and economic events. Based on the body of literature and my findings, it is clear that MoC are reacting to public approval ratings, both as individuals and as an institution, in ways they find situationally most beneficial.

An analysis involving every model discussed in this literature review is beyond the scope of this paper. However, variables from each of the models are be included in the statistical analysis to provide a representation of the effects each model could produce over the timespan in question. The Threat Model is represented by the presence of war; the Military Keynesian Model

[73] Gallop polling shows that military conflict tends to become less popular overtime, particularly as costs rise with little sign of progress and no perceived direct threat to the population.

by changes in inflation and GDP; the Leader Model by public approval of Congress;[74] and the Follower Model by the public's perception of the adequacy of defense spending.

The shortcoming with the existing literature on defense budgets is that it relies too heavily on over-simplified drivers, without continuing to explore the wide range of effects which, both individually and in concert with one another, act upon the dynamic process. This paper address the overlooked factor of congressional approval and re-focuses attention on the need for a more holistic and multi-discipline approach to the defense budget process. As Seneca cautioned us to, "beware the man of one book," so must we avoid the temptation to accept the seemingly obvious or overly parsimonious explanation of defense budgeting. This study offers a new branch to the literature by demonstrating that in addition to other factors such as economic health and war, congressional reaction to public approval is a powerful motivator for manipulation of the defense budget.

[74] If the Elite Model is correct, Congress will make not react to public perception of its actions, but rather make changes to defense spending based upon its own calculation of institutional benefit and need.

## III. Defense Budget Process

*"The defense budget is more than a piggy bank for folks who want to get busy beating swords into pork barrels."*

***– President H.W. Bush, in a speech to defense workers in California on 6 AUG 1992.***

The U.S. defense budget is the single largest discretionary budget and falls behind only social security as the largest program for overall government spending (see Figure III-1 below). In the scope of resources devoted and the degree of planning required, there is no comparison to be found in government. The defense budget process involves every DoD service member and civilian in some way. All DoD commands at every echelon are required to prepare and defend their own annual budget estimate (known as a Program Objective Memorandum or POM), which are carefully validated and aggregated into the total DoD budget. Over 25,000 people are primarily dedicated to the process in the Pentagon alone.

With so many moving parts and literally thousands of programs requiring precisely sequencing technical and training solutions in order to achieve interoperability with each other, the budgeting process begins years before the President's Defense Budget is proposed to Congress. Every politically motivated change introduced by Congress outside this carefully orchestrated planning cycle creates reverberations throughout DoD and the defense industry.[75]

[75] A very real hypothetical example would be a DoD weapon system program which coordinates all sensors, weapons and data links on a warship. That weapon system would have to be interoperable with hundreds of other Joint and Navy programs (able to process data and electronically communicate). A delay or change in requirements to any system which has to operate with that weapon system would change the technical requirements and timeline for integration and technology upgrade efforts. Since ships are only available for upgrades during specific windows (between deployments), such changes could lead to multiple versions of the weapon system being fielded at the same time. This would create a situation where only certain ships, airplanes, communication systems, etc. would be interoperable with the weapon system on a given ship. Neither industry nor the military could adapt to this disruption of the sequence of upgrades. In time of war, tracking each ship and version of software of each weapon system would create an impossible logistical task.

The later into the planning cycle a change is initiated, the greater the potential damage to long range strategic planning and defense weapon systems capability and continuity.

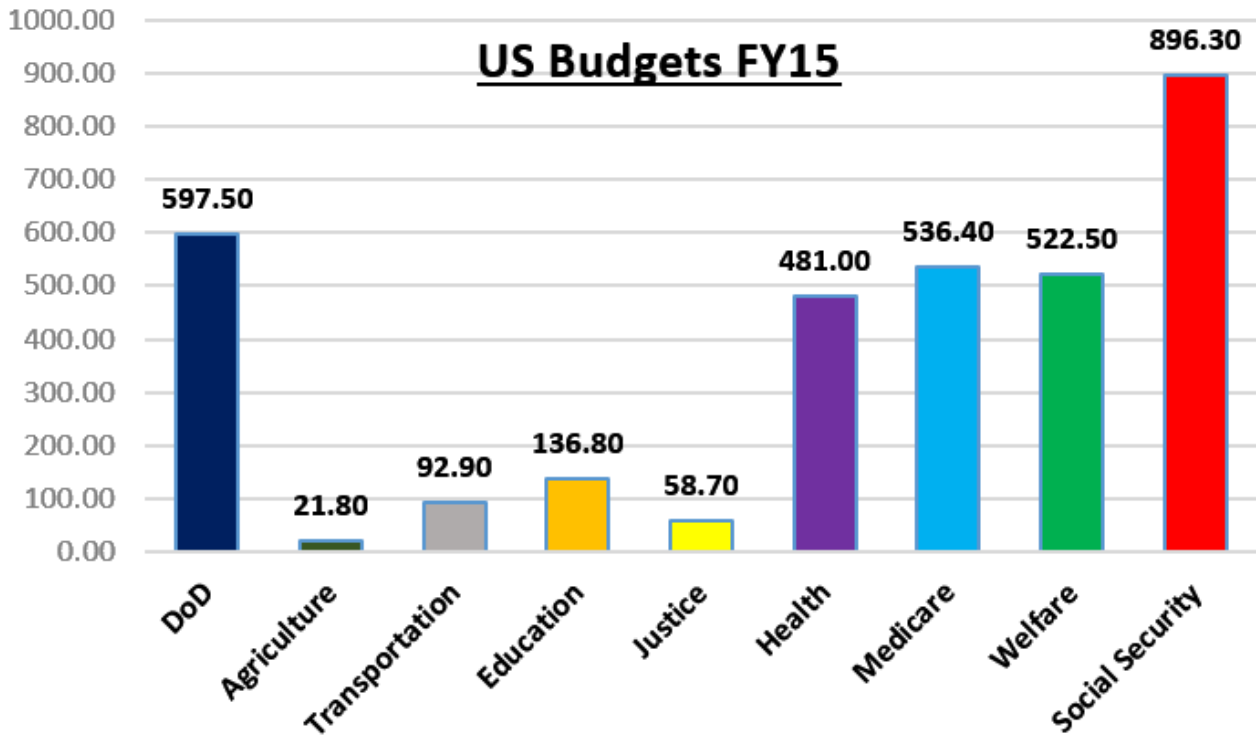


*Figure III-1:* Budget Comparison
*Source: Congressional Budget Office*

The Defense budget process is unique in the U.S. government. Although every agency has a budget process and some (such as NASA) use parts of the DoD process, there is no comparison in scale or congressional salience (see Figure III-1 above).[76] With a budget of over $600 billion and 2.1 million employees (military and civilian), DoD is effectively the largest business on earth. By comparison, it dwarfs even global giant Walmart with its $485 billion in annual sales and 1.5 million U.S. employees.[77] Figure III-2 below details just how substantial DoD is as a function of total government and the economy at large.

[76] NASA uses the Planning, Programming, Budgeting and Execution (PPBE) portion of the DoD budget system, but its budget is approximately 1/35th that of DoD and has a workforce of around 18,000 people.
[77] Based on 2015 DoD reporting and Walmart corporate public filings.

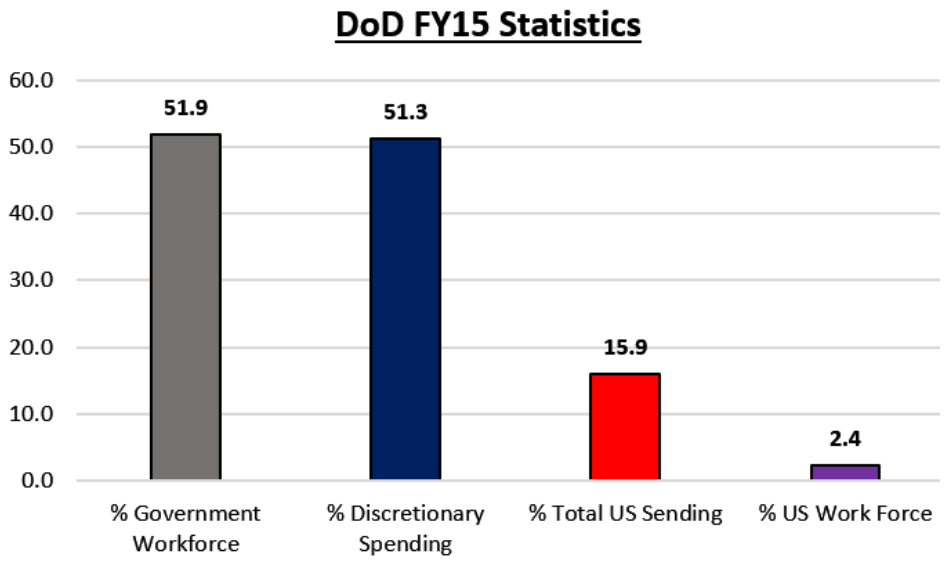


*Figure III-2*: DoD Statistics
*Source: DoD Greenbook 2017*

The defense budget is not only huge, but it is seen by Congress and the President as a "must pass" annual bill. Since 1961, the President has vetoed the defense authorization bill only five times (FY79, FY89, FY96, FY08, with the last time in FY16), and no president has vetoed the defense appropriations bill since 1970. Although appropriations were late 34 out of the last 45 years, defense has been funded in some form or fashion every year, prompting some in government and industry to refer to the defense budget as a "Christmas Tree" appropriation, since everyone is guaranteed to get something (Jones, Candreva and DeVore, 2012).

In order to grasp the implications of the use of the defense budget by MoC as a lever to affect public approval, it is necessary to appreciate the complexity of the process. My understanding of the defense processes is aided by substantial anecdotal experience. For three years I served as a Requirements Officer (RO) for the Chief of Naval Operations (CNO), assigned to the Deputy Chief of Naval Operations (OPNAV) Resources, Requirements and Assessments (N-8). As an RO, I was responsible for the linkage between OPNAV, Naval Fleet

Commands, Joint Combatant Commands, Systems Commands, and the Secretary of the Navy (SECNAV). I was expected to determine the Navy and Joint position on programs within my portfolio,[78] and to identify how those programs (or associated weapons systems) met Joint Capabilities Integration Development System (JCIDS) requirements. I was also responsible for establishing the individual program requirements that would be utilized by the Acquisition Management System to procure systems or modifications to those systems.

In addition to my role as an RO, I was also assigned as the Resource Sponsor (RS) for the same portfolio of programs. This meant that I coordinated the Navy (and Joint) acquisition plan for the programs under my charge, and I was responsible for obtaining (and defending) annual funding for those programs in the Planning, Programming, and Budgeting and Execution (PPBE) process. This required me to champion my programs both within the Pentagon and in testimony to congressional budget and defense committees. These experiences allowed me to be active in every phase of the defense budget process and granted me an insider's view of the defense budgeting process, and at least a participant's perspective of the congressional budget process.

### A. DoD Budget Process

The DoD Budget process is composed of three parts: The Joint Capabilities Integration Development System (JCIDS), the Acquisition Management System, and the Planning, Programming, Budgeting; and Execution (PPBE) System. JCIDS supports the Chairman of the Joint Chiefs of Staff in determining and prioritizing military training, manpower and equipment requirements.[79] The Acquisition Management System develops and procures the requirements

[78] I was responsible for a $5 billion portfolio of aviation and command and control systems.
[79] JCIDS is a Chairman of the Joint Chiefs of Staff process to identify, assess, and prioritize joint military capability needs. It is a collaborative effort that uses joint concepts and integrated architectures to identify prioritized capability gaps and integrated doctrine, organization, training, materiel, leadership and education, personnel, and facilities

identified by JCIDS and funded by PPBE.[80] The PPBE is the internal process by which DoD allocates resources to requirements produced by JCIDS in order to support the Acquisition Management System in procuring the necessary capabilities to support the President's Defense Budget (PB) (see Figure III-3 below).

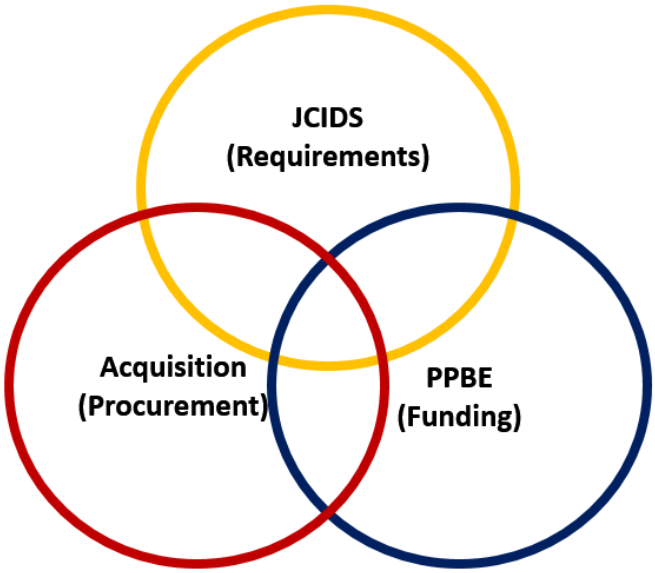


*Figure III-3: Components of the Defense Budget Process*
*Source: Defense Acquisition University*

Although a rudimentary understanding of the linkage between requirements, acquisition and budgeting is necessary to grasp the complexity of the defense budget, for the purpose of this dissertation I will deal primarily with the PPBE process. My focus is on the U.S. defense budgetary process, and the PPBE is the core of that process and one unique to DoD. The other components of the defense budget process will only be discussed as they impact the PPBE.

(DOTMLPF) solutions (materiel and non-materiel) to resolve those gaps (Source: CJCSI 6212.01F- Interoperability and Supportability of Information Technology and National Security Systems, 21 March 20012).
[80] Governed by the Department of Defense Instruction (DoDI) 5000.02.

The end result of the defense budget process is a construct known as the Future Years Defense Program (FYDP). The FYDP is a computerized database that captures both past, current and future (projected) defense expenditures. It prioritizes defense planning around the last budget year, the current year (year executing now), the next budget year (being currently planned and approved) and the following four years known as "out-years."

Twice during the PPBE cycle the FYDP is updated. The first point is when the Combatant Commanders (COCOMS) and services (Navy, Army, Marine Corps and Air Force) submit their Program Objective Memorandum (POM), usually at the end of July. The cost and capability specifications in the POM are reflected in the update to the FYDP. The second time the FYDP is updated is in January (typically), the month prior to the submission of the President's Budget (PB) to Congress. The President's Budget is a final version of the Pentagon's estimate of need for the next fiscal year.

The FYDP is closely held within DoD and is not released to any outside agency without Secretary of Defense (SECDEF) permission. However, the National Defense Authorization Act for Fiscal Year 1987 (10 U.S.C. 2216), required DoD to provide congressional oversight committees and the Congressional Budget Office (CBO)[81] with a modified version of the FYDP within 120 days of the submission of the PB.[82] This means that congressional committees and the CBO have visibility into DoD programming plans beyond the fiscal year under consideration, and they can and do often question these decisions. For example, a common term in the Pentagon is the "swizzle." This means in effect to take funds from a program in the upcoming execution

[81] Congressional Budget Office (CBO) supports the Budget Committees, the Appropriations Committees, and the Revenue Committees with fiscal and economic analyses to enable them to establish national priorities and to make informed decisions about budget policy. The CBO serves the legislative branch in much the same way as the executive branch's Office of Management and Budget (OMB).

[82] This was enacted by Congress as a way to track cost inflation of defense programs (Report GAO/NSIAD-88-79).

year and add them back to the program in an out-year. The advantage is that it appears that a program is being fully funded, although delayed, when in effect the program has been defunded. Since out-years are only estimates of future funding, no contracts can be obligated and industry cannot (realistically) count on those funds. The ripple effect to industry is that people are pulled off of the "swizzled" program, and restart costs are added to any future attempt to continue the effort. These new costs are not included in POM or FYDP estimates, since they are unknown. This is a concern to MoC who represent industries effected by such decisions. Visibility into the FYDP planning, allows "swizzles" to be identified early and challenged by committee, usually by threatened puts or takes in a future budget.[83]

The PPBE process is a calendar-driven process; however, since many appropriations cover multiple years and decisions overlap with calendar (1 Jan – 31 Dec) and fiscal (1 OCT – 30 Sep) years, the process can be very confusing. Figure III-4 below shows that at any given time the Pentagon is conducting planning, programming, budgeting or execution on three or four budget cycles simultaneously.

[83] Puts are moneys added to a program that were not requested. Takes are funds removed from funding requests.

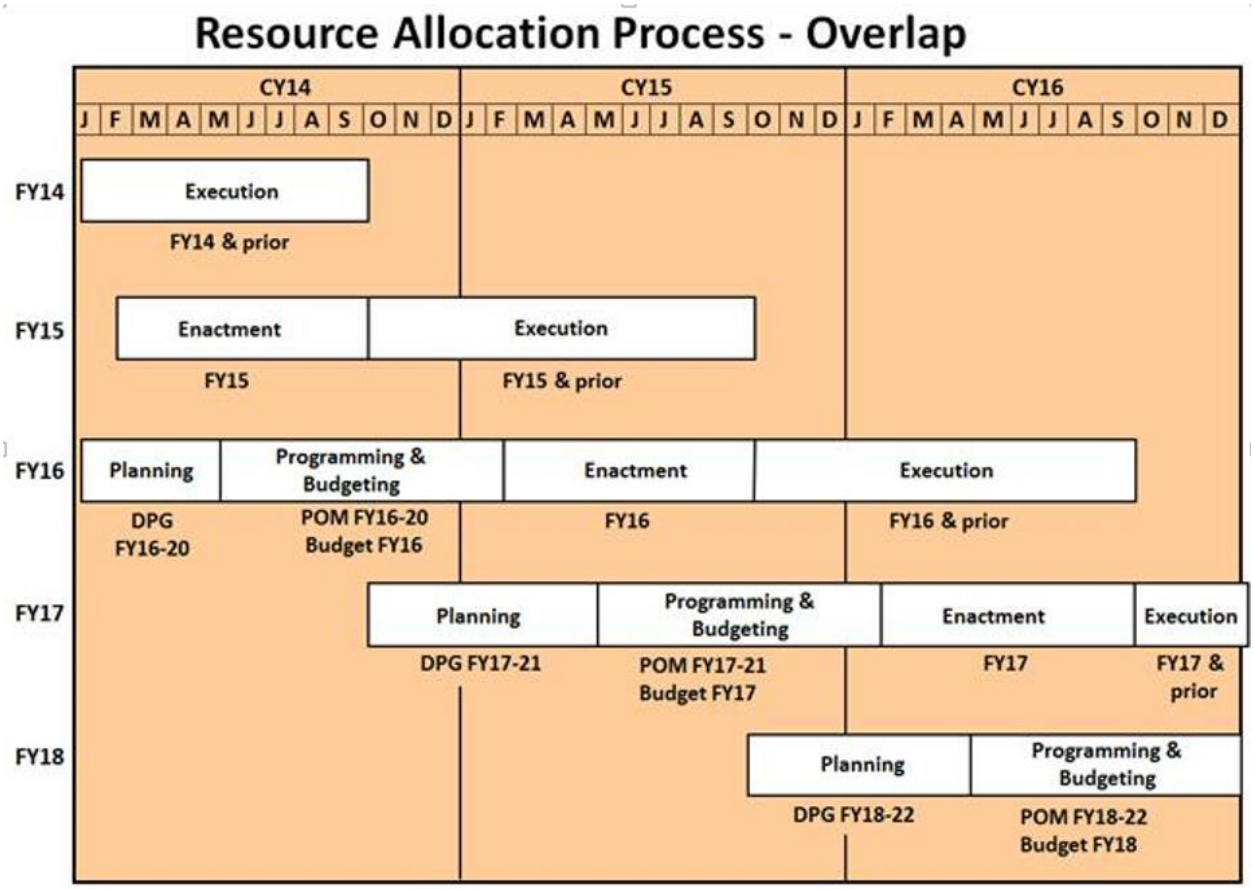


*Figure III-4: DoD Budget Timeline*
*Source: Defense* Acquisition University

The PPBE was derived from a budgeting system introduced into DoD by Secretary of Defense Robert McNamara in the early 1960s. The goal was to provide a decision making tool that could react to current military and economic challenges while projecting realistic cost estimates well out into the future. The process today is divided into four stages: Planning, Programming, Budgeting and Execution. Figure III-5 below shows how these stages fit together.

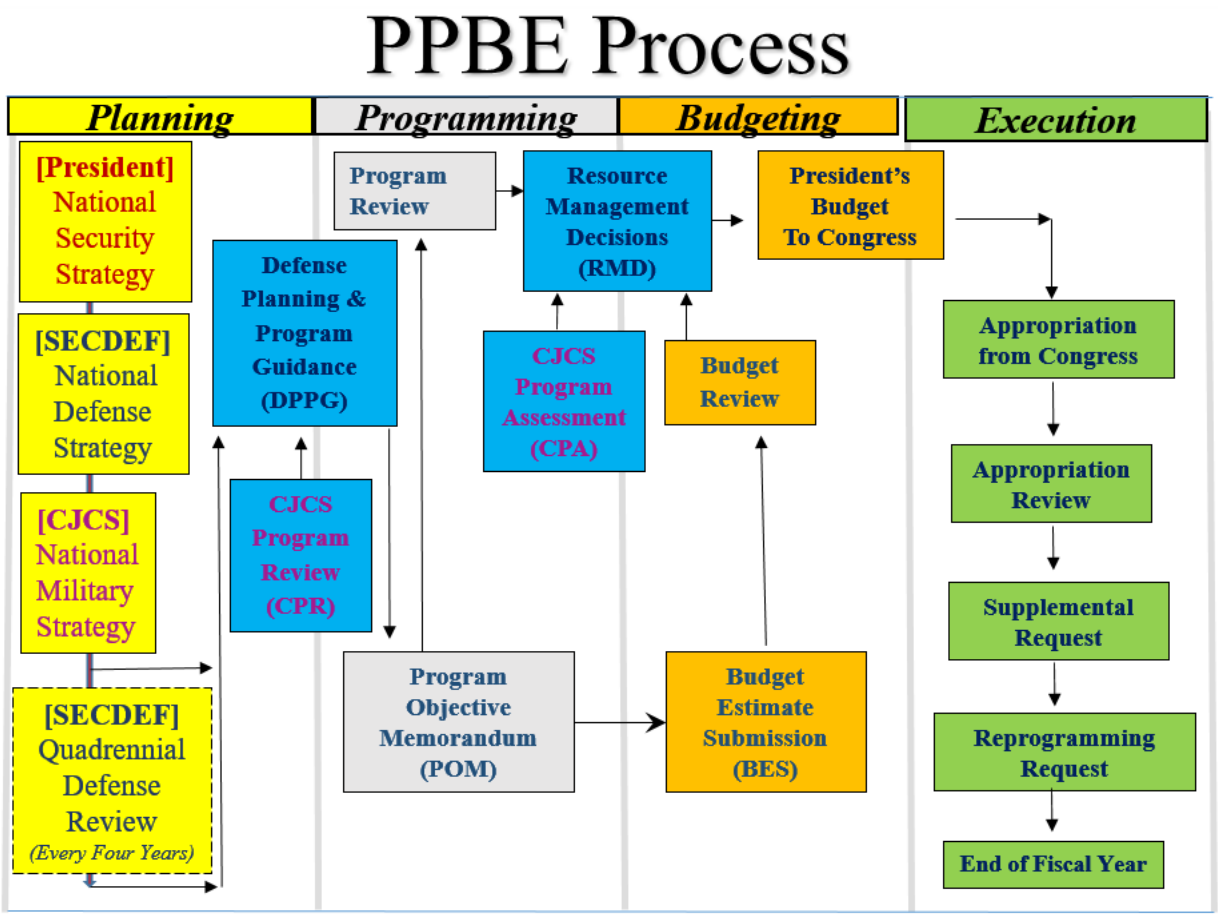


*Figure III-5: DoD PPBE Process*
*Source:* acqnotes.com

The PPBE begins with the Planning Phase. Planning starts at least three years prior to the fiscal year that funding will begin (i.e., Planning for POM 15 began in FY 12) and ends with the publishing of the Defense Planning and Programming Guidance (DPPG) by SECDEF. The DDPG requires a review of all previous guidance[84] and constitutes the DoD's long term view of the capabilities needed in response to the anticipated threat environment and establishes fiscal controls and program actions for each service and defense agency.[85] The Chairman of the Joint

[84] The DDPG is also sometimes referred to as the Defense Planning Guide (DPG) or the Joint Planning Guide (JPG).
[85] This review is composed of a set of high level strategic documents which includes: The National Security Strategy (NSS); the National Defense Strategy; the Quadrennial Defense Review (QDR); and the National Military Strategy. The NSS is an annual document from the President which establishes the high level priorities of U.S. security strategy. The NDS is produced every four years by the Secretary of Defense (SECDEF) and amplifies what is in the

Chiefs of Staff (CJCS) provides input into the DDPG through the Chairman's Program Recommendation (CPR). The CPR is the output of the JCIDS process and identifies the joint service priorities for readiness, doctrine, training and capabilities.[86] The planning phase establishes DoD priorities for funding current programs and establishing new programs of record.

The next phase of the PPBE is the Programming Phase, and it allocates resources in accordance with the DDPG. Previous programming decisions, SECDEF and congressional guidance are considered in a systematic review of programs and required capabilities. The intent is to "cost out" resource allocation options required for the next five years and give the President and SECDEF an idea of the tradeoffs and long term implications of funding one program or capability option over another.

In late July or early August, each military component and service submits a Program Objective Memorandum (POM) to SECDEF. The POM is the statement from each service of precisely what each believe they need in terms of training, technology, equipment and manning for the next fiscal year to satisfy the DDPG. The POM is a detailed document covering a five-year period, the next fiscal year and the four years following.

To support the component and service POM, all lower echelon commands are required to compile their own POMs which are then compiled to create the aggregate component or service POM. This process starts roughly 10 months prior to the July/August due date for the component

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NSS in conjunction with the results of the QDR. The QDR is an end to end review of current DoD strategy and attempts to predict threats 20 years into the future. It is produced every four years (out of sequence with the NDS) and is produced by SECDEF. Lastly, the NMS is produced every two years (or as needed) by CJCS and amplifies what is stated in each of the previous documents. These documents are distilled into the Defense Planning Guidance (also known as the Joint Planning Guidance), which is released by SECDEF each year to start the planning process.

[86] CJCS Instruction 3100.01, and CJCSI 8501.01 addresses participation by the CJCS, the COCOMs, and the Joint Staff in the DoD PPBE process.

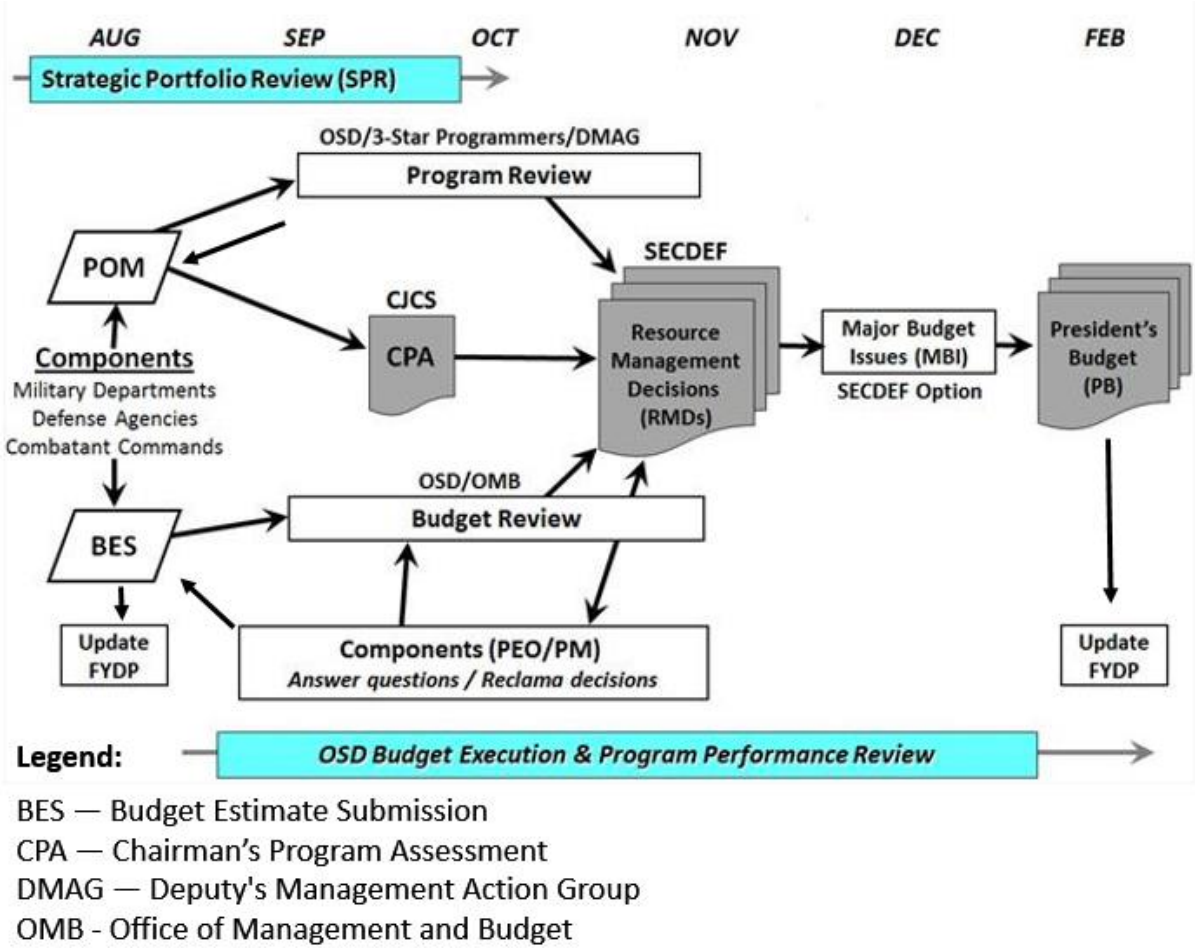
and service POM, and there are multiple programming ripples up and down the echelon command structure with each change or iteration at the component or service POM level. Guidance is usually published by component or service one year prior to POM due date. In other words, the entire process starts approximately four years prior to POM due date (five years out from year of execution).

After submission of the combined POM, CJCS conducts a review to assess how the component commands and services have conformed to the priorities and resource constraints addressed in the DPPG. The results of this review are provided to SECDEF as the Chairman's Program Assessment (CPA) in September or October. Following the CPA, SECDEF conducts an internal review during which the services and components are allowed a series of reclama (opportunity to challenge CPA conclusions) events. The final outcome is the issuance of one or more Resource Management Decisions (RMDs) in October or November, which summarize final SECDEF programing decisions. The services and components respond by adjusting their POMs in accordance to the RMDs.

The next phase of the PPBE is the Budgeting Phase, although in practice the Budgeting and Programming phases occur concurrently. Following the submission of service and component POMs, SECDEF and the President's Office of Management and Budget (OMB) conduct a joint review of the POM.[87] DoD is unique in its relationship with the President's Office of Budget and Management (OMB). Every other federal agency is required to send OMB

[87] This review is concerned with four primary areas: Program pricing -that the budget was prepared on the basis of "most likely cost" of the work to be done and that the proper escalation index has been applied to the constant-year budget estimate to determine the then-year funding requirement; Program phasing - have Procurement funds been phased properly to coincide with program plans for contract awards; Funding policies - examines the compliance of the budget request with the proper funding policy for each appropriation category being requested;
Budget execution – the efficiency with which the organization has executed (i.e., obligated and expended) currently available funds, and the effect of current year execution on budget year submissions (Acquisition University, 2017).

the final draft of their budget for review and revision and in all cases OMB has the final word on the budget submitted to the President. In the defense budget, OMB representatives physically come to the Pentagon and review drafts of the budget along with SECDEF staff as it progresses through the PPBE process. The final product is an iteration that both SECDEF and OMB agree upon before submission to the President. In most cases SECDEF has the final say on the version sent to the President. The output of this review process is the defense portion of the President's Budget (PB). The completion of the PB ends the Budgeting Phase of PPBE and begin the Congressional Enactment process.




BES — Budget Estimate Submission
CPA — Chairman's Program Assessment
DMAG — Deputy's Management Action Group
OMB - Office of Management and Budget

*Figure III-6: PPBE Program and Budget Review*
*Source: Defense Acquisition University*

Figure III-6 above illustrates the complex PPBE process. From a PET perspective, each box contains multiple friction points. Lines of input and communication move in back and forth throughout the process. With so many concurrent and overlapping sub-processes interacting, the end product is a non-linear and recursive process which bends back upon itself every time there is push back at any of the many decision points.[88] Negative pressure builds up quickly in the PPBE and the default strategy is to maintain the status quo or attempt incremental change. However, this is not what tends to happen.

Incrementalism is alive and well in the adage that no program every truly dies in the Pentagon, it is merely "rebranded" with a new name and sponsor (and usually less money). However, the perpetual reinvention of old programs does not explain the punctuated growth in defense budgets.[89] This is largely accounted for by the addition of new start programs every year, and the exponential growth in the costs of Major Acquisition Programs (MAPs). In 2015 MAPs had accumulated $469 billion in cost growth. These are all large programs with influential defense, political, and industry sponsors (several were in my portfolio), and they are essentially immune from significant threat of cancelation.[90] Unfortunately, a closer examination of how these programs operate is beyond the scope of this paper, but it is important to recognize that the

[88] No fight is ever truly won or lost. There is always a reclama or appeal and this contributes to significant delays and institutional exhaustion in pursuing any major system decision. The short duration of military tours of duty (normally three years of less) contributes to this, as military officers often leave before any major decision can be completed and the relief starts over without the benefit of institutional knowledge.

[89] Although it certainly adds pressure to the system to maintain legacy programs, often long after they have outlived their tactical usefulness. Many items are procured each year for which there are no requirements, but which ensure a particular factory or assembly line remains open. This extends far beyond measures necessary to secure the industrial base, as has been identified repeatedly in the National Infrastructure Protection Plan.

[90] GAO-16-329SP report March 2016.

mechanisms of cost growth and the deathless life cycle of most programs makes them very attractive as a source of economic manna for states, districts and industry.[91]

The defense budget is not created in a vacuum within the Pentagon; Congress provides "fiscal guidance" early and often during the process through informal channels with DoD leadership. This usually relates to bottom line spending totals, and not program spending specifics, but it does explain why the PB and Congress's defense authorization and appropriation bills are usually very close in total dollar spent.[92] The far more important difference lies in how money is moved from one program of interest to another. We will discuss this more in the following section on the congressional defense budget process.

Looking back on the process, it is difficult to imagine how anything is accomplished. However, what is missing from the above diagram are the external pressures. Even at this stage, industry and Congress are informally involved. OMB provides pressure for the President's interests, congressional inquiries occur daily and visits from defense industry consultants and CEO's are frequent. I spent a great deal of my time responding to and meeting with all of the above, and I was not a major decision maker. In other words, the system is permeated with influence at all levels. These influences constitute a surprisingly[93] regulated political pneumatic system that provides, as required, the positive pressure to push new programs and the negative pressure to preserve obsolete programs. This often leads to coalitions of governmental and industrial forces that are far easier to create than to control (Borch and Wallace, 2010). The

[91] Even after development and production runs, most major programs maintain healthy sustainment, upgrade and attrition costs. These programs also continually require local contract support and permanent DoD personnel commitments to train, maintain and deploy them at locations in various states and districts.
[92] Of course DoD is aware of the major program interests of MoC from the previous year's briefings to Congress.
[93] Considering the scope and scale of the system and the numerous internal and external factions promoting or opposing every decision.

motivations and mechanics of this influence into the defense budget process will be discussed in more detail below.

### B. Appropriation Categories

The single most important factor in defense spending utility is not necessarily the total amount available, but rather the category of appropriation. There are five main categories of defense appropriation, and each has characteristics that make it more or less useful to a particular industry or state/local government. Not all MoC are benefited equally by defense spending, or even the same category of appropriation. It depends largely upon the makeup of their constituency and the local economy (Stein and Bickers, 1994).

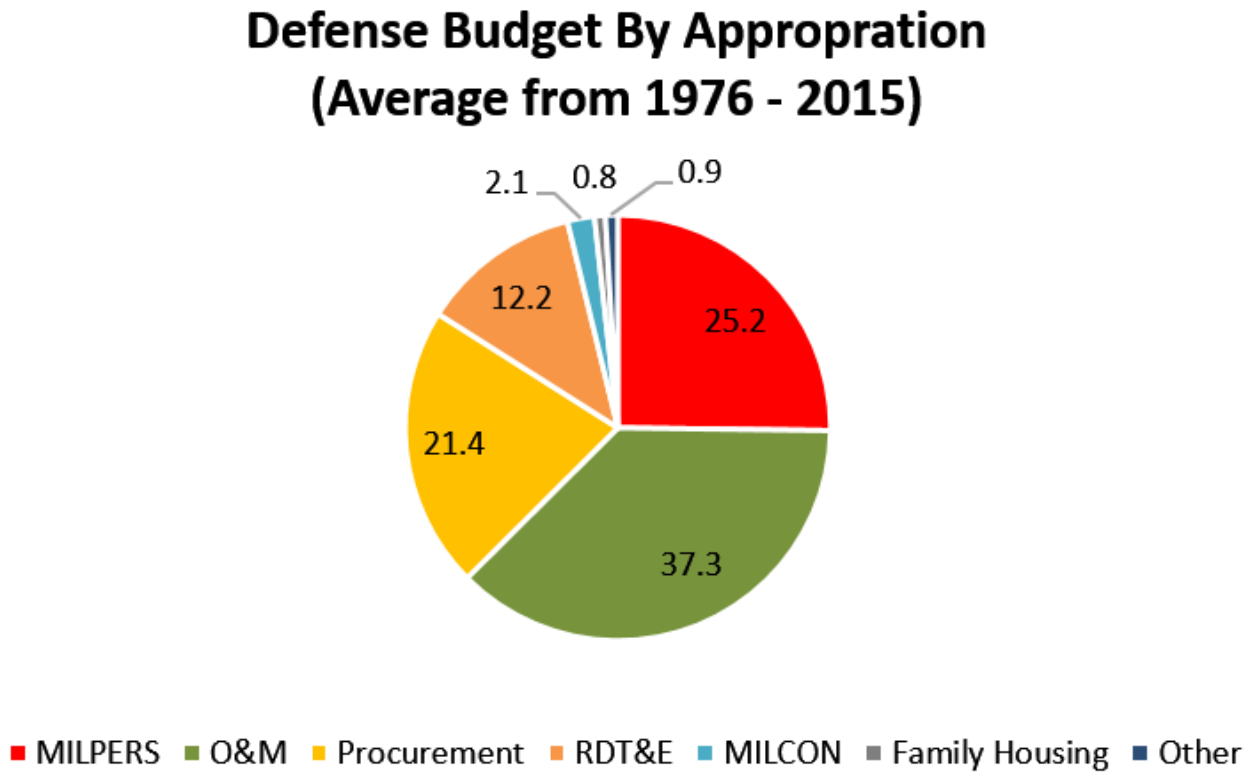



*Figure III-7: Appropriation Categories*
*Source: DoD Greenbook 2017*

The five defense appropriation categories are referred to in the Pentagon as the "color of money," and include: Military Personnel (MILPERS); Operation and Maintenance (O&M); Research, Development, Testing and Evaluation (RDT&E); Procurement; and Military Construction (MILCON). Over the last 30 years the largest slice of the pie (see Figure III-7 above) has been O&M, followed in descending order by MILPERS, Procurement, RDT&E, and MILCON. Each of these has a different burn rate (how much of the funds are obligated per year) and a different availability (the number of years available in which to obligate the funds). This is relevant, as the color of money determines what funds makes the biggest impact, the soonest, and for whom (Jones, Candreva and DeVore, p. 83, 2012). We will discuss each type in more detail below along with how they affect potential end users.

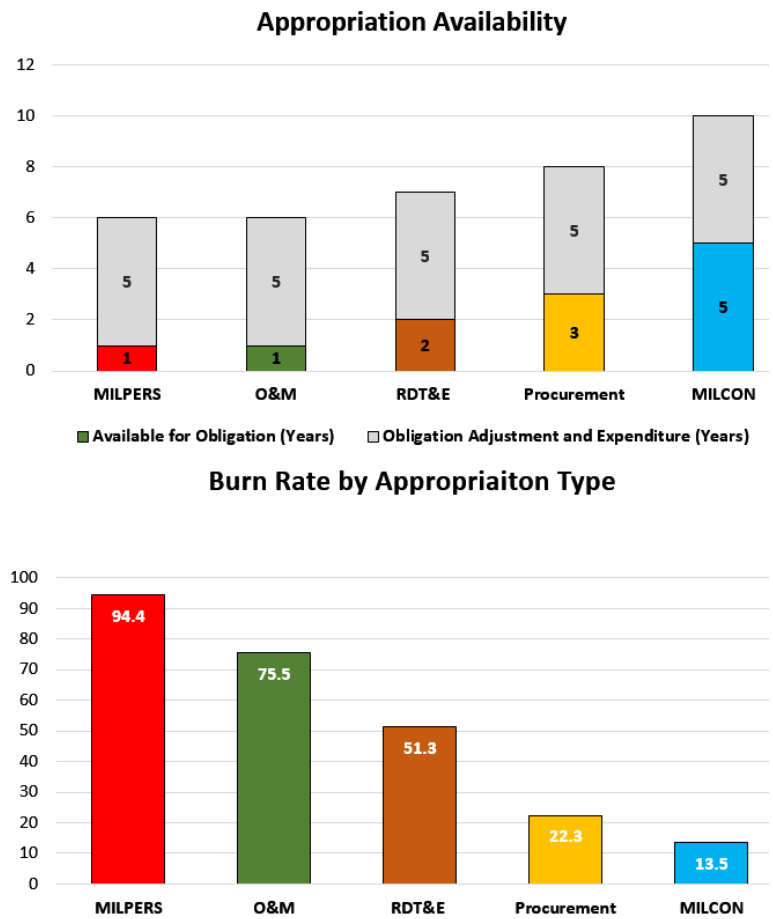



*Figure III-8: Availability and Burn Rate of Appropriations*
*Source: DoD Greenbook 2017*

Military Personnel (MILPERS) has a significant impact on state and local economies as it can add significantly to the payroll and tax base of an area. It is the second largest annual military appropriation and is used to pay the cost of salaries and other compensation for active and retired military personnel and reserve forces based on end strength.[94] MILPERS directly benefits areas that host large bases and cities where large populations of military retirees live.

There is a multiplier effect in MILPERS for state and local economies. Not only does DoD pay salaries and pensions to service members and retirees, which in most cases can be

[94] Defense Acquisition University definition. The actual funding of military retirement is complex, but for our purposes it can be effectively assumed to be part of MILPERS.

taxed, but the income of dependent family members who accompany the service member is also taxable.[95] Additionally, property and sales taxes from DoD populations contribute to state coffers as well as to local business profits. With very few DoD schools in the continental United States, DoD also pays a set amount per student to local school districts to supplement property taxes that would have been collected if the service member's family did not live in base housing.[96] All of this makes DoD members and retirees with their guaranteed income fiscally attractive to states and localities.[97]

The effect of MILPERS is amplified in that it is available solely in the year of appropriation, so it must be expended quickly. This leads to a burn rate of nearly 95% (see Figure III-8 above) per year. The only exceptions are bonuses, which are appropriated, but not always claimed for various reasons or funds revoked as disciplinary fines. Unlike most other appropriations, the state and local government sees the full value of the appropriation (taxes and retail) immediately. This allows MILPERS to provide a quick boost to state and local economies where service members are stationed or retirees live (Jones, Candreva and DeVore, 2012).

The characteristics of MILPERS that make it appealing for boosting economic interests also make it desirable as a tool for reducing DoD expenditures. When DoD needs to make quick cuts to its budget, a reduction in MILPERS is a preferred method. By law DoD is allowed considerable leeway in reducing personnel numbers without congressional approval, and with the availability and burn rates so short and high, the funds not appropriated to MILPERS are

[95] DoD member are allowed to maintain a home of record when they move from duty station to duty station, but this typically does not apply to spouses who work in the state where their service member is stationed. Although some states do not require service members to pay state income tax, this is the exception and not the rule.
[96] DoD base housing has been privatized, but it is currently still exempt from property tax for service members.
[97] Military members have guaranteed employment for the term of their enlistment or commissioned service unless discharged for disciplinary reasons.

recouped immediately.[98] There are also no contract concerns, as with every other appropriation category. As an example, when I was a student at the Navy War College, the CNO at the time (ADM Vern Clark) informed us that for every 10,000 sailors he eliminated we could reprogram $1.3 billion dollars toward procurement.[99] The drawback to this course of action is that personnel take time to train, and only on paper can you reconstitute the military force quickly by simply recruiting in a given year.[100] Despite this, he was aggressive in pursuing his approach to recapitalizing the Navy, and during his tenure he cut over 33,000 sailors from the active force.[101]

The next category of appropriation is Operations and Maintenance (O&M). O&M funds everyday expenses such as civilian salaries, military health care, travel, minor construction projects, operating military forces, training and education, depot maintenance, stock funds, and base operations support.[102] It is the largest annual category of military appropriation and provides all day-to-day consumables from pens and paper to furniture and fuel. Its biggest economic impact is the payroll of DoD civilians, healthcare expenses and the large and small contracts with local businesses and venders that support military bases and DoD facilities.

Similar to MILPERS, O&M has a one-year availability although a significantly lower burn rate of around 75% per year (see Figure III-8 above). The burn rate for the civilian payroll component is essentially the same as with MILPERS; however, the lower overall burn rate results from the variability in contract execution for consumables. These do not always result in

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[98] The NDAA sets an authorized max number, not a minimum.
[99] This is technically not reprogramming in the budgetary sense (which is subject to congressional constraints), but for practical purposes, the money previously devoted to MILPERS would be requested in the POM adjustment as Procurement.
[100] Time to train depends upon the skill set required. In the case of pilots, basic proficiency is obtained in around two years, but tactical proficiency takes on average six years. With the increase in high technology weapon system the time to train is trending toward increases in every military rating and operational specialty.
[101] 2017 DoD Green Book reference tables on Navy end strength.
[102] Defense Acquisition University definition.

outlays in the year of appropriation. In practice, the actual outlay of funds can come later, as long as the money is obligated within the appropriation year.[103]

These characteristics lead to similar budget pressures on O&M as seen with MILPERS. O&M provides significant benefits to state and local governments as well as small business in areas near major bases or DoD civilian facilities. It is also typically the first appropriation category to be raided when fiscal pressures are great, due to its relatively low visibility with the general public and Congress. This renders the appropriation and the services it procures particularly inconsistent.

O&M funds a mixed bag of services. Roughly 44% of costs in the O&M budget relate to health care, civilian compensation and fuel purchases.[104] These have reasonable salience with MoC and the public, but the other 56% of O&M costs are harder to quantify and mostly invisible to all but those who rely directly upon the services they purchase. Training, equipment maintenance and travel and consumables constitute the majority of the remainder, but are far less obvious to those outside of DoD. Reductions in training days, flight hours, deferred maintenance, limiting office heating and cooling systems, and reducing administrative consumables (i.e., furniture, paper, ink, and pens) are all common practices to reduce O&M costs; however, lack of training leads to accidents and low readiness, while only so much maintenance can be safely deferred until the systems cease to function.

The diversity of O&M makes it somewhat easier to affect in the short term than MILPERS. However, even though it is the largest overall annual defense appropriation, the fact

[103] One way to think of the various measures of defense spending is as follows: Budget Authority is what you put in the bank this year. TOA is this year's money plus any leftover in your account from before. Obligations are you writing a check, outlays are when the check is cashed and the bank transfers your money (Jones, Candreva and DeVore, 2012).
[104] CBO Trends in Spending by the Department of Defense for Operation and Maintenance, Jan 2017.

that over half of it is tied up in contracts and DoD civilian end strength, which cannot be adjusted as easily as that of the active duty force, renders it less politically palatable for long term or large scale reductions in military spending. By providing nearly $100 billion to the private sector each year, O&M is a significant economic provider for states and local economies.[105] This makes it a valuable resource to be cultivated particularly by MoC whose districts contain large military bases or civilian DoD facilities.

Perhaps the best known appropriation category is Procurement. It funds those acquisition programs that have been approved for production and all costs necessary to deliver a fully operational item intended for operational use or inventory.[106] All major defense programs are funded by procurement dollars, making it easily the most visible of the acquisition categories even though it only constitutes the third largest share of funds. Nonetheless, when we think of the defense industry, we are generally thinking of procurement.

Procurement is vital to state economies in that defense industries and their subcontractors operate in every state and nearly every congressional district in the country. However, procurement dollars are tricky. Due to the complexity and length of time required to produce most major weapon systems they are available for three years after appropriation and have a burn rate of only slightly more than 22% per year (see Figure III-8 above). Consequently, the defense industry has a rather unpredictable revenue stream, and state and local government taxing those revenues do not garner the full benefit in the year of appropriation. All of this leads to a rather complicated relationship between defense industries and DoD.

Since procurement contracts have the largest cost growth rate and delivery schedules are typically prone to slippage without penalty to industry, the defense industry is in effect

[105] CBO Trends in Spending by the Department of Defense for Operation and Maintenance, Jan 2017.
[106] Defense Acquisition University definition.

incentivized to over-promise and under-deliver. As major programs rarely die, and almost inevitably increase in cost over time, there is no mechanism to prevent industry from continuing to market the next system or upgrade, even before delivering functional versions of the systems for which they have already contracted.

Procurement contracts are of primary interest to MoC whose states or districts have large defense industries. With the size of contracts available, there is intense political pressure to seek new procurement contracts and to accommodate discrepancy in those that already exist. This pressure often becomes quite personal. For example, I was once replaced on a contract incentive review board, for refusing to authorize a large performance bonus award to a contractor who was months behind schedule and over budget. The rational for my removal was that by refusing the bonus I would get "Bob" fired, and he was a good ex-military guy who had a wife and kids to feed. I was also informed by the staff of a MoC who was a senior member of the HASC that if I ever had any issues with getting a particular program additional funds to call the congressman directly.[107] Such instances are neither rare nor unusual in an appropriation as politically charged as procurement.

Research, Development, Test and Evaluation (RDT&E) funds the efforts performed by contractors and government activities required for the research, development test and evaluation of equipment, material, computer application software.[108] RDT&E has a two-year availability and a burn rate of approximately 51% per year. It provides primary economic benefits to both industry and civilian academic institutions, as well as funding internal DoD research facilities.

RDT&E is important to the state and districts that contain civilian or military research facilities, and for the multi-use R&D that is provided to industry as a byproduct of development

[107] Pseudonyms have been used for the names of individuals in these examples.
[108] Defense Acquisition University definition.

and production contract. Since industry is typically allowed to retain the intellectual property rights to technology discovered in the process of executing its DoD contract, there are often spill-over benefits that provide downstream profits to the company.[109] These factors make RDT&E a useful appropriation, and one in which many congressional research priorities, such as medical and agricultural research, are embedded each year.

Military Construction (MILCON) is the last category of appropriation we will discuss. It funds major projects such as bases, schools, missile storage facilities, maintenance facilities, medical/dental clinics, libraries, and military family housing.[110] MILCON has the longest availability and smallest burn rate at five-year and 13%, respectively. This is due to the long lead time required on construction projects and the relative unpredictability of environmental factors involved in defense construction.[111] MILCON is a valuable economic resource for states and districts with large military bases and DoD facilities, as it provides local construction employment, potential for larger military populations, protection against future base closure, and often land use revenues.[112]

MoC are well aware of the variations in utility provided by the various appropriation categories. Separate from any discussion of the macro-effects of defense spending (Military Keynesian approach from the literature review) to the national economy, there are definite micro-effects taking place on state and district level economies. These impacts influence the relationship of MoC with their electorate and, therefore, the personal level of interest and activity in defense budget process.

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[109] For instance, the technology used for commercial flat screen televisions was paid for as part of a DoD program.
[110] Defense Acquisition University definition.
[111] These range from traditional construction issues such as weather and foundational adequacy of soil, to DoD specific problems such as 100% U.S. citizen requirement for construction works (with some form of security clearance), and lengthy administrative processes for environmental impact studies and hazmat abatement protocols.
[112] DoD often rents or purchases land from local government for construction projects.

### C. Congressional Budget Process

There is no need to rehash in minute detail how the overall congressional budget works. It has been dissected and described many times by scholars from Madison to Mayhew and Schattschneider to Schickler. This paper does not seek to uncover new insights into the institutional or party structure of Congress as a whole, but rather to highlight the motivation of MoC to manipulate the defense budget in times of falling electoral approval. As such, I will refrain from describing congressional processes or procedures except where they are particularly relevant to the congressional defense budget process.

That said, it would be foolish to conclude that Congress' handling of the defense budget is not unique. In terms of scale, extensibility and salience there is no comparison. As Figure III-1 showed at the start of this chapter, a simple comparison of FY15 budgets highlights the sheer magnitude of U.S. defense spending. With so much capital at stake, it is no wonder that many entities both within and outside of Congress compete in the congressional budget process for a share.

Aaron Wildavsky was one of the first authors to note that defense spending is different. In particular, he noted its growing dominance of the discretionary budget (Wildavsky, 1964, 1975 and 1986). This phenomenon has been driven by the rapid increase of mandatory spending and the consequential diminishing of discretionary spending as a portion of overall federal spending. Figure III-9 below illustrates that as the total budget has grown (surpassing collected revenue in all but a few years), both discretionary and mandatory budgets have increased in dollar amount. However, as a share of the total budget discretionary spending has decreased by over 30% since 1970. This mismatch has resulted in a continually decreasing portion of the

federal budget available for congressional authorization and appropriation each year.[113] With diminishing resources available, defense spending has assumed an even greater proportional importance to congressional authorizers and appropriators.

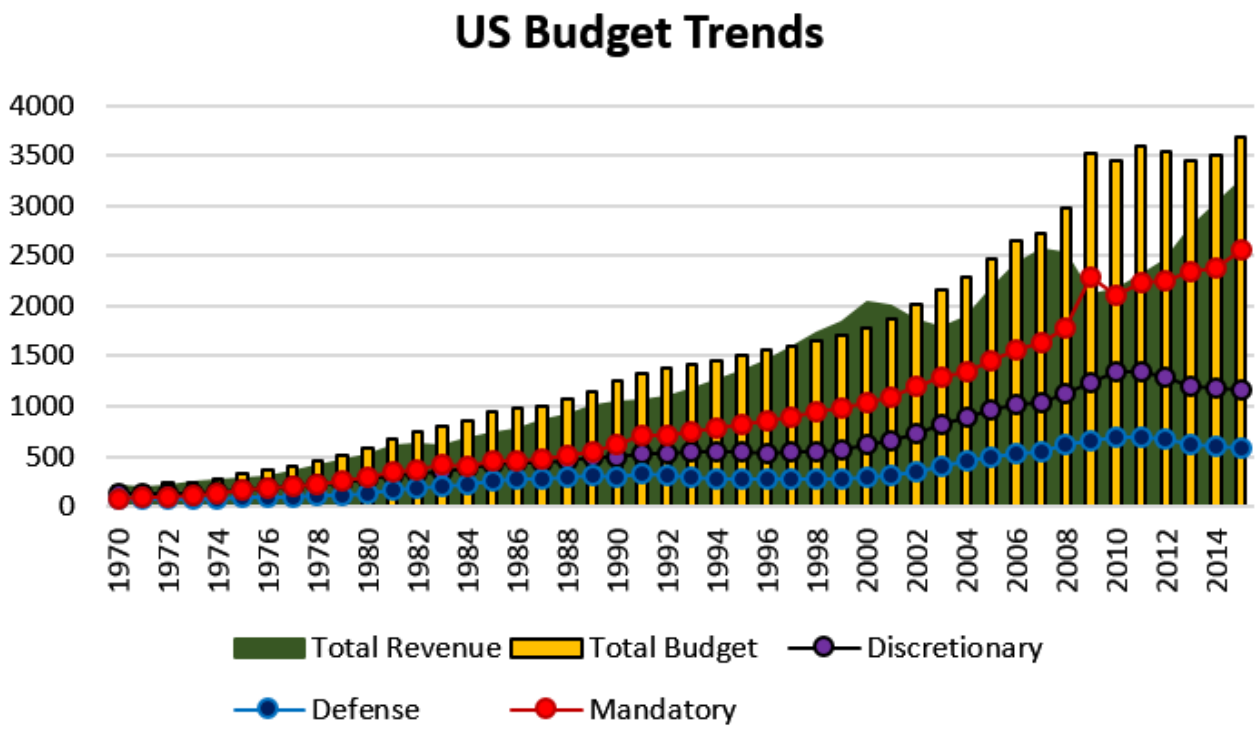


*Figure III-9: U.S. Budget Trends*
*Source: Congressional Budget Office*

As a function of the exponential growth in mandatory budgets over the last 40 years, discretionary spending has been continually squeezed. This has left MoC competing for appropriation priorities in a smaller and smaller piece of the budgetary pie. Since much of the budget is frozen in entitlements, Defense is one of the few pots of money available where a MoC can seek to get money to fund local projects (Jones, Candreva and DeVore, 2012).

[113] Mandatory programs do not need to be authorized or appropriated each year. They are enacted by statutory law and funded (in most cases) by trust funds established by law.

Although defense spending has fluctuated as a percentage over this span, since 1970 it has accounted for an average of 54% of all discretionary spending, making it by far the single largest appropriation in the federal budget.[114] Figure III-10 below tracks changes in the defense share of the discretionary budget from the Vietnam War drawdown, through the Reagan defense buildup in the early 1980s, the Cold War demobilization, the Global War on Terror and the introduction of the Budget Control Act of 2011 (budget caps enacted in 2013). What is apparent in this chart is that even in times of relative peace, defense spending retains the lion's share of the available budget. This is not lost on MoC, as evidenced by the composition of defense budget committees.

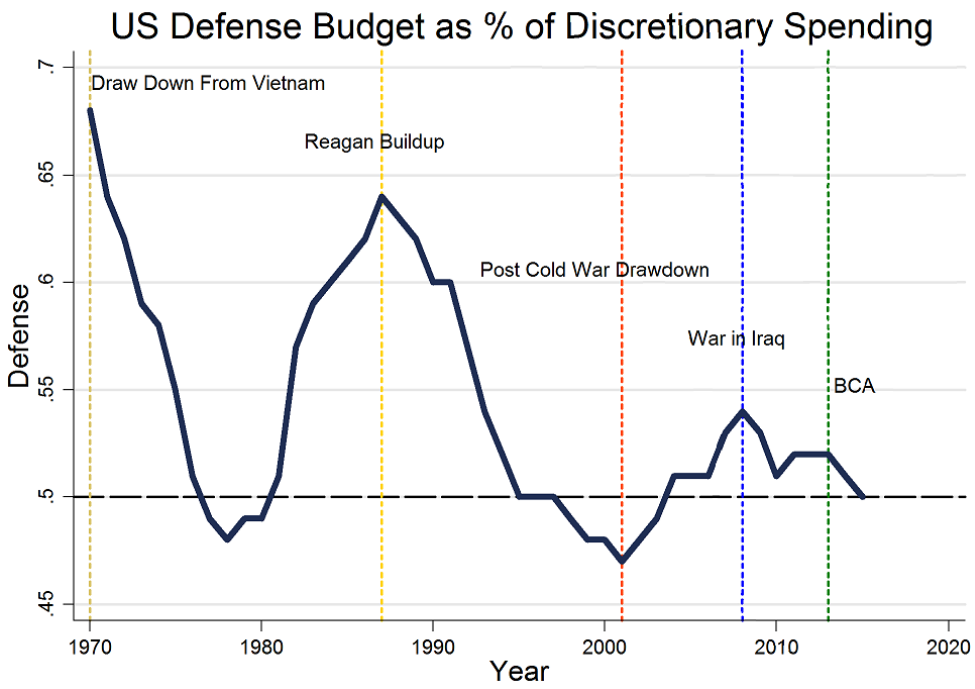


*Figure III-10: Discretionary Spending*
*Source: Congressional Budget Office*

[114] Of the 12 appropriation bills provided in the federal budget each year, defense is the largest. This does not include mandatory spending which does not require appropriation. The 12 appropriations bills are: Agriculture, Rural Development, Food & Drug Administration & Related Agencies; Commerce, Justice, Science & Related Agencies; Energy & Water Development; Defense; Homeland Security; Labor, Health & Human Services, Education & Related Agencies; State, Foreign Operations & Related Agencies; Military Construction, Veterans Affairs & Related Agencies; Interior, Environment & related Agencies; Transportation, Housing & Urban Development, & Related Agencies; Financial Services & General Government; Legislative Branch.

The Congressional Budget and Impoundment Control Act of 1974 (and its amendments) largely establishes the timeline and process for the U.S. Budget in Congress (see Figure III-11 below) and produces three outputs. The first is the Concurrent Budget Resolution (CBR),[115] which establishes a mutually agreed upon ceiling on spending for the budget.[116] The second is the National Defense Authorization Act (NDAA), which reauthorizes established programs, authorizes new start programs, delineates quantities of weapon systems, and sets troop end-strength limits for the services. Its primary role is to designate what programs are to be funded and set the cost ceilings for those programs.[117] The third output is the Defense Appropriations Act. This determines how much money is actually allotted to programs and sets conditions for its use. Only the Defense Appropriations Act is required by the U.S. Constitution, but all discretionary programs require authorization by law before funds can be appropriated.[118] Although these logically seem to flow in order, in practice they are not required to do so. The budget can continue with or without the CBR, and appropriations can lead authorizations, so long as they balance in the final bills.

Figure III-11 below describes the congressional budget process flow as intended. The President's budget (PB), in our case the defense budget, is due to Congress the first Monday in

[115] Concurrent Budget Resolution Major Functional Categories 050 - National Defense 150 - International Affairs 250 - General Science, Space, and Technology 270 - Energy 300 - Natural Resources and Environment 350 - Agriculture 370 - Commerce and Housing Credit 400 - Transportation 450 - Community and Regional Development 500 - Education, Training, Employment and Social Services 550 - Health 570 - Medicare 600 - Income Security 650 - Social Security 700 - Veterans Benefits and Services 750 - Administration of Justice 800 - General Government 900 - Net Interest 920 - Allowances 950 - Undistributed Offsetting Receipts 970 - Overseas Contingency Operation (OCO) and Related Activities

[116] Violations of the CBR in the budget process may be challenged by raising a point of order. In that case, 60% of the membership must vote to pass the measure.

[117] Originated in 1946 as a means of providing assistance to the Appropriations Committees in considering the increasingly complex defense budget request.

[118] Technically, all programs require authorization, but mandatory programs are considered to be permanently authorized and do not require re-authorization in the annual budget.

February. It is immediately taken up concurrently by the House and Senate Budget Committees (HBC and SBC), Armed Service Committees (HASC and SASC), and Appropriations Defense Subcommittees (HAC-D and SAC-D). By 1 April, the HBC and SBC should report their concurrent budget resolution to the floor of their respective chambers. By 15 April the Concurrent Budget Resolution should move from conference (to resolve any discrepancies between chambers) to the floor of each chamber for a vote and the HASC and SASC begin markup of the PB. By 15 May, HAC-D and SAC-D start markup, even if the Concurrent Budget Resolution has not been passed. From this point on, the HASC and SASC should lead the HAC-D and SAC-D process, with communication of significant actions passed back and forth between committees. By mid to late June, the HASC, SASC, HAC-D and SAC-D report final appropriations bills to their respective chambers, and by mid-July to early August both bills should have cleared conference. By mid-September the House and Senate should complete action on the annual authorization and appropriations bills. Prior to 1 October, the President should sign both the Defense Authorization and Appropriation bills.

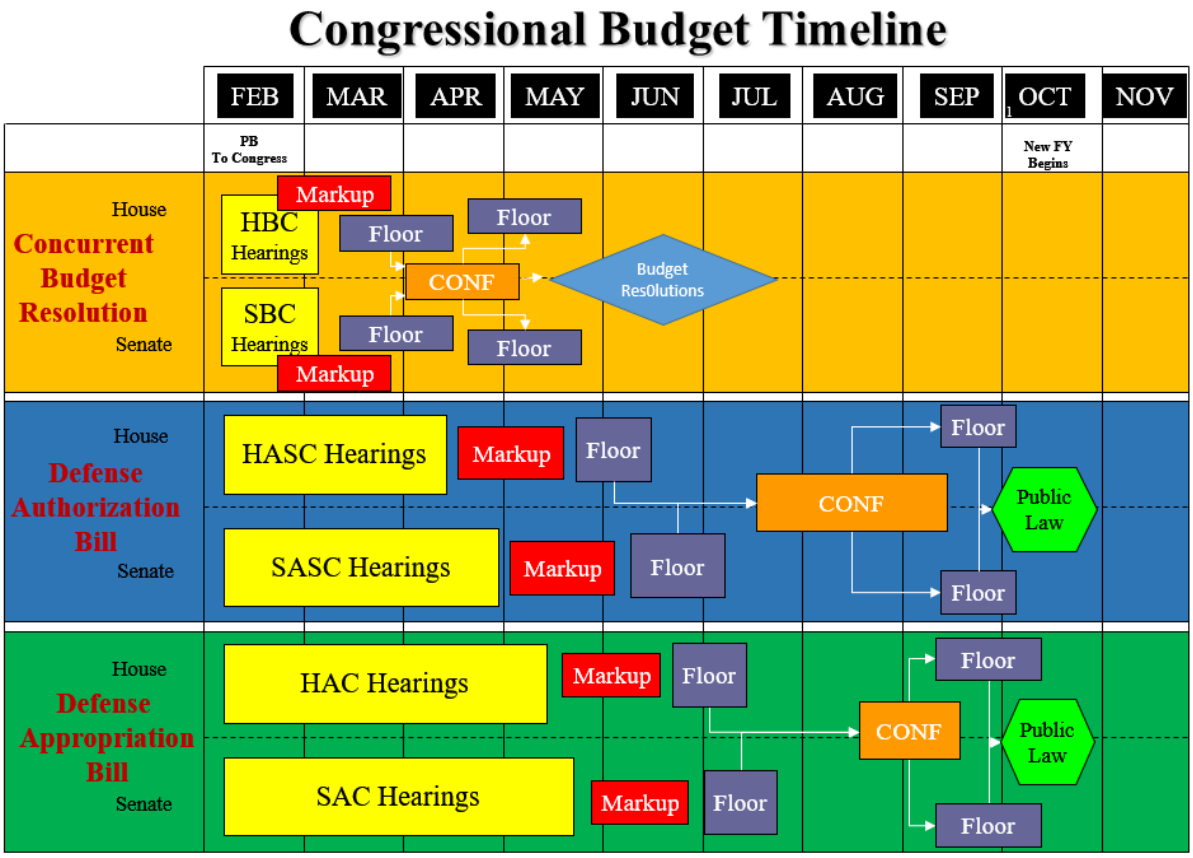


*Figure III-11: Congressional Budget Process*
*Source:* OPNAV Briefing Slide[119]

The entire sequence described above is of course the ideal, and seldom – if ever – occurs as designed. In reality, the defense budget moves by fits and starts through the year and is more often than not delivered late.[120] The process is never smooth, but whether late or temporarily funded through concurrent resolution (CR),[121] the defense budget receives its money.

[119] This slide was taken from one of my OPNAV briefing slides. It is UNCLASS and for information only.
[120] 34 out of the last 45 years.
[121] Concurrent resolution funds a budget typically at the level of either its last approved budget or the lowest congressional mark of that budget. However, exceptions written into the concurrent resolution to increase or decrease funding for specific programs.

### D. Congressional Committees

The congressional defense budget process is facilitated by the Defense Committees. Some scholars have claimed that with the changes in the power of committee chairs in the 1960s, defense has gone from being an insider's to an outsider's game (Lindsay, 1987; Wildavsky, 1988; Jones and Bixler, 1992). While it is true that in the 1950s only six committees oversaw the defense budget, whereas today some 28 committees and subcommittees have some measure of input to the process (Jones, Candreva and DeVore, 2012),[122] prior to 1959, most authorizations were permanent and did not require annual reauthorization. Over time, additional defense program categories were added until nearly every program required annual reauthorization (Tyszkiewicz, 1998). The defense budget has always attracted both internal and external stakeholders, but as the rules have changed and the share of defense has grown in respect to other available budgets, new opportunities have appeared for additional committees and interests to seek a voice in the process. Despite these changes, the HASC and HAC-D in the House and the SASC and SAC-D in the Senate have remained the most influential committees in the defense budget process. Other committees have situational input to the defense budget, but the HASC/SASC and HAC-D/SAC-D have the final word before the defense bills reach the floor for a vote.

The HASC[123] and SASC[124] are the authorization committees created in 1946 to guide the appropriations committees (Stephens, 1971).[125] The HAC-D and SAC-D are the appropriations

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[122] The full appropriations committees and five subcommittees. The budget committees and the committees on Armed Services, Commerce, Energy, Government Affairs, Select Intelligence, Small business and Veterans Affairs.
[123] HASC Subcommittees: Emerging Threats and Capabilities; Military Personnel; Oversight and Investigations; Readiness; Seapower and Projection Forces; Strategic Forces; and Tactical Air and Land Forces.
[124] SASC Subcommittees: Subcommittee on Air-Land; Subcommittee on Cybersecurity; Subcommittee on Emerging Threats and Capabilities; Subcommittee on Personnel; Subcommittee on Readiness and Management Support; Subcommittee on Seapower; and Subcommittee on Strategic Forces.
[125] Established by the Congressional Reorganization Act, ch. 753, 60 Stat. 812.

sub-committees responsible for matching funding to the programs and force structure provided by the authorization committees. In conjunction (and often in competition) with each other, these four committees construct the congressional defense budget that goes to the floor of both chambers for amendment and final approval.

The number of MoC on each committee changes with House and Senate rules; however, membership is typically larger on full committees and on House committees in general. Members request assignment to a committee and are either approved or rejected by their party leadership. The chairman and the largest number of committee members are from the majority party, although the ratio used can change with the rules of each new Congress.

Although committee distributive theory studies show mixed results that members will self-select to committees which align with constituent needs (Frisch and Kelly, 2004), most scholars agree that membership on defense committees is both in response to electorate interest and a way to attract special interest funding (Carsey and Rundquist, 1999). Typically, membership represent districts with predominately large military populations or defense industry interests (Ray, 1981). By comparing Figures III-12 and III-13 below you can see that the allocation of seats to defense committees corresponds well to each state's share of defense spending.[126]

[126] Figures III-12 and III-13 display the 114th Congress, but the comparison holds for most congresses. Membership from the 91st through the 114th were spot checked.

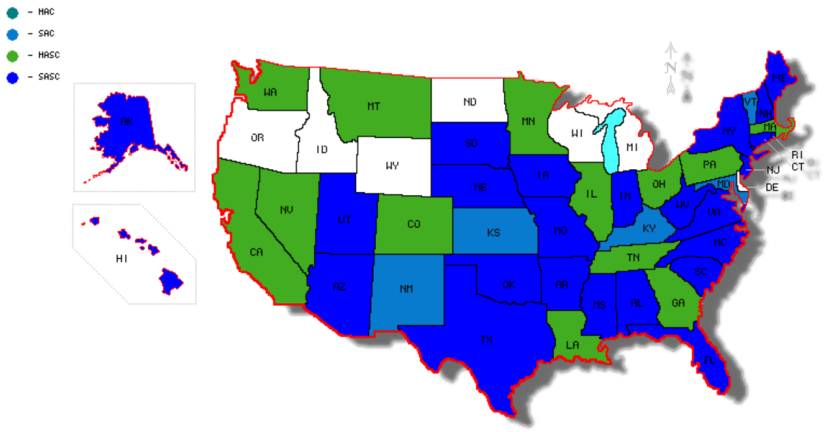
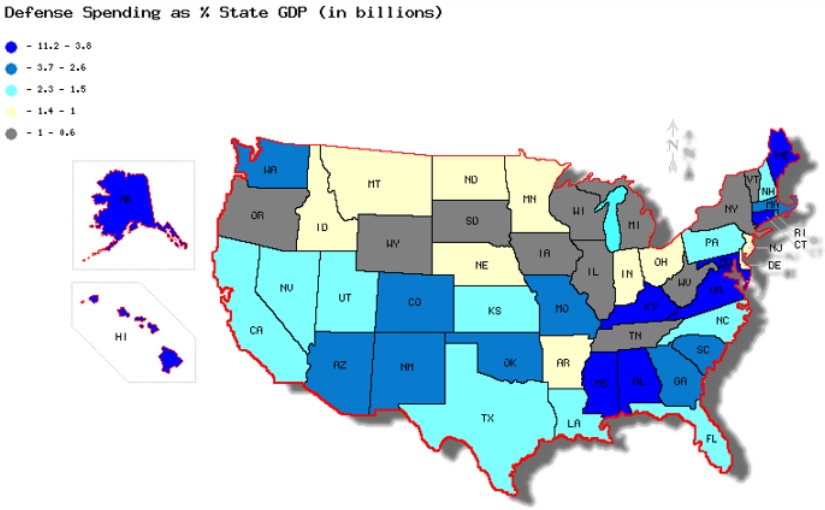



*Figure III-12: Defense Committee Seats*
*Source: Congressional Record*



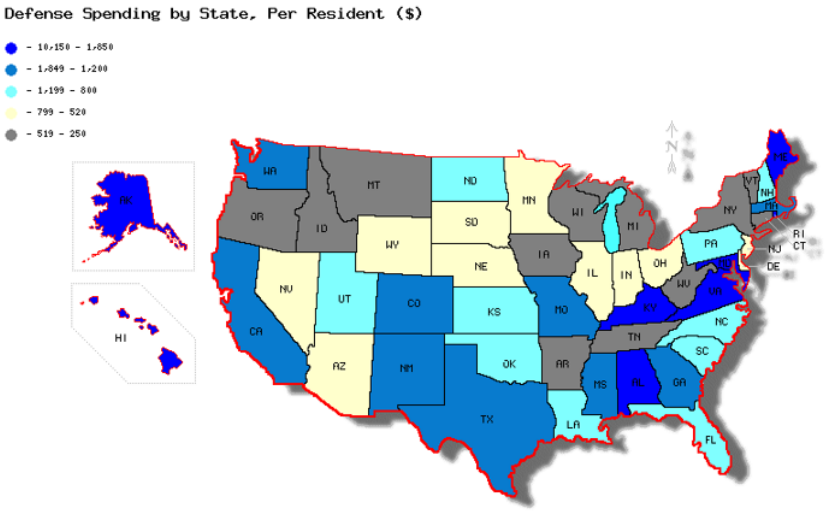




*Figure III-13: Defense Spending by State*
*Source: U.S. Department of Defense Office of Economic Adjustment*

The defense committees are supported by personal and professional staffs. The personal staffs work directly for the MoC and support the member in all their activities. Professional staffs are employed by the committee itself and are usually experts on some aspect of the committee's work. Professional staffers provide continuity as committee members come and go over time, and they can act as political entrepreneurs in their own right. DoD staff often maintain dossiers on prominent and long-serving professional staffers, as each tend to develop their own policy and program preferences which are often passed on to the MoC on the committees.

DoD also maintains liaison with each committee. For the HASC and SASC, the Assistant Secretary of Defense for Legislative Affairs and the Offices of Legislative Affairs for each service interface directly with the committees. For the HAC-D and SAC-D this is accomplished through the Undersecretary of Defense Comptroller and the senior Financial Management Officer (FMO) for each service. For both sets of committees DoD utilizes dedicated liaison officers to track all committee actions, coordinate information flow between the committees and DoD leadership and set the briefing schedule of subject matter experts to defend DoD budget submissions.[127]

In practice both sets of committees work very similarly. Political Science professor, nine-time congressman from Virginia and former member of the HASC, George William Whitehurst[128] aptly described the committee as a lesson in horse trading (Whitehurst, 1983). Members often barter increases for programs in exchange for current or future reciprocation, and

[127] These liaison officers prepared me for briefings to the HASC, SASC, HAC-D and SAC-D. They would typically provide a schedule as well as a dossier on the individuals I would be briefing and a history of their questions/issues from the past (what to say and what to avoid).
[128] George William Whitehurst served as a Virginia Congressman for the Hampton Roads area from 1968 – 1987. Prior to this he taught political science at Old Dominion University.

most House and Senate budget rules are enforced by points of order. In other words, if no one objects, then there are few limits on what can be done.

Congress often differs greatly in their defense priorities with the President's Budget (PB). Although the final congressional budget bills are usually not far off in total expenditures, where those funds are allocated within the budget can change significantly (Jones, Candreva and DeVore, 2012). The mark-up process involves a line-by-line review of the PB, with puts (added funds) or takes (subtracted funds) amplified with descriptive language of how the modification was to be implemented. This process is initiated by the committee professional staff, who conduct interviews with DoD subject matter experts to allow rebuttal. It is then elevated to the committee principals (MoC) with the professional staff's recommendation.

If the marks stand in the committee, DoD is given an opportunity to challenge. These appeals can be to dollar amounts, quantities, manpower totals or specific language introduced by the committee. Appeals can only be sent to the next committee to consider the bill, not the committee marking the budget. This means that if the HASC marked the budget, DoD's appeal would be to the SASC (or to the House and Senate conference). By agreement between DoD and Congress, appeals to authorization committee marks are only made within the authorization process. The same is true with appropriation marks.

The rules are somewhat complicated, but basically, when DoD appeals a mark, it can only appeal to the amount of the PB, or if there is more than one mark against a program, then to the mark that is closest but does not exceed the original amount specified in the PB. If multiple marks have been made that exceed the PB, then the amount appealed can only be the original amount of the PB. This system ensures that DoD cannot appeal for more than the original PB, nor more than both committees marked (if appealed in conference).

There are cases where, even after they become law, the Authorization and Appropriations Acts are in conflict on the amount provided for a particular program. In these cases, the Appropriations Act generally takes precedence. When the amount appropriated exceeds the amount authorized, DoD can legally obligate the funds; however, SECDEF will usually ask the Armed Services Committees for permission prior to applying those funds toward the program in question (Defense Acquisition University, 2017).

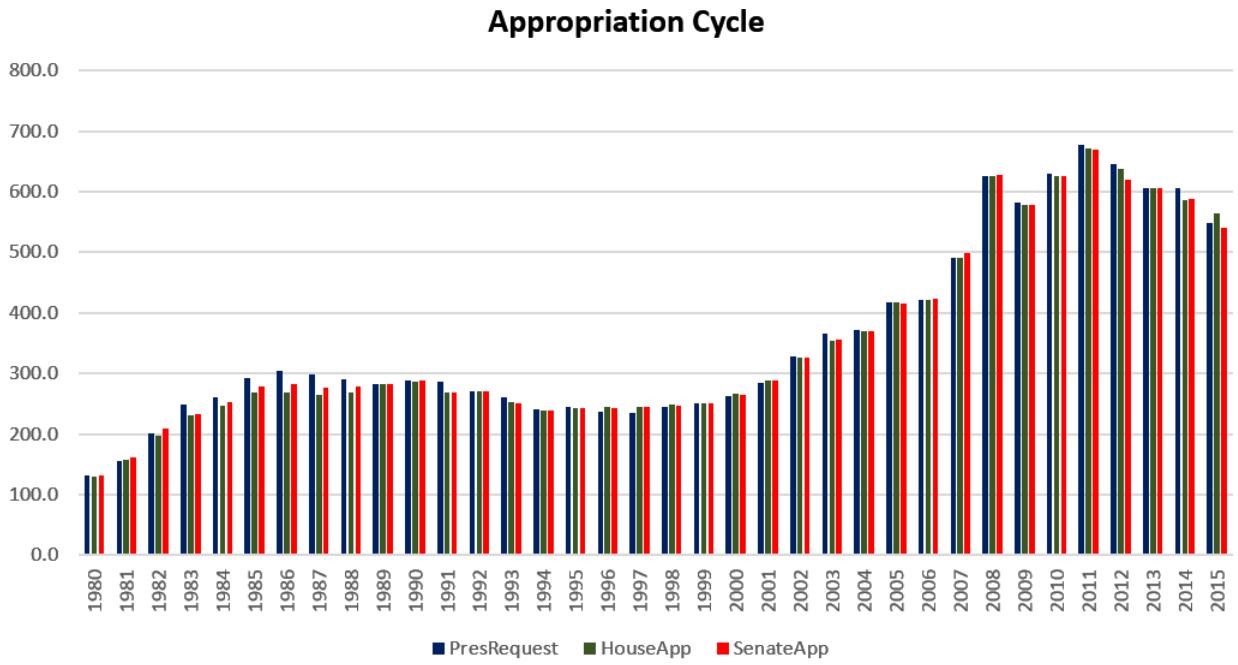



*Figure III-14: President's Budget vs. Congressional Appropriation*
*Source: Congressional Budget Office*

The end results of all this work is a final budget that appears very similar to the PB, but can be very different in allocation (see Figure III-14 above). As discussed earlier, during the defense budget process, the total amount Congress is willing to spend is communicated to DoD (and the President) in terms of fiscal guidance repeatedly during the process of generating the PB. The real fight occurs over the allocation, not the amount of defense spending.

### E. Earmarks or "Pork"

Earmarks are in effect the most tangible product of the fight over allocation of defense dollars. These are a special kind of "mark." Marks typically refer to changes made in committee to the amount allotted to a program. Earmarks refer to wholesale additions of programs, usually created by marking funds from another program. For example, the Senate version of the supplemental appropriation in 2003 to cover costs of the war in Iraq also contained funding for fisheries management in Lake Champlain, subsidies for catfish farmers, research facilities in Iowa and the South Pole, repair of a dam in Vermont, money to designate Alaskan salmon as "organic" and an increase in postage allowances (Franking) for Senators to communicate with their constituents (Jones, Candreva and DeVore, 2012, p.74). These are obviously not related to military requirements, but MoC are mindful of the political benefits of constituency services, and the defense budget is one way to meet constituent needs (Cain, Ferejohn and Fiorina, 1987). This is not to say that economic advantage to constituents is the only motivation, but it is certainly one factor in the marks made in committee (Lindsay, 1990).

There is a problem of definition to consider. Earmarks and "pork" are usually considered to be one and the same. However, that is probably unfair. The Office of Management and Budget (OMB) defines earmarks as "specified funds for projects, activities, or institutions not requested by the executive, or add-ons to requested funds which Congress directs for specific activities" (OMB, 2015). This does not necessarily imply that the earmark was unnecessary or wasteful, but rather simply not included in the President's Budget (PB).

The organization, Citizens Against Government Waste (CAGW), uses seven criteria in evaluating earmarks. To be considered "pork," it need only satisfy two. The criteria are requested by only one chamber of Congress; not specifically authorized; not competitively awarded; not

requested by the President; greatly exceeds the President's budget request or the previous year's funding; not the subject of congressional hearings; or serves only a local or special interest (2015 Pig Book). By this metric, nearly any earmark could be considered pork. Academics also have also established their own definitions. For example, earmarks are congressional appropriations that are placed in spending bills at the request of a single member, usually for the benefit of the member's particular district. (Lazarus, 2010). Whether called pork, or simply earmarks, it is clear that these changes in allocations of funding are significant and widespread in the defense budget.

The defense budget receives three times as many earmarks as any other program in the U.S. budget (OMB, 2015). The Department of Defense (DOD) Appropriations Act usually contains the most earmarks at the highest cost to taxpayers each year, and the FY 2015 bill did not break this tradition. While the number of earmarks in the bill decreased slightly, from 58 in FY 2014 to 56 in FY 2015, the cost of these earmarks skyrocketed. The $2.3 billion in FY 2015 represents a 43.8% increase from the $1.6 billion in FY 2014, and constitutes 54.8% of the $4.2 billion in earmarks contained in the 12 appropriations bills for FY 2015 (CAGW, 2015).

It has long been known that states with seats on the defense committees tend to receive more defense funds (Rundquist, Lee, and Rhee 1996; Carsey, Rundquist, and Fox 1997; Carsey and Rundquist 1998), and that defense committee members are benefitted by steering defense funds toward their districts (Gross, 1972). Studies have shown that the number of military instillations in a district is a significant driver of defense earmarks (Lazarus, 2010), as well as links between defense earmarks and campaign contributions from defense Political Action Committees (PACs) (Rocca and Gordon, 2013). In short, distributive and partisan theories of legislative organization can both be used to explain why earmarks are prevalent (Crespin and Finocchiaro, 2015).

There have been may attempts to curb earmarks, with varying levels of success. Allen Schick was probably correct when he said, "Earmarks survive periodic reform campaigns because the chief political value of serving on Appropriations is to bring home the bacon, not to guard the Treasury'' (Schick, 2000). Earmark disclosure rules have been established in both the House and Senate to require MoC to put their names to any earmark they propose; however, rather than discouraging earmarks, this often has the effect of allowing the Member to advertise just how hard they are working for their constituents (Lynch, 2015).[129]

The HAC-D and the SAC-D are the leaders in earmarks production and have proven reluctant to implement serious reforms. House and Senate attempts resulted in only a 7.1% drop in number and a 1.4% drop in value of earmarks from 2007-2010 (Doyle, 2011). In 2010, Senate Republicans voted to approve a self-imposed moratorium on all congressional earmarks for two years. Initially, the numbers plummeted but have subsequently started to creep up again. By coincidence (or not), the number of laws passed dropped significantly over the same period that earmarks declined. By 2015, earmarks had increased again to $4.2 billion but well below the high of $29 billion in 2006 (CAGW, 2015).

[129] Earmark Disclosure Rules in the House: Member and Committee Requirements Megan S. Lynch Analyst on Congress and the Legislative Process May 21, 2015 (Congressional Research Service 7-5700 www.crs.gov RS22866).

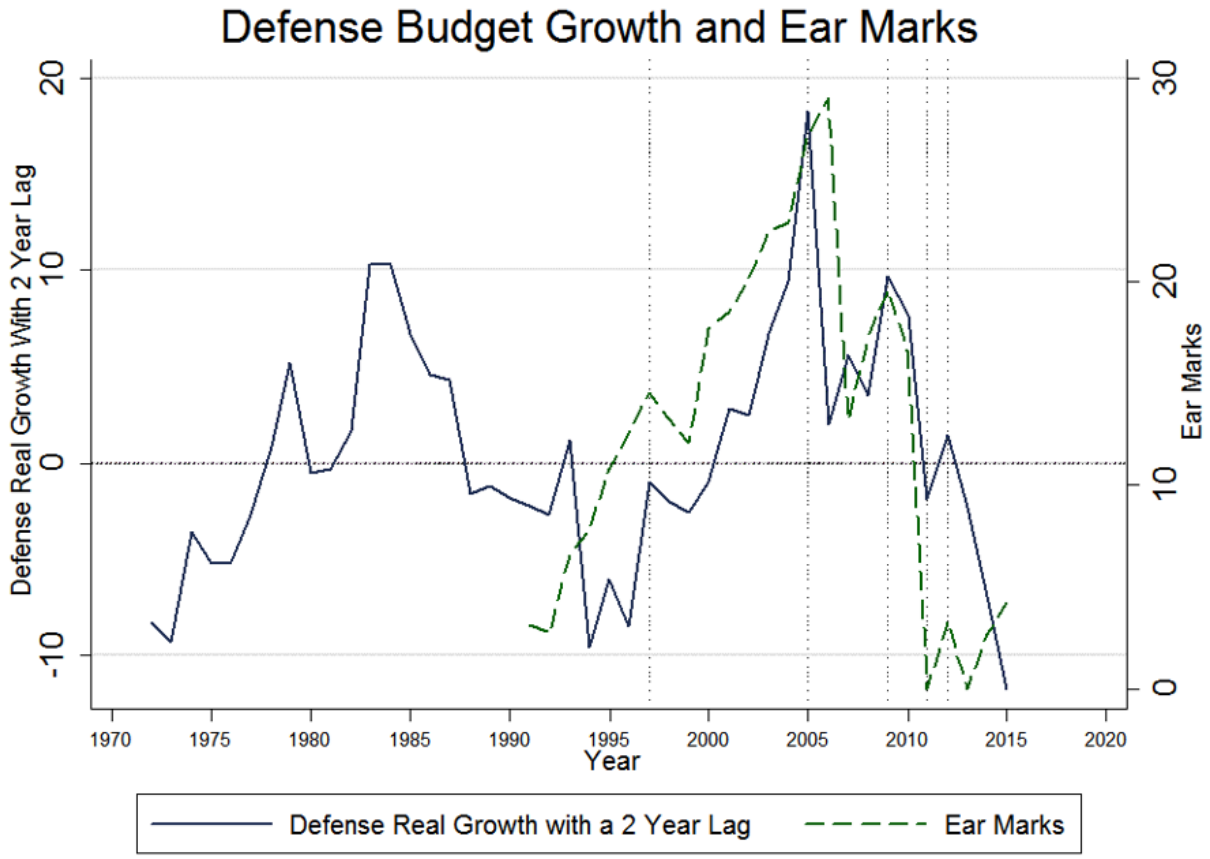



*Figure III-15: Ear Marks*
*Source: Citizens Against Government Waste*

Figure III-15 above shows that earmarks tend to follow, not lead, increases in defense spending. In other words, as greater funds are available for manipulation, opportunities for earmarks increase.[130] This is but one way of graphically depicting the opportunistic nature of MoC and defense spending. The bottom line is that pork barrel projects influence electoral results (Crespin and Finocchiaro, 2013), and MoC take this very seriously, as do the other stakeholders in the defense budget process.

[130] The other reason that earmarks lag defense spending is that most involve procurement dollars, and with its slow burn rate and long availability, it takes a few years for the earmark to transition from Budget Authority (BA) to outlay.

### F. Summary

It has been said, “There is no 9th inning in defense budgets, because as soon as any decision is made, the next budget cycle will bring that decision back into question” (Jones, Candreva and DeVore, 2012, p.87). The defense budget is a constant work in progress, eternally pushed and pulled by competing internal and external influences. MoC take advantage of this complex process and the enormous pressure to pass defense spending legislation to make changes, both to programs of record and to introduce new spending (earmarks) which benefit themselves, their backers and their constituent voters.

The importance MoC place on the defense budget is evident in both the uniquely interwoven nature of the congressional and DoD defense budget processes and in the response by the voting public to significant changes in both direct spending and the ripple effects produced in state and local economies. Take for example, the Budget Control Act of 2011 (BCA). This was seen by many as a failure to find a successful overall budget compromise between the President and partisan interests in Congress. Between 2010, when the defense budget began to shrink until the implementation of BCA caps in 2013, congressional approval dropped by 16 points. However, by 2014, as the results of the BCA were tempered by congressional agreement to raise the BCA caps, their approval steadily improved. Bi-partisan actions to prevent the precipitous decline in defense (and domestic) spending forestalled the economic and security collapse predicted to by many defense advocates. The message to MoC was clear, defense spending is important, and the mitigation of rapid decreases can be as important to economic interests and public opinion as large increases in the defense budget.

# IV. Defense Budget Stakeholders

*The main mark of modern governments is that we do not know who governs, de facto any more than de jure. We see the politician and not his backer; still less the backer of the backer; or, what is most important of all, the banker of the backer.*

**– J.R.R. Tolkien**[131]

Political and economic factors often induce higher levels of defense spending than are necessary for national security (Mintz, 1985 and 1988; Mintz and Ward, 1989). In this chapter, I examine how political and economic factors are manipulated to address the individual and collective priorities of the many stakeholders in the defense budget process. The sheer scale of the defense budget makes it very attractive to a wide variety of political and industrial interests, but I will focus on three broad groups of stakeholders and their motivations: the defense industry and its supporting lobbies and PACs; the economic interests of individual states; and MoC.

Specifically, I will examine the extensibility of the defense budget from the perspective of military spending and the impact the geographic dispersion of military bases and the defense industry has on state economies. I will investigate how interest groups, lobbies and PACs create salience for both overall increased spending and targeted programs within the budget. These activities have a direct impact upon the electoral and financial support of MoC and cannot be easily ignored by those seeking to maintain or advance their positions in Congress.

## A. Defense Industry PACs and Lobbyists

It is easy to overlook that the defense industry serves three primary purposes to the U.S. government. First, it provides the means of defense in the way of weapons and munitions necessary to prosecute (or threaten) war. Second, it serves as an arm of foreign policy providing

[131] From the Letters of J.R.R. Tolkien.

access to weapons for allies and developing nations so that they can both protect themselves and function as an interoperable part of the U.S. strategic defense community. Finally, it is a major employer and provider to the overall economic health of the individual states and the nation. All three of these are important to different interests, and a basic understanding of how they function and interact is essential to building a picture of the importance of the defense industry to MoC.

Earlier in this paper, I made a comparison of scale between DoD and Walmart, but size is not the only meaningful way in which these mammoth organizations are similar. In many respects, DoD is the world's largest retailer of security. Like Walmart, DoD operates through a symbiotic relationship with its wholesale partners, vying to obtain the best products at the lowest price possible. Squeeze the price too hard and the supplier folds, not enough and you pay too much.[132] Walmart supports literally tens of thousands of suppliers, which are contracted to provide its retail outlets with everything from toilet paper to ammunition. Any decline by Walmart is reflected in the profits of its vast supply chain. The same is true of DoD. Changes in the defense budget reverberate through the thousands of large and small businesses that support and supply its needs.

The idea of the Iron Triangle (Figure IV-1 below) has somewhat fallen from favor since scholars such as Mills and Lowi argued that congressional unresponsiveness to the will of the electorate was in part due to MoC being held hostage by the quid pro quo nature of the relationship between Congress, industry and the Pentagon (Mills, 1956; Lowi, 1969).

[132] Of course, an important difference is that there are many makers of toilet paper, not so many of tanks.

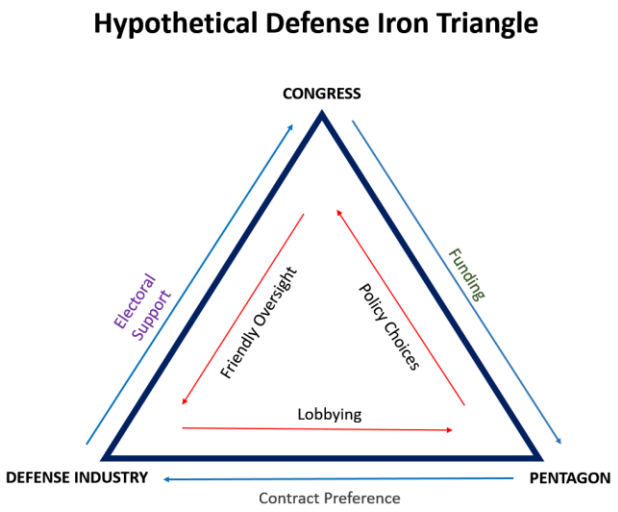



*Figure III-16: Defense Iron Triangle*

It is not my purpose to champion the power of the Iron Triangle as an explanatory concept, but rather to establish that there is a significant relationship between the defense industry, DoD and MoC.[133] As a strategic resource, the U.S. government has always maintained an active role in cultivating the indigenous defense industry. Unlike other sectors of the economy, section 2504 of Title 10, U.S. Code, requires SECDEF to submit an annual report to the HASC and SASC each year regarding technological and industrial capabilities of the national technology and industrial base. This "Annual Industrial Capabilities Report" is intended to ensure considerations for the protection and promotion of the U.S. defense industrial base are included in the annual defense submission.[134] The President, Congress and DoD expend tremendous energy on strategic messaging to the Defense Industry (and vice versa), in recognition that the fortunes of each depend, to a large extent, on the others.[135]

[133] The Iron Triangle is arguably too simple a representation of the complex nature of the relationship.
[134] Impacts of the DoD budget on the defense industrial base are required as part of the President's Budget submission to Congress and are mandated by law as part of section 2504 Title 10 of the U.S. Code.
[135] Strategic messaging in this context is the attempt to communicate intentions through statements or action taken prior to significant legislation to give the target the opportunity to prepare and adapt to coming change.

The end of the cold war in the late 1980s brought many changes to the U.S. defense industry. Defense decreases began under President Bush, but accelerated under President Clinton. More than two million defense workers, military personnel and civil servants lost their jobs, over a hundred military facilities closed and hundreds of companies left the defense industry (Gholz and Sapolsky, 2000). In 1993, William Perry, Secretary of Defense during the Clinton administration, hosted what became known as the "defense last supper."[136] Perry brought together a gathering of defense industry Chief Executive Officers (CEOs) to inform them that defense spending would soon decrease significantly and that they needed to consolidate and become more efficient in order to maintain the national defense industrial base.

DoD would go to great lengths to support and promote defense industry consolidation as part of acquisition reform (Deutch, 2001), and industry overwhelmingly responded. The result was the largest merger and buyout of defense companies in U.S. history (see Figure IV-2 below). As defense companies scrambled to consume each other, share prices surged for the survivors. In a few years, hundreds of defense companies vanished. At the top of the defense corporate food pyramid, more than seventy companies merged into five mega-companies, and competition for defense contracts evaporated. High overhead costs increased and the willingness to negotiate fixed cost contracts ebbed.

To soften the blow of consolidation, Defense Secretary Perry approved a major policy change (which was incorporated into the FY1995 National Defense Authorization Act (NDAA)) to reimburse defense contractors for various types of merger expenses called "defense restructuring costs." The expressed intent was that by reimbursing defense companies for their restructuring costs, DoD would benefit from the increased efficiencies generated in future

[136] Perry pointed out that the phrase "last supper" used to describe his meeting with executives was coined by then CEO of Martin Marietta Norm Augustine, who stood next to him at the gathering (Erwin, 2015).

defense acquisition contracts. The results would provide billions of dollars to select defense companies and their CEOs.

In testimony before the Senate Armed Services Subcommittee on Acquisition and Technology April 15, 1997, the Government Accounting Office (GAO) reported that DoD was unable to recover any actual lower prices due to the merger. One of the chief purposes of the restructuring funds was to provide aid to some 2.1 million displaced defense workers. However, while CEOs received million dollar bonuses at the government's expense, only 10% of restructuring funds were dedicated to workers. Newly formed Lockheed Martin was eventually reimbursed over $850 million. [137]

[137] GAO/NSIAD-98-156

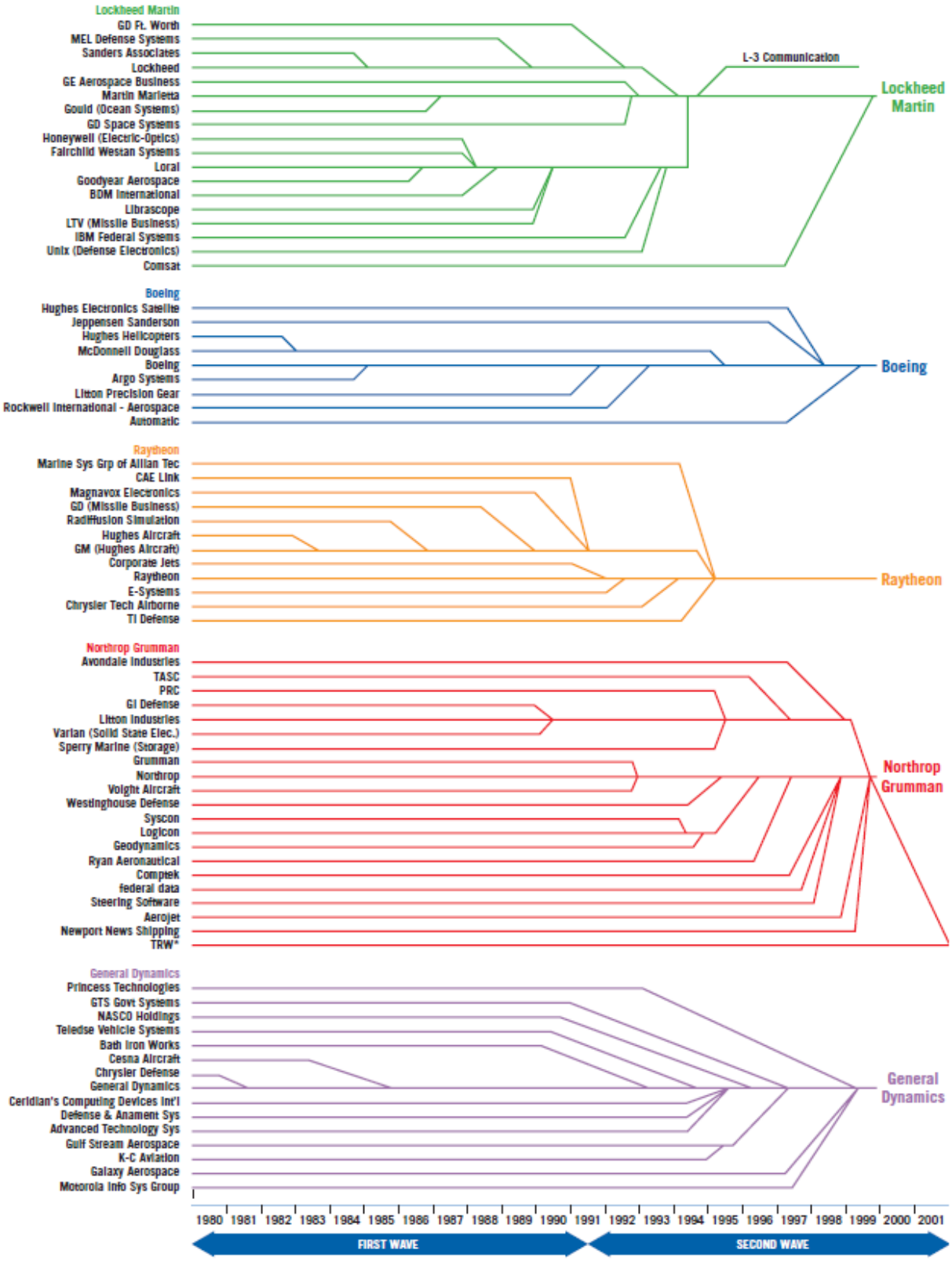



*Figure III-17: Defense Industry Consolidation*
*Source: 2002 Final Report on the Future of the United States Aerospace Industry*

Far from increasing efficiency, the consolidation and associated restructuring payments enforced a near monopoly on defense contracts. During a 2015 interview, former Secretary Perry admitted the result of his message to industry was the "unnecessary and undesirable consolidation of the defense industry, leading to less competition and higher overhead to defense contracts" (Erwin, 2015). Frank Kendall, former Under Secretary of Defense for Acquisition, Technology and Logistics summed up the experience of defense industry consolidation as,

> "With size comes power, and the department's experience with large defense contractors is that they are not hesitant to use this power for corporate advantage. The trend toward fewer and larger prime contractors has the potential to affect innovation, limit the supply base, pose entry barriers to small, medium and large businesses, and ultimately reduce competition, resulting in higher prices to be paid by the American taxpayer in order to support our war fighters."[138]

Attempts by Kendall and others to place legislative restraints upon future defense industry consolidation via the NDAA were rebuffed by Congress in 2015.

Consolidation was not the only tool utilized to ease the burden of shrinking defense spending following the end of the Cold War. With the collapse of the Soviet Union, the international arms market lost a major supplier. With the aid of Congress, U.S. Foreign Military Sales (FMS) and Direct Commercial Contracting (DCC)[139] greatly expanded.

Figure IV-3 below examines defense exports and is divided into three parts. The top section depicts the rise of the U.S. as the world's largest exporter of military hardware and the

[138] Defense News article, Kendall's Remarks Inject Uncertainty into M&A Market. By Andrew Clevenger, October 4, 2015.
[139] U.S. defense companies selling directly to foreign consumers approved by the State Department.

increase in defense exports as a share of all U.S. exports.[140] The second section shows how the U.S. defense export market has continued to grow and expand the gap over any other large-scale defense exporting nation. The third section describes the impact of reductions to the domestic U.S. defense budget and changes to defense export rules in 1993. These events combined to create the largest spike in defense exports since the height of the Vietnam War. In 1994-1995 as DoD and the State Department opened the aperture to countries allowed to buy (or receive) U.S. defense industry products, the defense industry expanded its market and its political influence.

[140] The U.S. currently supplies one third of the world's weapons exports. Even though the chart shows Russia with a greater share of its overall exports devoted to arms sales, the U.S. economy is so much larger than that of Russia that even as a smaller percentage of exports, the U.S. exports far more arms than Russia.

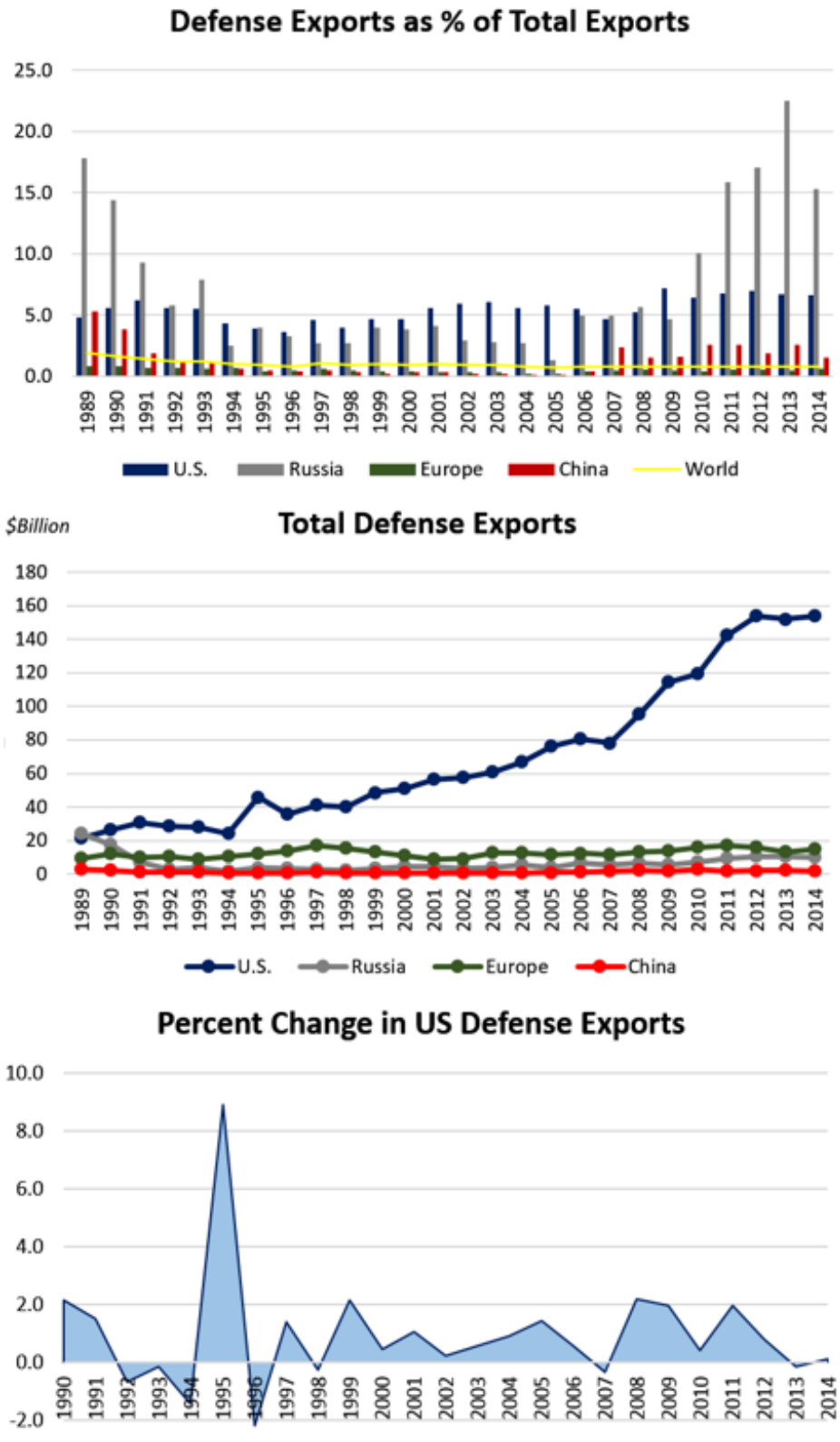



*Figure III-18: Defense Exports*
*Source: State Department World Military Expenditures and Arms Transfers" (WMEAT)*

Historically, FMS has accounted for the lion share of U.S. arms sales overseas. In the FMS process, DoD acts as the intermediary for a foreign country that desires to purchase U.S. military hardware. DoD helps identify the military need of the recipient and then recommends the hardware necessary to meet the defense requirements identified. The advantage to the customer is that DoD handles all interactions to obtain clearance for the materials, contract, payment, delivery and training. For DoD the advantage is that potential allies are provided with military gear and training which are interoperable with current U.S. equipment. From the perspective of government foreign policy, FMS allows more control over exactly what a potential ally can, and cannot, obtain. It creates greater dependencies, as the foreign nation must come back to the U.S. government to acquire more, or upgrade the equipment they purchase through FMS. It also builds more enduring training and cooperative relationships due to increased government-to-government and military-to-military engagement throughout the processes of requirement definition, contracting, delivery and training. Since many U.S. Allies could not pay the price for U.S. weapons, many FMS costs were simply absorbed by DoD. Figure IV-4 below shows that in the early 1990s, nearly half of FMS case costs were waived.

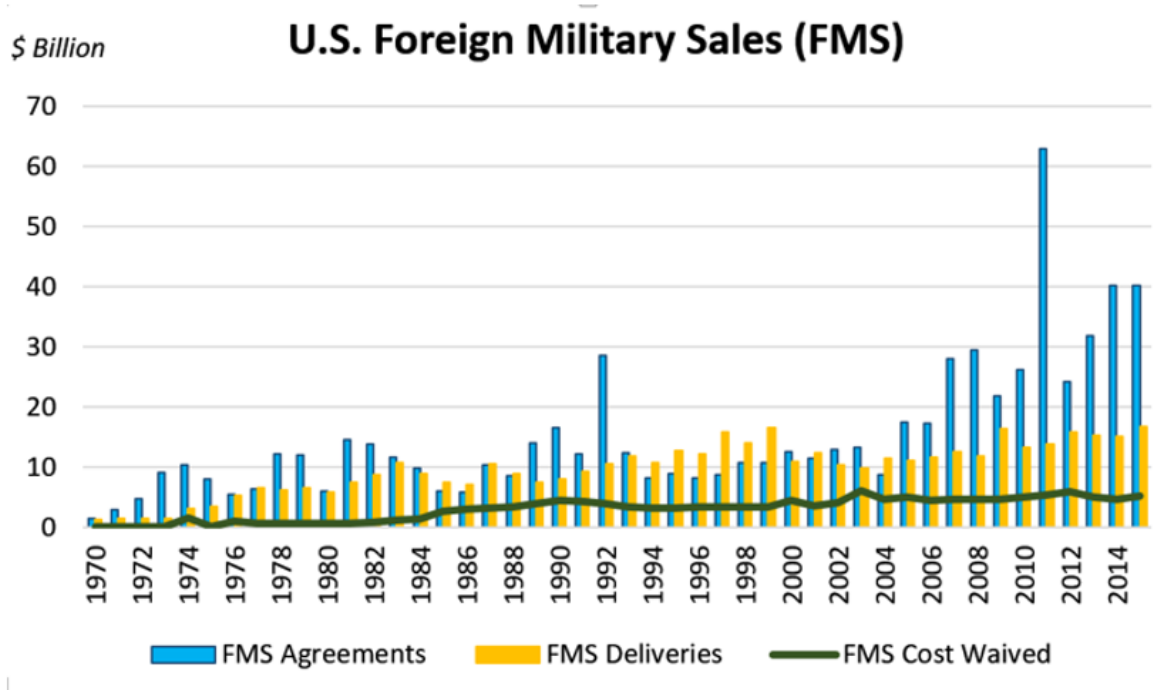



*Figure III-19: FMS Agreements and Waived Costs*
*Source: State Department World Military Expenditures and Arms Transfers*

For the defense industry, FMS is a double-edged sword. It provides greater access to some foreign markets and puts the contracting onus on DoD, but since DoD bargains on behalf of the customer, it also constrains the freedom of industry to negotiation price and terms. In some cases, it creates barriers to competition, since the customer is more likely to choose a system the DoD has already selected, rather than seeking competing designs from other U.S. contractors. This is fine if you are the contractor who built the system in question but not if you are a competitor seeking to market your product. Because of these factors, the defense industry sought and received congressional support to expand Direct Commercial Sales (DCS).

DCS sales have grown consistently since 1994 until by 2015 they accounted for approximately two-thirds of all U.S. arms exports (see Figure IV-5 below). Instead of involving DoD, DCS contracts require approval of the State Department and are conducted directly with a

foreign state. DCS contracts are favored by industry for a number of reasons. Once a market has been established through FMS in a particular country, DCS offers the opportunity for open negotiation for additional goods and services, not necessarily recommended or desired by DoD. Although technically limited to dealing with authorized countries, the actions taken in 1993 to open up markets for defense exports greatly reduced these restrictions, and the number of State Department requests for DCS clearance grew exponentially.[141] U.S. arms exports climbed to the highest level since WWII, with some U.S. defense companies supplying over 70% of their production to overseas clients. [142]

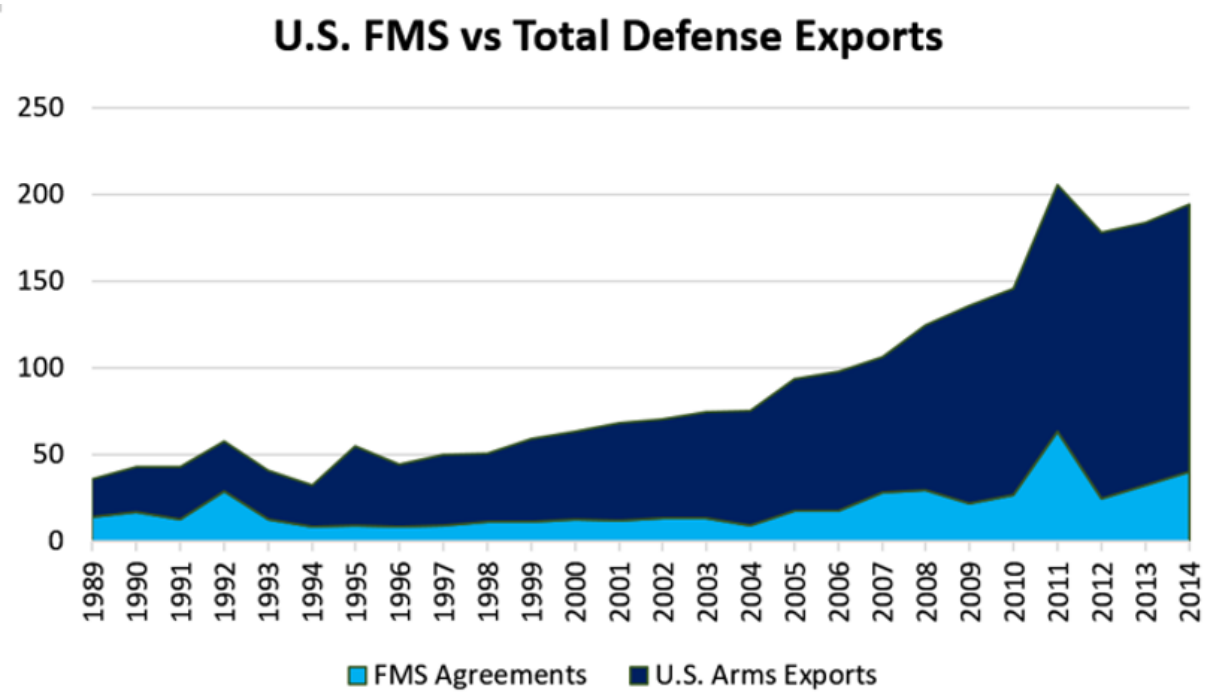



*Figure III-20: FMS vs Defense Exports*
*Source: State Department World Military Expenditures and Arms Transfers*

[141] A Comparison of Foreign Military Sales (FMS) Versus Direct Commercial Sales (DCS), Defense Security Cooperation Agency, 2017. The fall of the Soviet Union make many former Soviet ally countries available for clearance to receive U.S. arms.
[142] State Department World Military Expenditures and Arms Transfers (WMEAT).

To create further incentives in the defense export market the U.S. expanded the Foreign Military Finance (FMF) program and created the Defense Export Loan Guarantee Program (DELG). The FMF program provides financing to foreign countries entering into FMS cases. In effect, the DoD provides a loan to the purchasing country. This program was established to provide a funding mechanism for DoD to purchase weapons on the behalf of foreign nations which did not have adequate domestic banking infrastructure or access to international banking. The amounts available for FMF are determined by the NDAA each year. Figure IV-6 below shows the expansion of the program between 1993 and 1998, as well as the amounts provided as grants or direct subsidy.

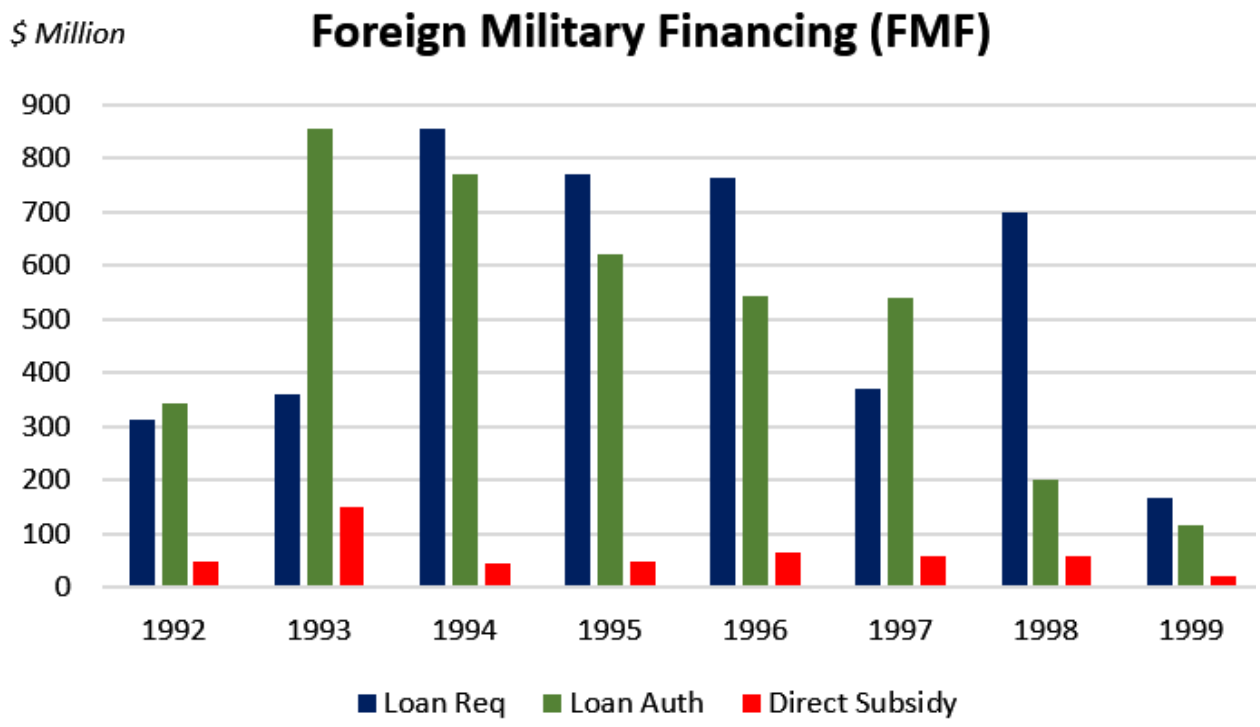



*Figure III-21: Foreign Military Financing*
*Source: State Department World Military Expenditures and Arms Transfers*

The DELG was a more controversial construct. It was established in 1996 as part of that year's NDAA, and it operated much like the U.S. Import-Export Bank. It was designed specifically to provide credit for foreign nations that were considered too risky for commercial banks. The intent was to increase the market for U.S. defense industries to sell to countries that could not afford to purchase weapons any other way. It was slowly phased out after the 1990s, as the defense industry was able to procure business without the additional assistance.

Three laws ostensibly govern all foreign defense exports. The Arms Export Control Act (AECA) of 1976 is the primary law establishing procedures on sales and transfers of military equipment and related services. The Foreign Assistance Act (FAA) of 1961 provides for the provision of economic and military assistance to foreign governments. The Export Administration Act (EAA) of 1979 governs shipments of dual-use goods-technology and information with both military and civilian applications. Technically, the EAA lapsed in 1994, but it continues to be implemented under emergency powers of the President. The Bureau of Export Administration at the Commerce Department administers this law through the Export Administration Regulations (EAR).[143]

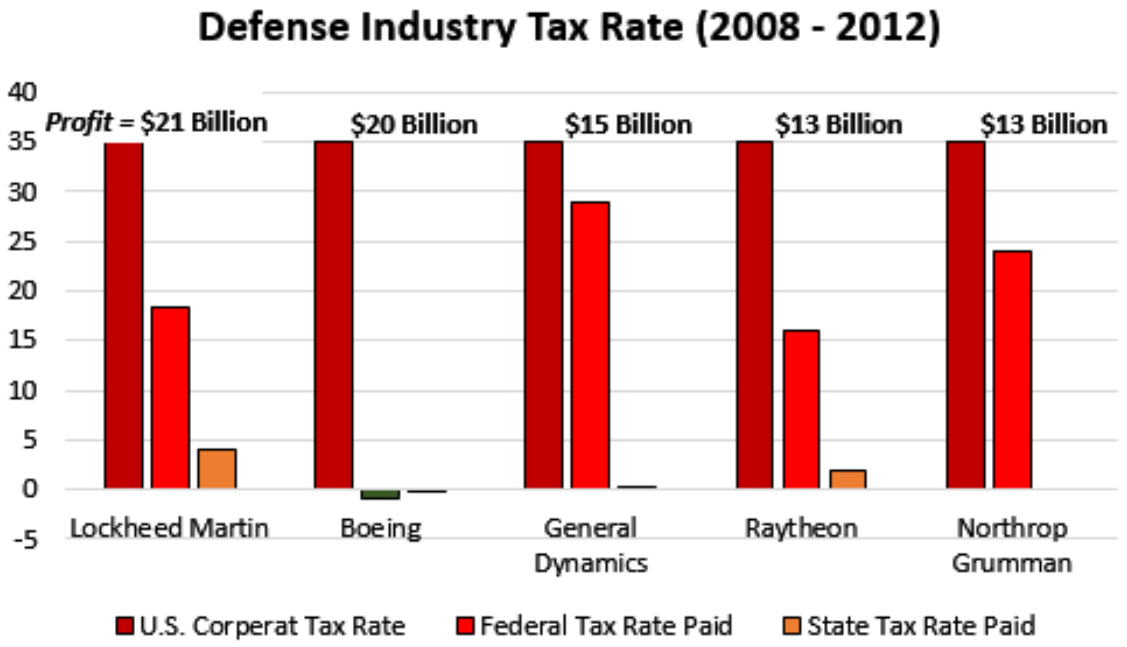
Each of these laws provides specific guidance and controls; however, since the early 1990s most changes to defense export regulation has been accomplished through the NDAA. This has a number of advantages to the defense industry and to MoC. Rather than deal with politically touchy issues of foreign support or industry favoritism, lumping changes in with the large "must pass" NDAA prevents scrutiny of any one program too closely. It has proven a

[143] Defense Security Cooperation Agency

remarkably successful process, as no NDAA has been defeated on grounds of foreign aid abuse.[144]

Consolidation assistance payments and increased access and government financing for defense exports are not the only ways that Congress assists the defense industry. Corporate tax breaks and incentives have become an invaluable tool. Figure IV-7 below shows that even though the adjusted corporate tax rate for the top five defense companies was 35%, they in fact paid on average an effective rate of 16%.[145] In fact, over this span of time Boeing actually managed an effective tax rate of -3.8%. Meaning that the U.S. government paid Boeing each year instead of collecting taxes.[146] During the consolidation period of 1993-1997 defense was the lowest taxed industry in America at 11.8% while the average corporate tax rate for all industry was 21.7%.[147] Despite record profits over the period in question, the defense industry is still the sixth lowest taxed U.S. industry (see figure IV-7 below).[148]

[144] Congressional Record search of each year NDAA since 1990 showed no instance of foreign military assistance, FMF or DCS resulting in major amendment or delay.
[145] McIntyre, Gardner, Wilkins and Phillips. A Joint Project of Citizens for Tax Justice & the Institute on Taxation and Economic Policy November 2011. Review of FEC filings for 2008-2012 confirm the study finding.
[146] Usually in the form of tax credits to be applied against future earnings.
[147] Income Taxes in the 1990s. McIntyre and Nguyen Institute on Taxation and Economic Policy, October 2000.
[148] Updated FEC filings show no significant change in the tax rates for the top defense companies through 2014.



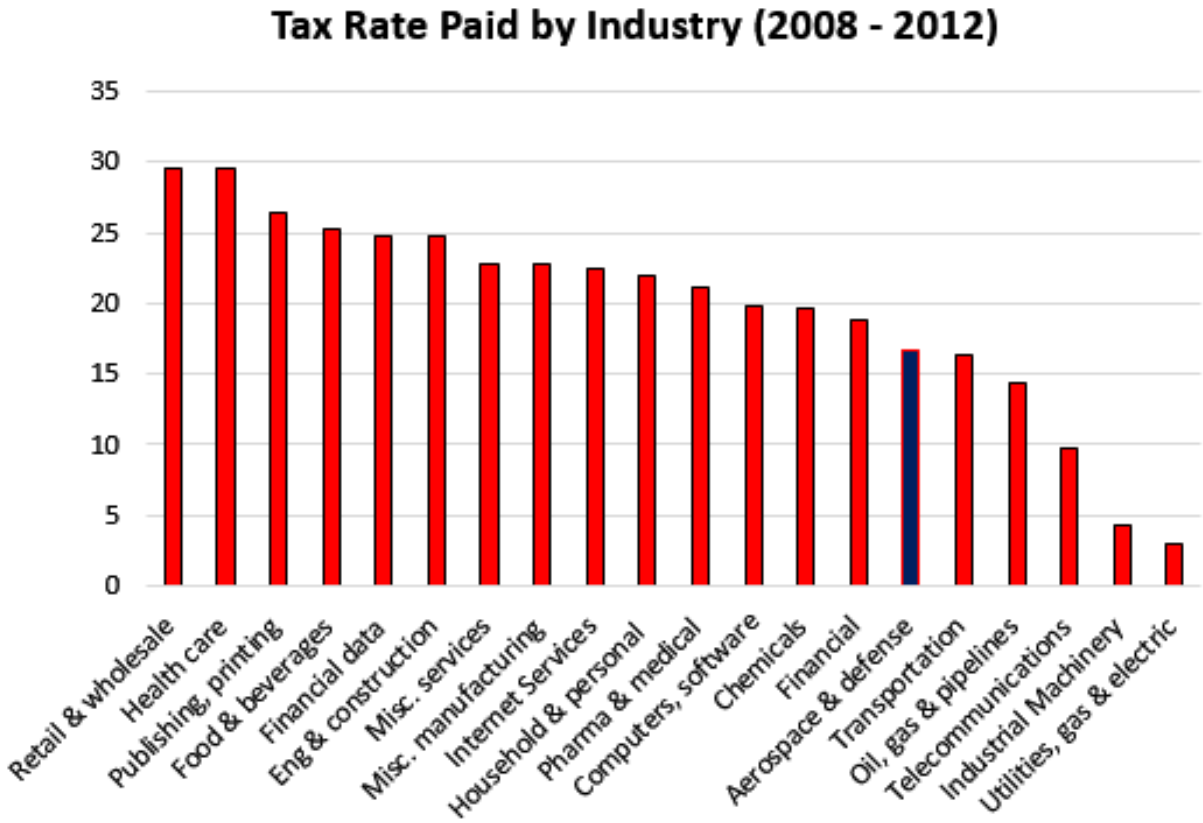




*Figure III-22: Defense Industry Tax Rate*
*Source: Citizens for Tax Justice & the Institute on Taxation and Economic Policy*

The top defense firms also learned another important lesson from the struggles of the early 1990s. Those companies that diversified were better able to survive the feast and famine-punctuated nature of the defense budget. Figure IV-8 below shows the split between defense and non-defense earnings of the top ten defense firms in 2015. With the exception of Raytheon (produces defense specific electronic system), L-3 Communications (produces defense specific electronic systems) and Huntington Ingles (the largest builder of warships), it is clear that the defense industry has learned that defense contracts and the R&D funding and subsidies which come with them can be usefully applied to commercial products as well.[149]

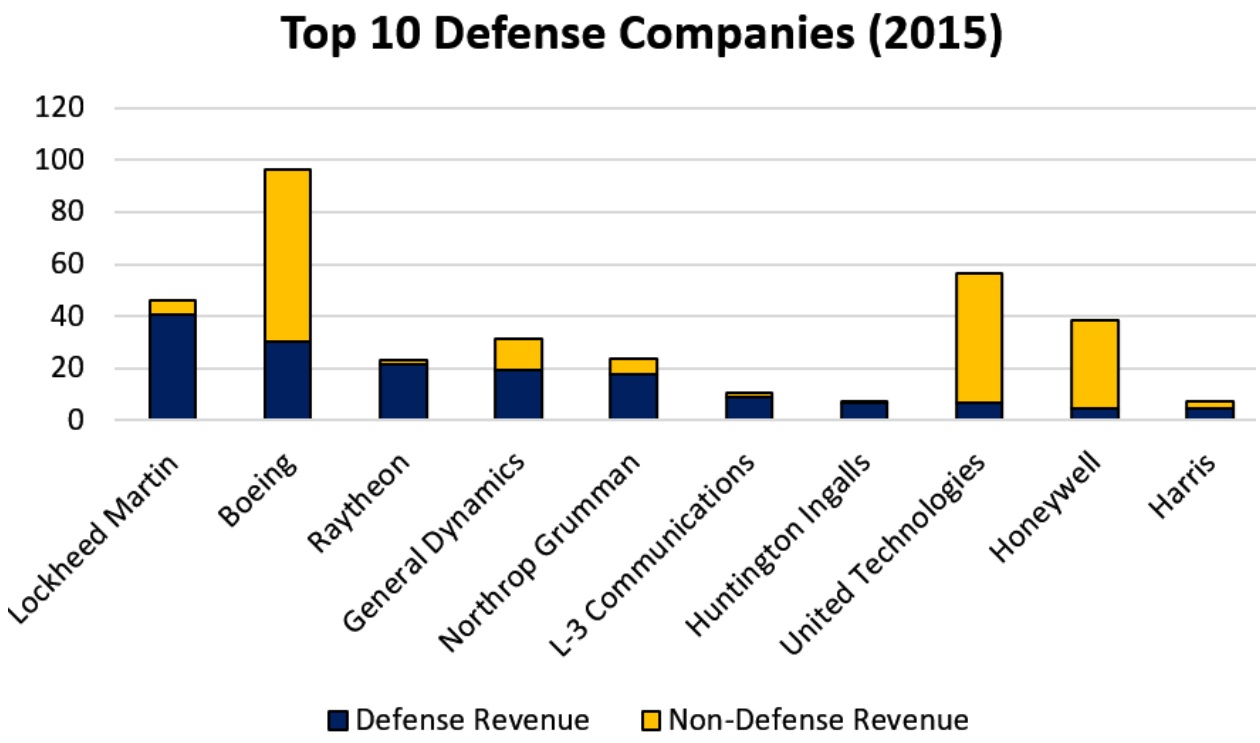



*Figure III-23: Top Defense Contractors*
*Source: Defense News Top 100 Report*

[149] Huntington Ingalls is the sole builder of U.S. Navy Aircraft carriers, and has built approximately 70% of the ship hulls currently serving in the U.S. Navy.

All this maneuvering resulted in the U.S. defense industry becoming one of the most profitable and political industries in the world. Over the last 20 years, defense has consistently outperformed the S&P 500. Figure IV-9 below shows the average stock performance of the top five defense companies since 1981.[150]

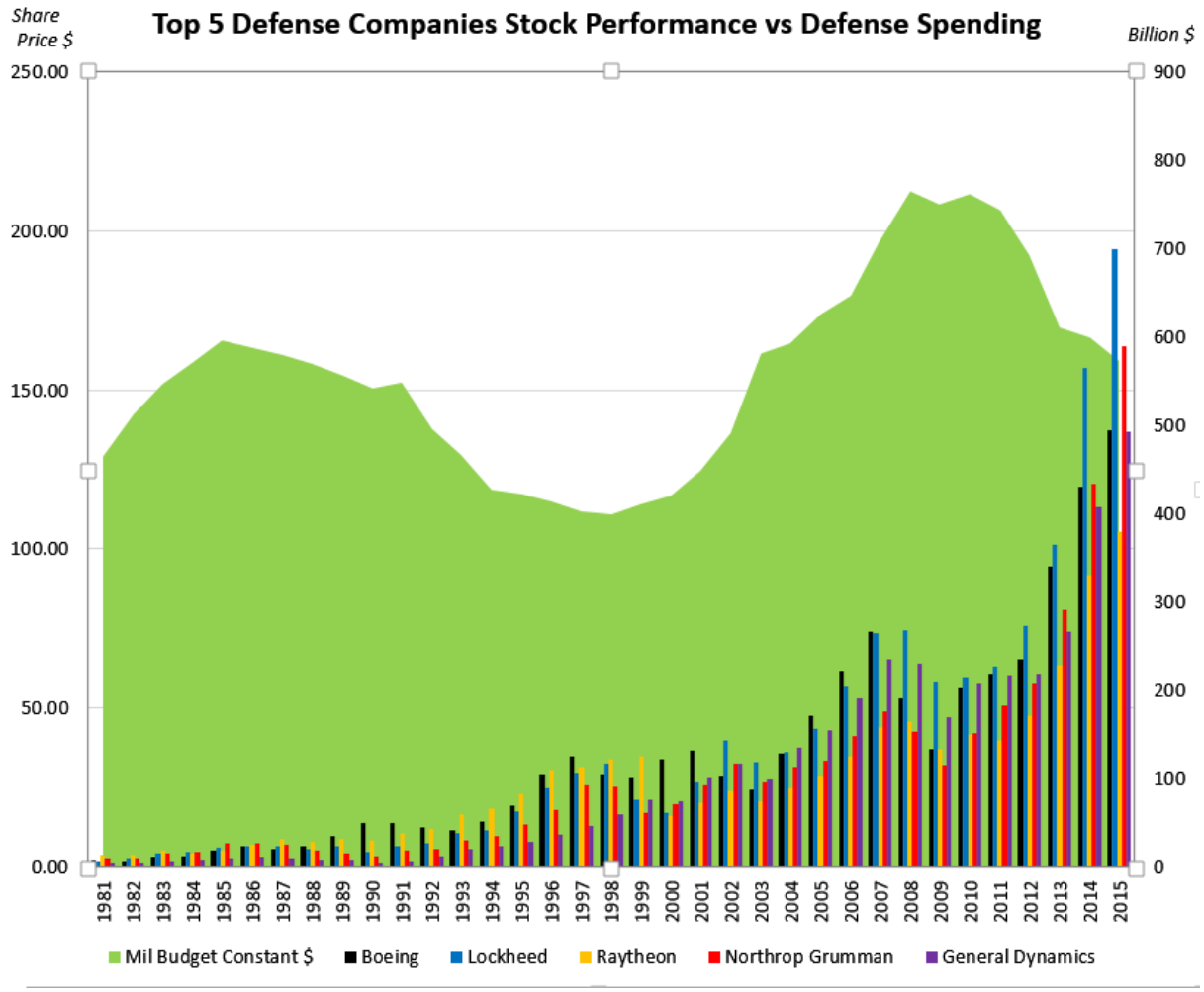



*Figure III-24: Top 5 Defense Contractor Stock Performance vs Defense Budget*
*Source: Standard and Poors.com*

It quickly becomes obvious when looking at the above figure that stock prices do not always track with defense spending. In the Reagan defense buildup of the 1980s there was a

[150] All of these companies existed prior to the consolidation in 1993-1997; however, all changed through merger or acquisition. For example, Lockheed Martin was Lockheed and Northrop Grumman was Northrop and Grumman respectively. The stock prices shown reflect the parent company during the time of evaluation.

great deal of competition from many companies, and the stock prices of even major companies remained rather low. During the period of consolidation, as the defense budget dropped, however, stock prices soared. This reflects the consolidation of companies, the extension of government subsidies and tax credits and the expansion of the defense export market. After the consolidation period ended in 1997, average stock prices regressed until the beginning of the War on Terror in 2001. Another significant dip is noticeable during the recession of 2008-2009 reflecting the impact of diversification in commercial markets even as defense spending remained extremely high. It is interesting to note that even with the implementation of the Budget Control Act (BCA) spending caps in 2013, defense stocks continued to climb.

The continued growth of defense company stocks in a time of apparent defense budget decline can be explained in a couple of ways. First, as noted previously, RDT&E and Procurement accounts are multi-year authorizations, meaning they pay out over several years, rather than in the year of execution. In particularly, their burn rates are typically back-loaded toward the end of the appropriation life. This provides a backlog of money that is executable several years after the appropriation is made and softens the blow of future dips in defense procurement. Second, the actual RDT&E and procurement appropriations have not suffered as much as the O&M appropriations. There are currently literally trillions of dollars in decades-long development programs currently in the Pentagon procurement pipeline, and these will provide a rich harvest for the top defense companies and their major subsidiaries for some time.[151] Investors and MoC are aware of these facts and respond accordingly.

One of the more visible measures of the health of the defense industry is the level of capital goods orders. Capital goods in the commercial sector are tangible assets such as

[151] Ford class Aircraft Carrier (CVN), Columbia class ballistic missile submarine (SSBN), F-35 and its derivatives, B-21 next generation stealth bomber, etc.

buildings, machinery, equipment, vehicles and tools that an organization uses to produce other goods or services.[152] Defense capital goods are effectively all the machinery and equipment procured to provide defense, such as planes, warships, uniforms, and small arms. The measure of defense capital goods relates how much "stuff" DoD is purchasing from the defense industry. Figure IV-10 below shows that although there was a decline from the peak in 2009, procurement of defense capital goods has remained high and is in fact growing.

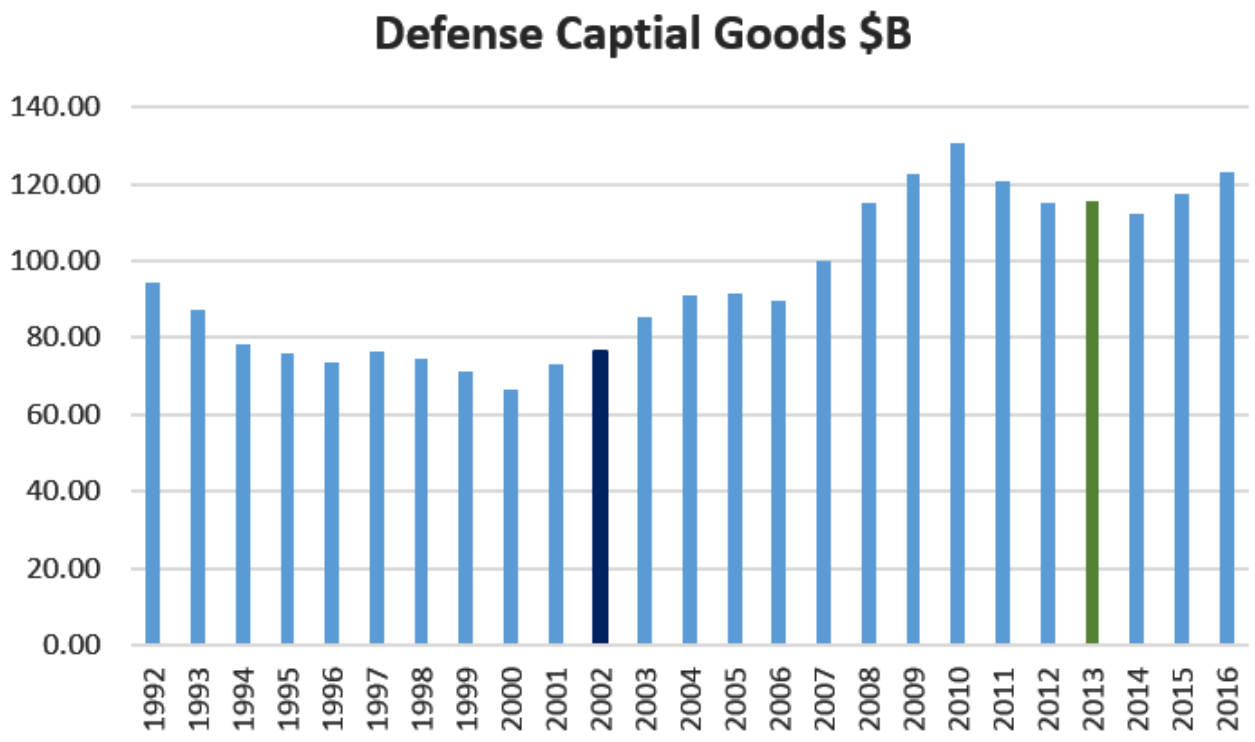



*Figure III-25: Defense Capital Goods Spending*
*Source: U.S. Census Bureau*

All of this leads to the conclusion that the U.S. defense industry is indeed healthy, and in fact, has always benefited from a great deal of congressional nurturing. If the defense industry and the defense budget were not important to MoC, then why have such measures been taken to ensure its profitability? These measures have gone well beyond ensuring the viability of the

[152] Together with land and labor capital goods are considered the primary factors of production.

means of defense production, to encouraging the growth and proliferation of mega-companies with national reach and significant political influence.

Boeing, as the second largest defense company in the U.S., provides an informative example of the political strategy of the defense industry. On 15 July 1916, William Boeing established the Pacific Aero Products Co in Seattle Washington. Over the next one hundred years, it rose to become one of the largest producers of military and commercial aircraft in the world. Although well known for the B-17 and B-29 Bombers it designed in WWII and the Cold War B-52 Bomber (still flying today), Boeing's share of the defense market increased significantly during the 1990s. In 1996, Rockwell Aerospace and Defense Co. was acquired, and in 1997 Boeing merged with McConnell Douglas in a $13 billion stock transaction to form the Boeing Company.

Boeing's plan was simple, consolidate into a huge company and establish a footprint in as many states as possible. If this seems counter-intuitive to the "consolidation" idea, it is strategically brilliant. By consolidating horizontally and vertically (absorbing both competing companies and the means of production and distribution), Boeing was able to control the price of production through establishing a controlling interest in the companies that provided raw materials, components and the delivery of products. They also embarked on a practice of exponentially expanding the practice of subcontracting. In subcontracting, small parts of a large contract are bid to smaller companies. In theory, this allows a large company to avoid having to invest in technology or manufacturing equipment for the production of something they do not expect to need on other contracts. In practice, it also allows a company to sweeten a large contract bid by bringing more companies with interests in other states into the political mix of government contracting. For example, in my time at the Pentagon, my portfolio involved the

prime contractor Raytheon, but also over a hundred subcontractors spread across the country. In congressional committee testimony, the questions I was called to answer came not only from Florida's 13th district (Raytheon division headquarters) but also from MoC representing states and districts where the subcontracting companies were located.

These practices allowed Boeing to play state governments against each other for tax breaks. In 2013, Boeing received a $13.7 billion tax break for 16 years from Washington State.[153] This constituted the largest state corporate tax break in history and was, in fact, an extension from the $3.2 billion tax break it had received previously in 2003. In addition, Boeing received a reported $4 billion in tax breaks from other states competing for production facility contracts.[154] Couple this with the federal tax breaks identified in Figure IV-7 above and the success of Boeing's tax strategy becomes clear.

Why is Boeing so successful at demanding and receiving tax breaks? Figure IV-11 below illustrates the point. Boeing has 148,000 employees spread across every state in the union. They provide political and charitable contributions to every state but Wyoming, and they claim to support over 1.5 million indirect jobs (support and subcontract).[155] State politicians fight for job creation credit and the competition can be fierce. In 2001, when Boeing decided to move its corporate headquarters from Seattle Washington to Chicago, the city and the state of Illinois provided over $56 million in incentives, even though the move involved less than 500 employees. In 2003, Kansas offered Boeing $500 million in bond financing to build part of its next airliner in the state and allowed Boeing to pay off $200 million in interest by collecting personal income taxes collected from its 7E7 workers.[156]

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[153] Seattle Times Article. Originally published November 12, 2013 at 6:00 pm Updated November 13, 2013 at 8:08.
[154] Goodjobsfirst.org Boeing Case Study 2017. http://www.goodjobsfirst.org/corporate-subsidy-watch/boeing.
[155] Data from Boeing company filings.
[156] Goodjobsfirst.org Boeing Case Study 2017. http://www.goodjobsfirst.org/corporate-subsidy-watch/boeing.

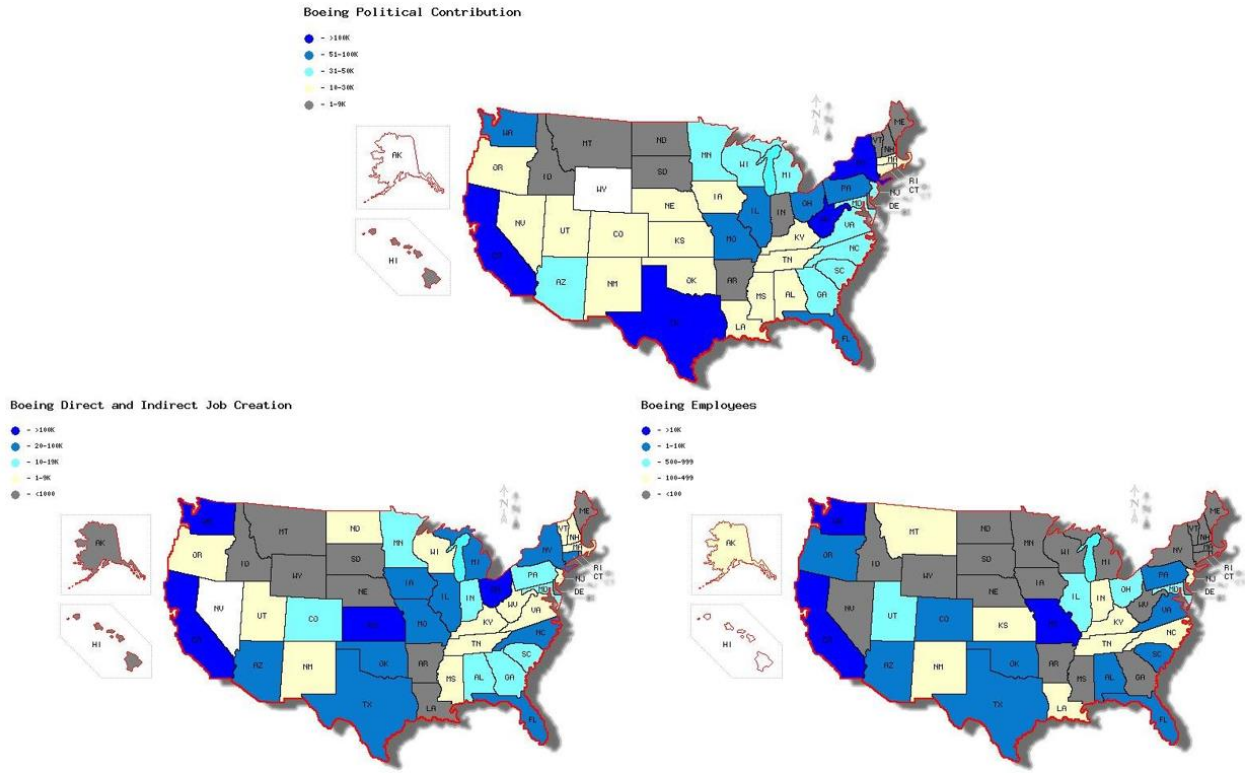



*Figure III-26: Boeing Coverage*
*Source: Boeing Company Reports 2015*

Boeing did not wage this fight alone – they recruited the aid of interest groups and created a powerful Political Action Group (PAC) to advance their agenda. Business PACs in general generate the most money, but they also find ready government allies in the DoD. The ability to find high-level government allies is critical to interest group success (Baumgartner et al., 2009). The power of the status quo to resist change is considerable (Schattschneider, 1951; Lowi, 1969), but defense PACs sit in the unique position of being able to play both sides of the argument. They simultaneously seek to maintain DoD spending levels on specific programs while seeking to produce impetus to fund new initiatives. Defense issues tend to face competition for resources, rather than direct opposition from other PACs. It is hard to argue against security and protecting the lives of soldiers, sailors, airmen or marines, but it is easier to

argue for what constitutes a reasonable level of support. PACs win by bringing salience to a topic, real or not, that either threatens the safety of Americans or promises increased capability at a reduced cost.

One example from my experience took place in 2011. The BCA was in play and defense budgets were expected to shrink. Raytheon was advocating aggressively to protect funding for its Cooperative Engagement Capability (CEC) program, and it appeared to be headed for an inevitable loss. Unexpectedly, Raytheon proposed a new antenna technology that would cut production costs for the CEC system substantially, while reducing cooling and weight requirements for the platforms that hosted CEC.[157] The catch was that to operationalize and produce this new antenna would require an upfront investment and subsequent increase to the program budget. The idea was that in the long run reductions in production costs to the program would more than pay for the initial investment. Calls came in from several influential MoC who were provided with briefs by the Raytheon PAC, and the CEO of Raytheon paid us a visit. Raytheon succeeded not only in protecting their program budget, but achieved an increase during a declining budget with the promise of future efficiencies. In retrospect, the technology for the new antenna had existed for some time, but it was not in the company's interest to bring it forward until there was a threat of reduction to the contract. Why build something cheaper if you do not have to? In the end, the new antenna was procured, but the efficiencies in cost were somehow never fully realized. To make a Kingdon multiple streams analogy, Raytheon did not create a solution to a problem identified by government. They created a window of opportunity by harnessing the politics to support a solution (policy) they had held in reserve while waiting for a problem to emerge.

[157] CEC is a system that fuses sensor data from multiple sources to create a composite track. It is composed of a set of electronic boxes and antenna assembly that are hosted in naval ships and aircraft.

It has long been supposed that PAC contributions from defense contractors influence vote outcomes (Fleisher, 1993), and the defense industry has not set idle. The Boeing PAC took shape during the period of consolidation and has been growing ever since (see Figure IV-12 below). PACs reward earmarks with campaign funds to MoC (Rocca and Gordon, 2012), and according to FEC filings, six of the top ten corporate PACs giving to federal candidates and committees in 2015 were PACs of defense-related companies. In 2015, Boeing became the top defense lobby firm, spending nearly $22 million on lobby efforts (FEC, 2015). Overall, Boeing contributed to representatives in 49 states and 70% of all districts.

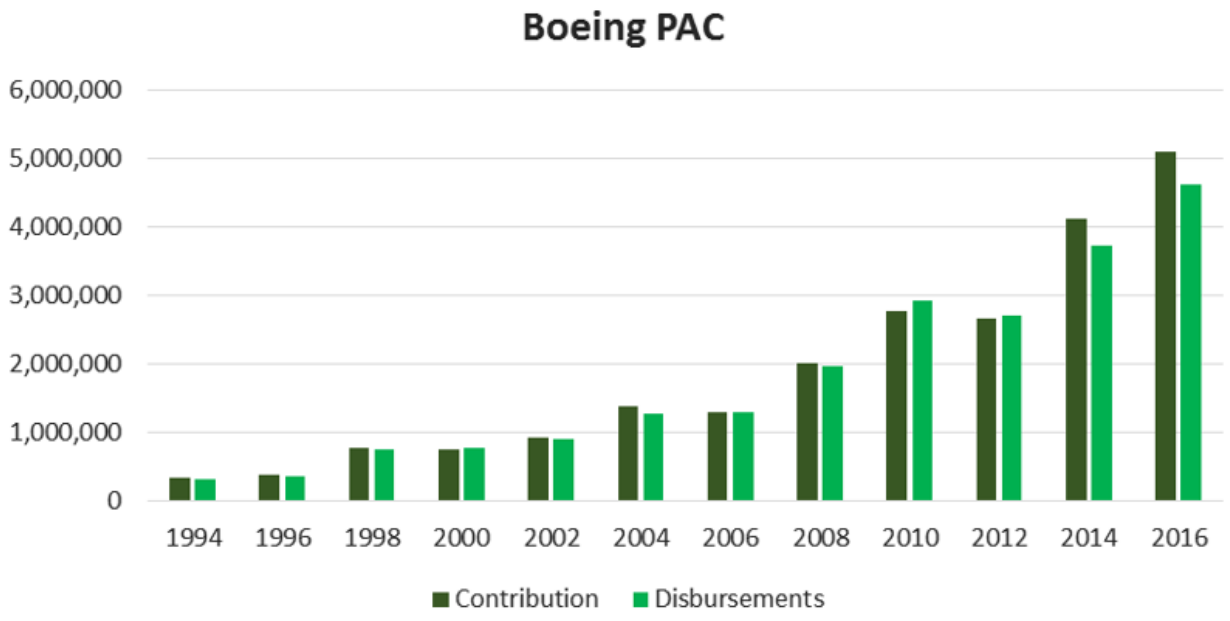



*Figure III-27: Boeing PAC*
*Source: Boeing Company FEC Filings*

PACs disproportionately give money to members of defense committees (Mayer, 1991). Even in times when the congressional committee system is seen to have diminished authority (since rule changes in the 104th Congress), defense committees still matter to PACs. Overall, the HAC-D and HASC received more attention than the SAC-D and SASC, leading to the

supposition that more effort goes into districts with constituent interest and only strategically toward states with large defense interests. In 2015, Boeing's Total Lobbying Expenditures were $21,921,000 on its own PAC efforts and an additional $3.1M on 16 lobbyist firms hired to work various issues without directly involving Boeing.[158]

The Boeing PAC committee approach over the 2012-2016 election period depended on widespread coverage with the House and strategic targeting with the Senate. More money was devoted per senator, but more members of the House Defense Committees were covered. Boeing gave to every member of the HASC, and MoC on the HASC received an average of $1000 more per donation than those who were not. Boeing also contributed to every member of the HAC-D. Average donation to HAC-D was $5,000 more than the average House donation and $4,000 more than to those on the HASC. Seventy-four percent of the SAC-D received donations, but the average for each member was $18,000 or $8,500 above average for other Senate donations. Only 31% of the SASC received donations, but the average was $11,000 or $1,500 more than average for Senate.

An example from my experience involved Congressman Charles William "Bill" Young (R-FL). Congressman Young served from 1971 until his death in 2013. As the chair of the HAC-D, he was influential and received two extensions to the normal six-year chairperson's term. His district contained Raytheon Integrated Defense Systems (a division of Raytheon Co). Raytheon was the lead contractor for most of the programs in my portfolio at the Pentagon, and Congressman Young was a fierce supporter of every program. As you might imagine, Raytheon was his top PAC contributor, and he obtained over $475M in earmarks for Raytheon from 2008-2010 while I was at the Pentagon. According to FEC filings, Raytheon donated $102,400

[158] Boeing FEC Filings.

($99,000 from their PAC) to Congressman Young. Boeing also donated $91,250 ($73,500 from their PAC) during the same period. These donations are not coincidental. MoC see the connection between defense spending and electoral support (financial and message advocacy).

Despite polarization, the defense industry seems far more pragmatic than partisan. At least from the standpoint of PAC donations, the party in power tends to receive more investment (Carsey and Rundquist, 1999). Figure IV-13 below shows a comparison of Boeing PAC House contributions compared to average defense PAC House contributions per year. From 1994-2014 each year is represented by four bars. The two bars on the left for each year show the percentage of Democrats and Republicans in the House of Representatives and the two bars on the right show the percentage of contributions made to Democrats and Republicans that year. In 2008 and 2010 when the Democrats controlled the House, they received the majority of donations. Likewise, in all other years when the Republicans were dominant, they received the majority of contributions.

The bottom line from the Boeing example is that, if you were a MoC with a seat on the HASC, your state had on average of 32 times more Boeing employees, benefited from three times as many indirect jobs, had three times more vendor purchases and received 13 times more charity investment from Boeing Co. These statistics tend to lead credence to the supposition that MoC from districts with heavy defense company representation tend to seek seats on defense committees, and having obtained those seats, are rewarded by companies like Boeing for their efforts. Boeing is far from unique, and the other top-tier defense companies share similar strategies in their approach to PACs and congressional interaction. I chose Boeing for this example specifically because it is not the largest defense contractor; and yet it still provides a

diverse program portfolio and an immense geographical and political presence. An examination of any other top-ten defense contractor would produce results very similar to those of Boeing.

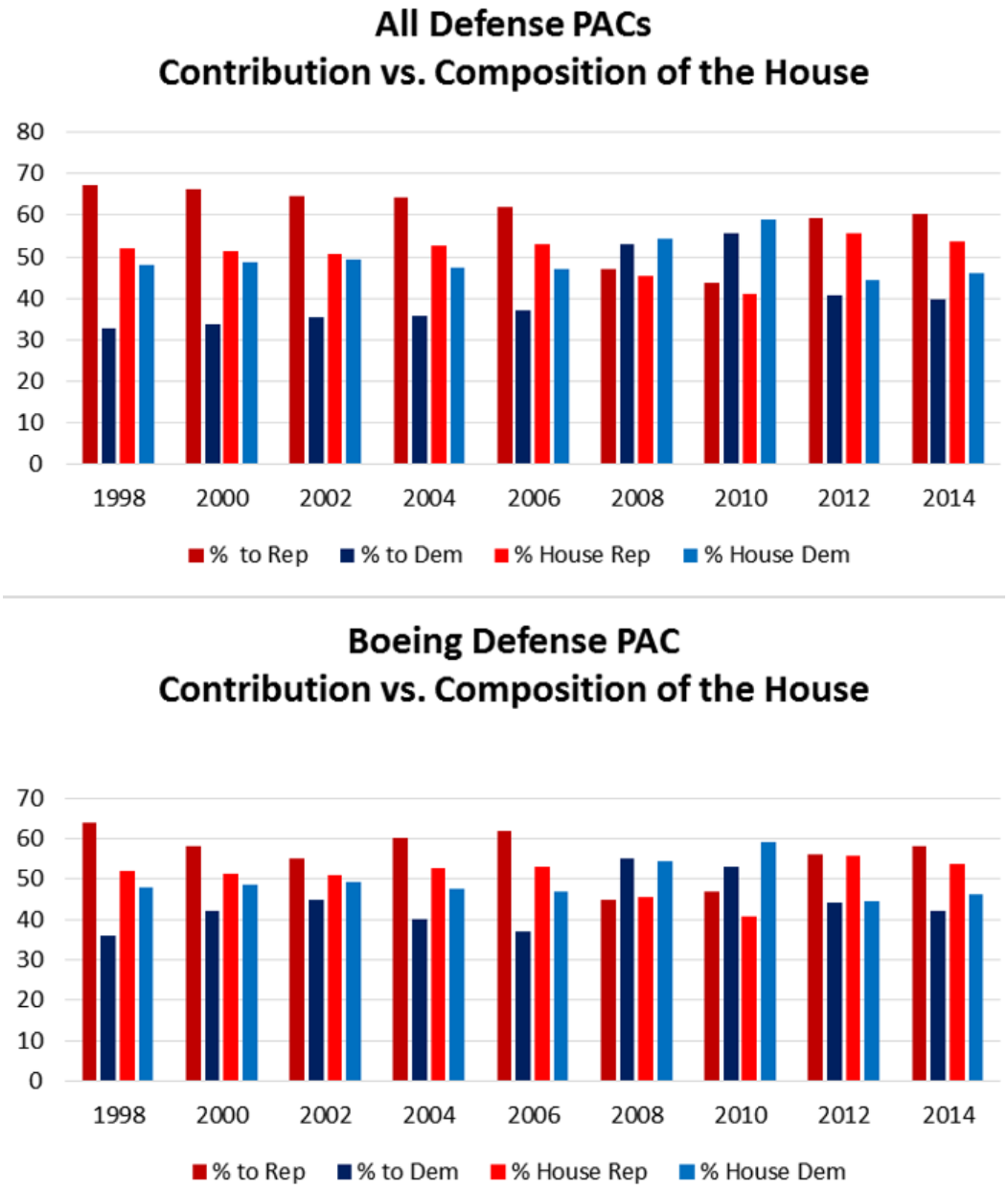



*Figure III-28: All Defense and Boeing PAC Party Disbursements*
*Source: Center for Responsible Politics*

Perhaps the single most important role of lobbyists, interest groups or PACs is simply to increase the salience of an issue. Lobbyists sponsor industry days and conferences as well as pay reps to promote candidates and associate candidates with the military. One question, which is

difficult to answer, is whether defense lobbyists influence greater defense spending (Predator approach), or whether greater defense spending attracts lobbyists who fight to divvy up the greater share of increased spending to their clients (Scavenger approach). To simplify the problem, if we were to treat registered lobbyists as an avatar for all interest group efforts we could look at how the increases in money provided to lobbies and the number of lobbyists compare with defense spending increases. If the number and spending on lobbies precedes growth in defense spending, we could hypothesize that lobbing efforts produce greater spending and that lobbyists are predators, actively influencing the behavior of defense spending. However if the number of lobbies and spending follows increases in defense spending, then we could assume that lobbyists are more opportunistic and scavenge on the bounty provided by other influences.

Unfortunately, the data is limited for this comparison, since lobby registration numbers and spending were only made part of the public record after the Lobbying Disclosure Act of 1995. Figure IV-14 below shows that lobby efforts tend to lag increases in defense spending by several years and decrease as defense spending decreases. Defense lobbies follows the money and grow, as there are more resources at play. Once established, the lobby tends to spend more money even as overall defense spending decreases as they compete for a piece of a shrinking pie. Eventually the funding falls off as diminishing opportunities result in lobbyists leaving the game.

Although far from conclusive, these results do support the supposition that lobbyists and PACs tend toward reaction to circumstances, rather than driving policy. This would support the claim that MoC drive defense spending to meet their own interests and that the defense industry follows, albeit willingly, when spending increases.

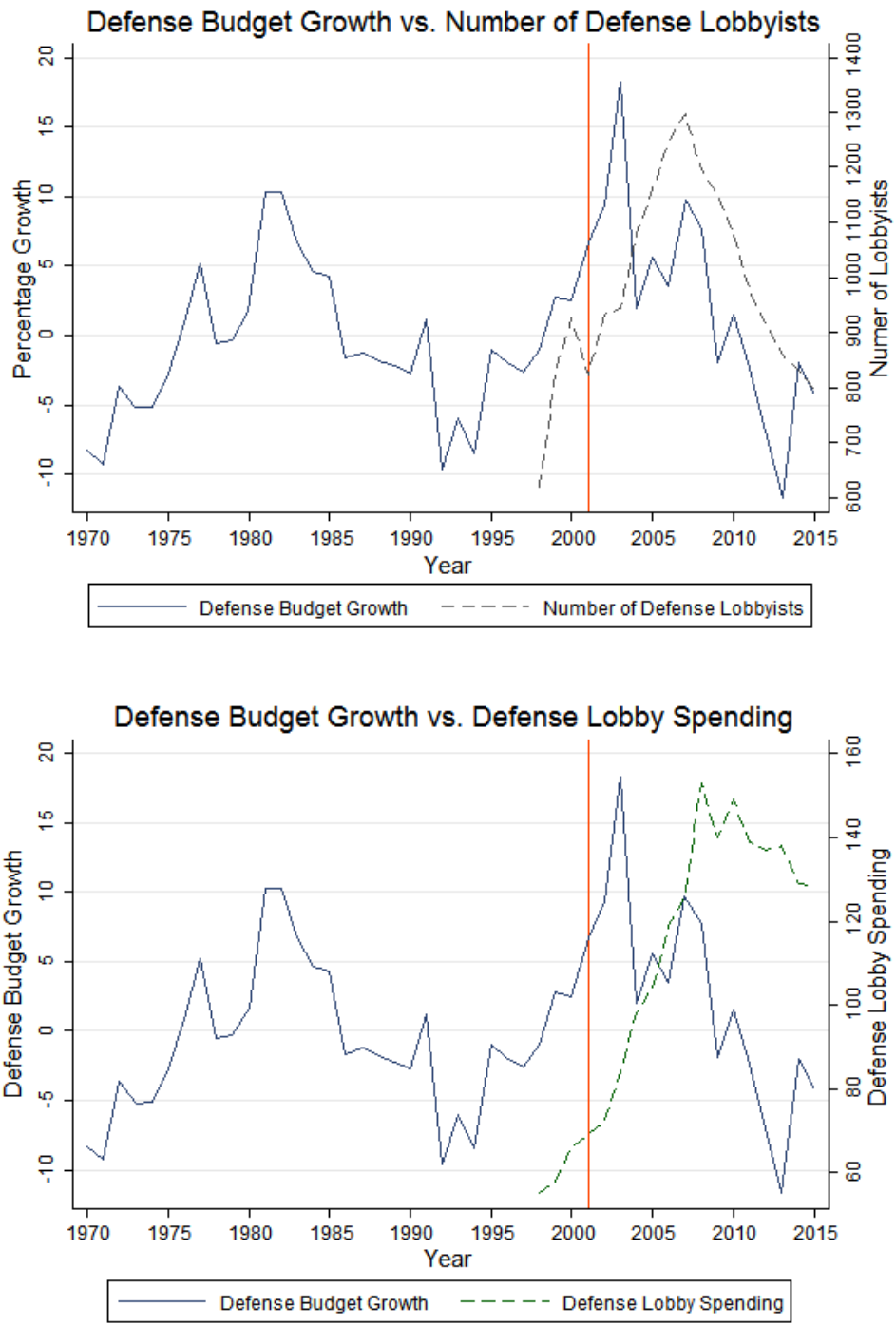



*Figure III-29: Defense Lobby*
*Source: Center for Responsible Politics*

## B. Benefit to States

Former Speaker of the House, Tip O'Neal, is reported to have once said, "All politics is local." He later clarified this to mean that if you want to survive in politics, you can never forget

who elects you.[159] Often overlooked is the role of the states as beneficiaries and thus major influencers of MoC in the pursuit of greater defense spending. Some scholars suggest that MoC are keenly aware of the impacts of defense spending to their state or district, even if the effect were somewhat muted to the country at large (Rundquist and Carsey, 2002 and 2009). Todd Sadler and Keith Hartley looked at profit margin among different businesses and determined that defense firms returned higher profit margins than non-defense related industries, thus providing greater economic stimulus on the state level. This in turn incentivized MoC to fight for greater general defense spending with the understanding that even if they could not control specific contracts, the geographic proximity of large defense companies or bases within their districts or states would mean potential increased tax revenue and potential job growth for their constituents (Sadler and Hartley, 1995).[160] Other scholars have suggested that states with high levels of military spending are better off during economic downturns (Borch and Wallace, 2010). All of this implies that MoC understand that defense spending is important to the states and districts they represent, so it is important to them.

Figure IV-15 below shows the top states for defense spending as a percentage of Gross State Product (GSP), total defense contracts, defense spending per person and military and civilian payroll. Not surprisingly, all of these states are represented on the HASC, SASC, HAC-D and SAC-D. States depend on defense spending for economic growth (Brace, 1993), and with defense spending producing an average 2.5% of SDP for every state; this provides considerable economic impact. However, on a district level this impact can be even greater. Some districts

[159] O'Neal, Tip, and Gary Hymel. *All Politics is Local: And Other Rules of the Game* (Avon: Adams Media Corporation, 1993), np.

[160] The type of defense spending desired by a particular MoC (Procurement, R & D, manpower or construction) depends upon the infrastructure (Defense related industry, R & D Universities or bases) located within the district or state.

have no military impact, but others depend overwhelmingly on defense spending, such as the 8th congressional district of VA where defense contracts and employment is nearly half the total economy.[161]

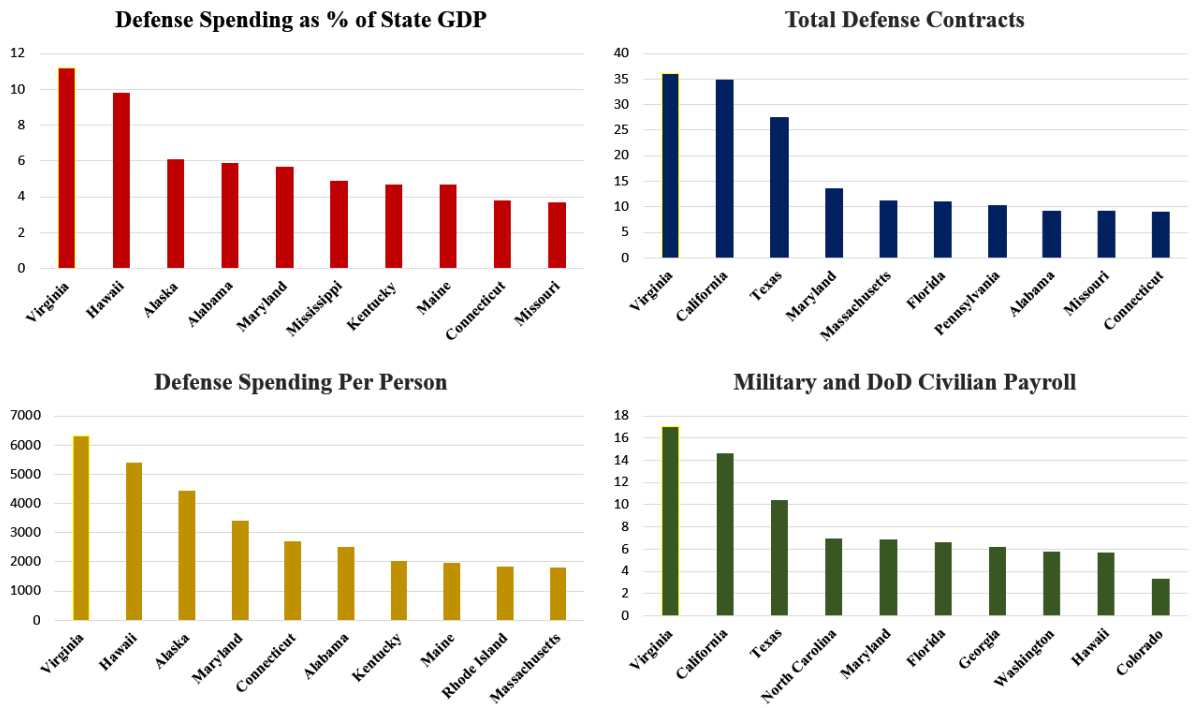



*Figure III-30: Top States for Defense Spending*
*Source: U.S. Department of Defense Office of Economic Adjustment*

There is a connection between state military population and defense contracts (Russet, 1970). The states with the largest DoD population do receive the most attention, particularly from the House. This makes sense when you consider that as a portion of the total state population DoD workers (military and civilian) may only account for a small percentage, but in any given district it may be considerable. Figure IV-16 below shows the DoD population by state, and again it is not surprising that the six states not represented on any defense committees in 2015 were all well below the average for military population, as well as every defense economy category in Figure IV-15. In Figure IV-16 below, the states with associated red bars are

[161] Virginia employment commission.

the top ten defense contract states, while those in grey are the six states not represented on any defense committee (Michigan, Wisconsin, Idaho, Oregon, North Dakota and Wyoming).

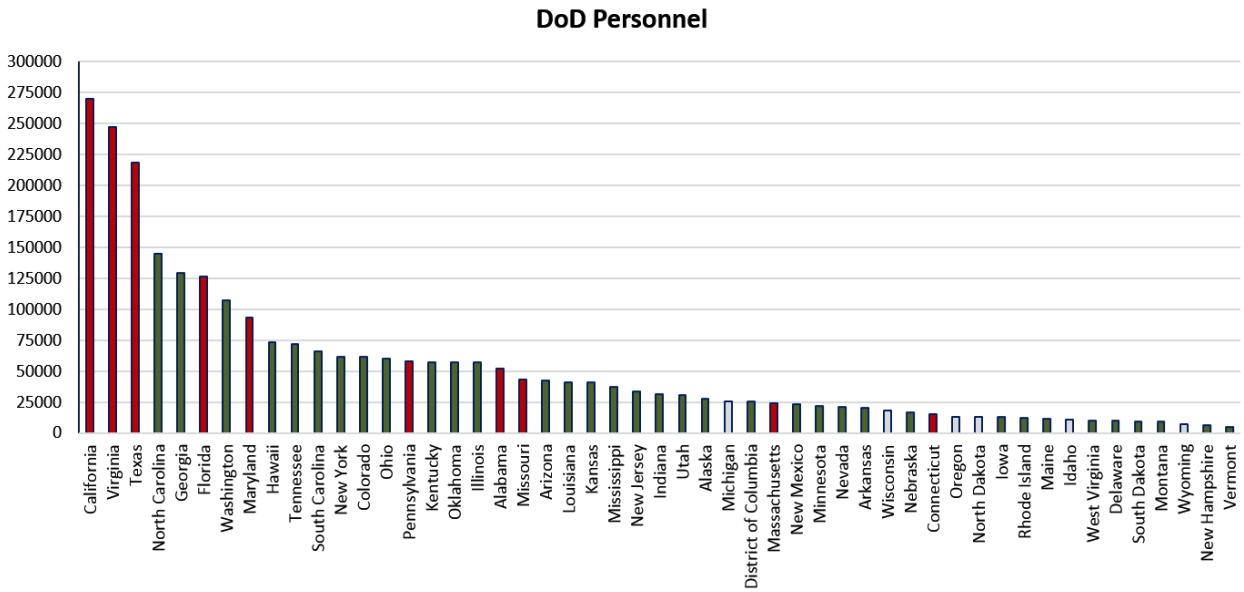



*Figure III-31: DoD Personnel by State*
*Source: U.S. Census Bureau*

Every member of the HASC and HAC for the 114th Congress came from a district containing either a top grossing defense contract county or a top military population county save one. The lone exception was District 14 Jackie Speier (D-CA). Her case is explained by redistricting. District 14 used to contain parts of Santa Clara County, which is the 3rd largest recipient in CA of defense procurement funds. In 2013, redistricting moved her district north and out of the counties receiving the bulk of defense spending, but she retained her seat on the HASC.

The type of defense appropriation matters to districts and states. Figure IV-17 below shows the growth rate of the different appropriations discussed in Chapter III. Reduction in Procurement dollars affects defense contractors, MILCON impacts local construction, O&M is felt by suppliers of consumables, RDT&E by research universities and industry research &

development groups, and MILPERS by local retailers where military families shop. In other words, MILPERS, O&M and MILCON tend to be the greatest concern to local districts where military facilities are located, while Procurement and RDT&E are the biggest concern for those with large defense industries.[162] These are simplistic examples, but they touch on the very real impact defense spending has on thousands of small and large businesses across America.

Since BCA caps went into effect in 2013, the districts with large DoD populations have suffered the most. MILPERS and O&M have been reduced by four times as much as procurement (-2%) and twice as much as RDT&E (-4%), while MILCON has been slashed by over 35%. This fits with the expectations stated in Chapter III for which appropriations are the first to be cut, and why.

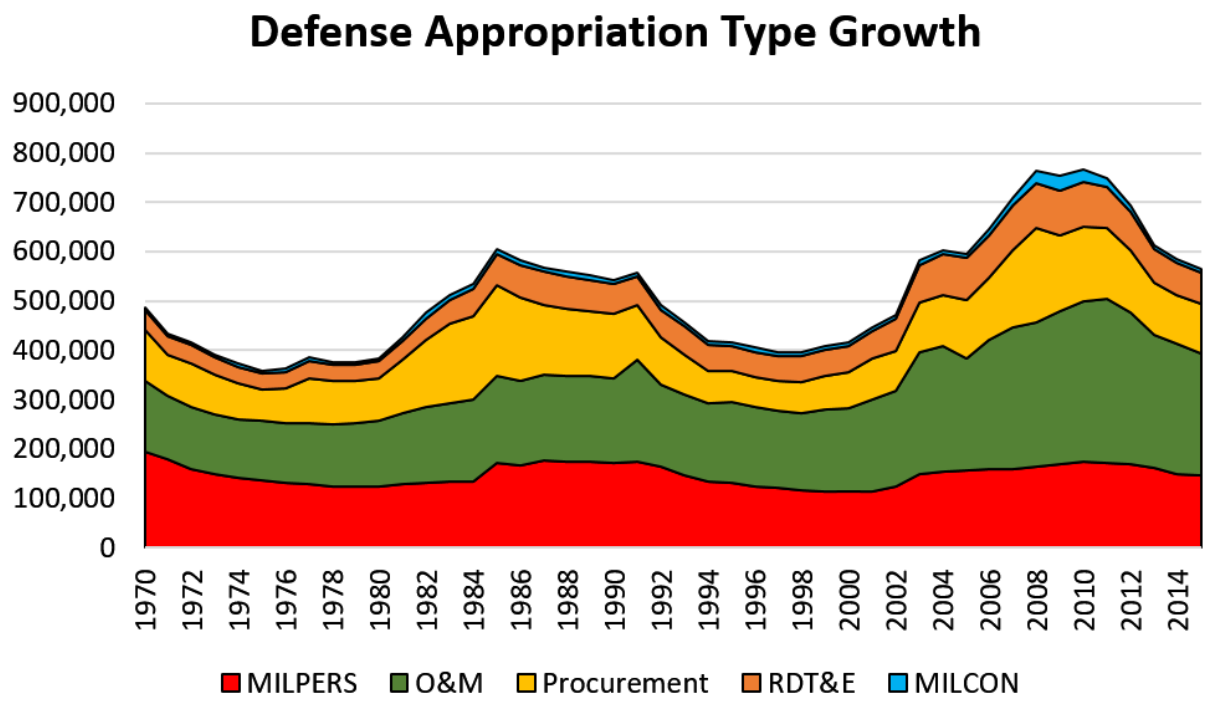



Figure III-32*: Defense Appropriation Type Growth*
*Source: Defense Greenbook 2017*

[162] Reflecting congressional attention to industry funding stability concerns. Procurement and RDT&E are the only appropriations with requirements for congressional notification in case of reprograming resulting in termination.

By comparing the reductions seen in Figure IV-17 with the state-by-state analysis of appropriation distribution below in Figure IV-18, we can see where the impact of defense cuts hit first and hardest. We can also see graphically why some MoC are not incentivized to become members of defense committees. Those states with small percentages of appropriations and small DoD populations do not have much to gain from defense committee membership.

However, returning to Tip O'Neal's comment that all politics is local helps us understand the logic for those states with small DoD footprints that do seek representation on defense committees. For example, a small overall state DoD population may prevent a senator from seeking a defense committee position, but it does not preclude a representative in the same state whose district has a large military population from seeking a seat. Similarly, a state with a small DoD footprint, like Montana, but one that has a large portion of its voting population represented by veterans or DoD retirees, may also see a reason to seek a seat. The bottom line is that through the motivation may differ, most states see benefit from defense spending.

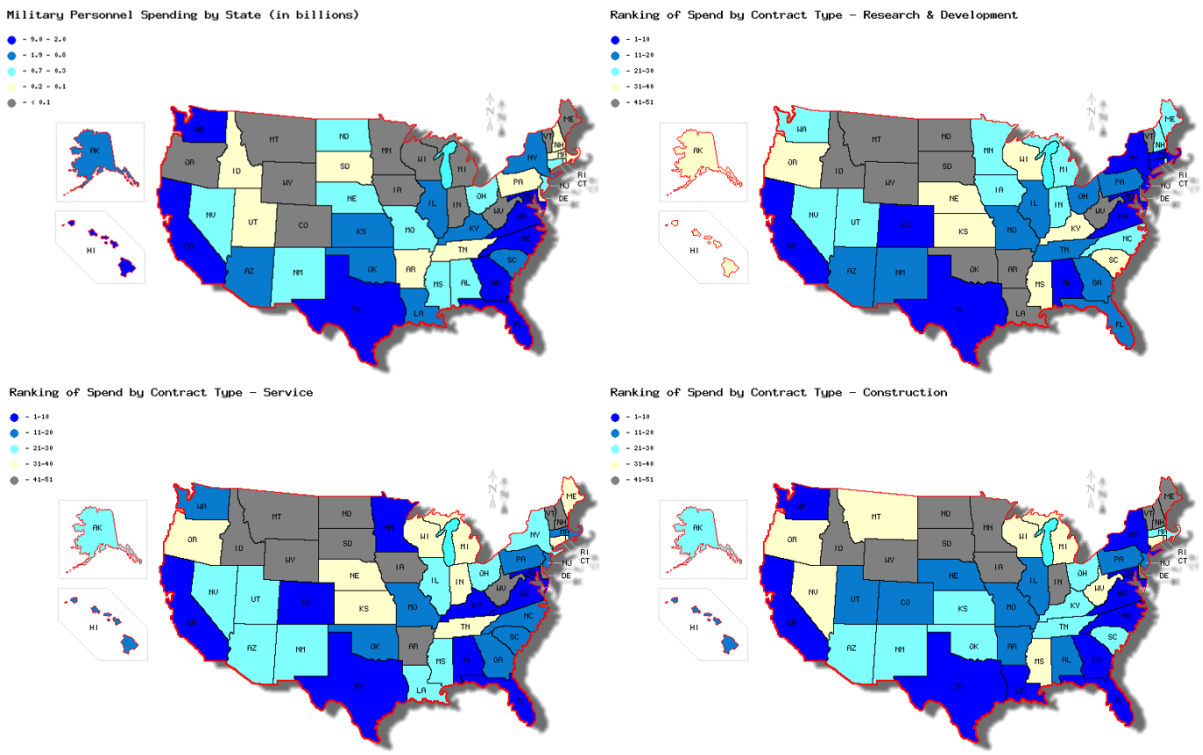



*Figure III-33: State Spending By Appropriation Type*
*Source: Department of Commerce Bureau of Economic Analysis*

A good representative case study for state defense spending is Missouri. It sits in the top ten or just outside in most categories of DoD spending impact except number of DoD personnel. However, it is far from the largest in any category. Defense spending makes up approximately 3.7% of the GSP and defense is the 10th largest industry in the state (see Figure IV-19 below).[163]

[163] U.S. Department of Defense Office of Economic Adjustment.

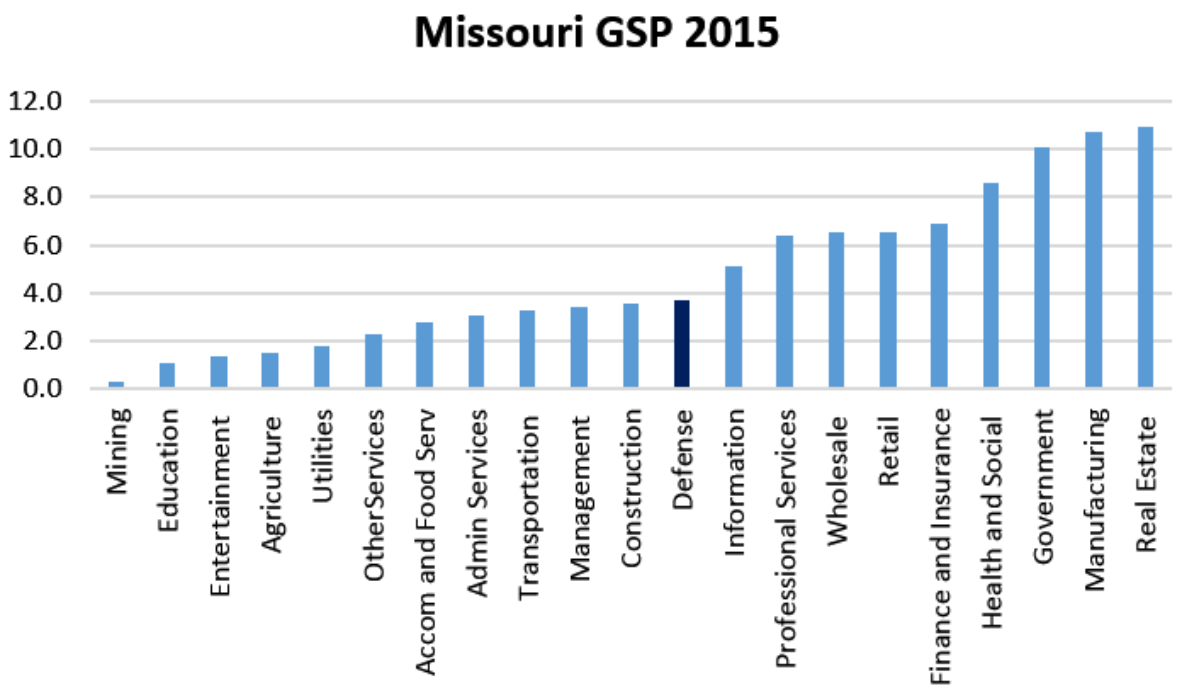



*Figure III-34: Defense as a Percentage of Missouri GSP*
*Source: Missouri Economic and Information Research Center*

The concentration of defense spending is in St. Louis area where Boeing Defense, Space & Security division is headquartered.[164] Most of the 43,000 DoD personnel are concentrated in congressional District 4, where two military bases are located.[165] By appropriation type, Missouri is in the top 15 for every type except MILPERS. Missouri has a senator on the SASC and one on the SAC-D. It has two representatives on the HASC.

Figure IV-20 below shows the congressional districts of Missouri and the breakdown of defense spending. The circles around counties represent the top ten counties for DoD population, and the squares denote the top ten defense spending counties in the state. Looking at the figure it is apparent that Districts 4 and 6 contain most of the DoD population and are consequently the districts with representatives on the HASC. District 4, with Representative Vicky Hartzler (R-

[164] Boeing Defense, Space & Security is moving with about 50 employees to Washington D.C. in 2017.
[165] Army Ft. Leonard Wood and Whiteman Air Force base.

MO), has over half of the states DoD population and roughly a tenth of the total defense spending. The majority of the defense money in her district is in MILPERS, MILCON and O&M.[166]

In 2011 when the BCA was enacted, it was clear that the most severe cuts would come in exactly the appropriations most important to MoC Hartzler. She was the only member of the Missouri delegation to make a public statement, and her response when asked about the defense budget was, "I was able to promote a strong defense budget when it could have been cut a lot more severely." [167] In other words, she recognized that the cuts would affect her constituency and she tried to get ahead of the blame.

[166] U.S. Department of Defense Office of Economic Adjustment.
[167] As quoted in the Hill online newsletter: New Member of the Week: Rep. Hartzler sees God's plan in politics By Ramsey Cox - 05/16/11 10:19 Am EDT. Hartzler helped organize an effort by 24 freshmen to ask the Republican leadership and Ryan not to make any further cuts in defense beyond what the Obama administration requested.

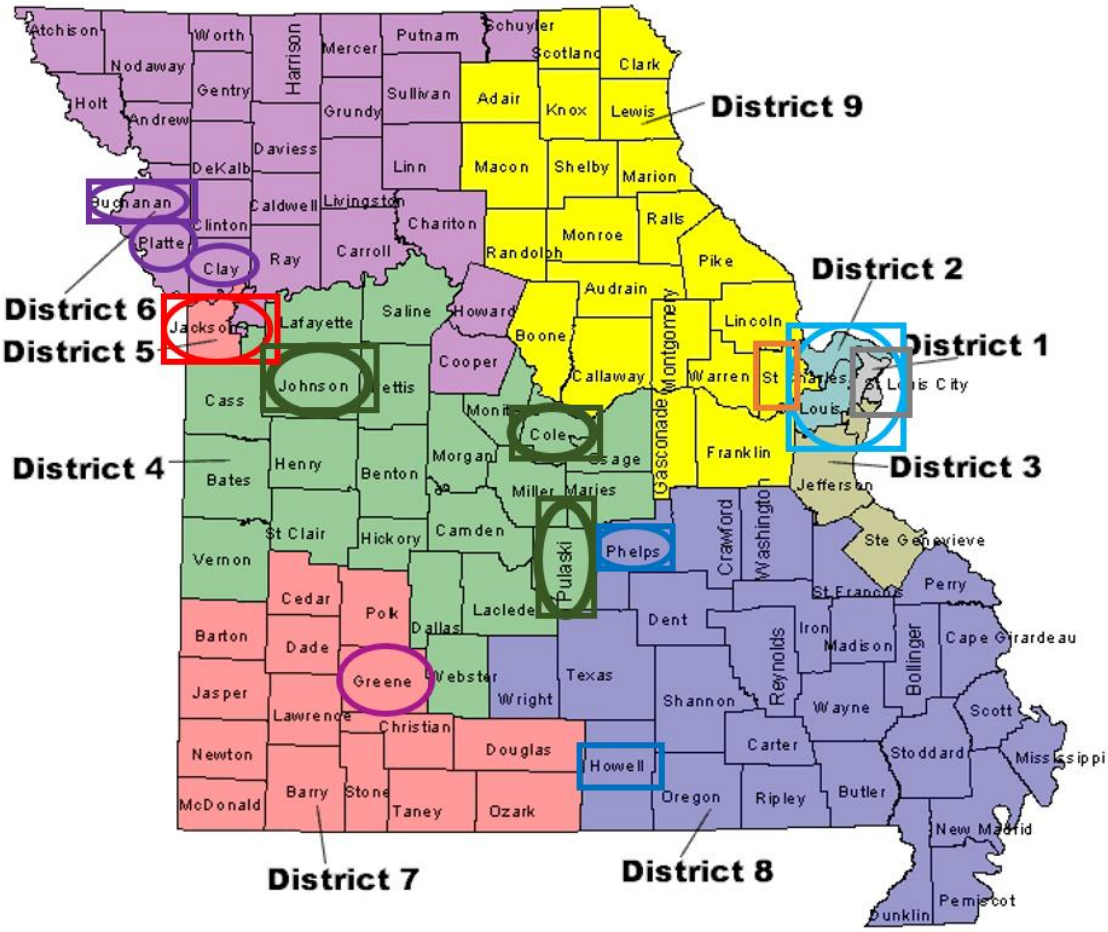



*Figure III-35: Top Missouri Counties and Districts for Defense Spending*
Source: *U.S. Department of Defense Office of Economic Adjustment*

Constituent concerns are not the only influence to Missouri MoC. Boeing accounts for $6.4 billion of the $10.6 billion in annual defense spending in the state and employs nearly 15,000 workers. It makes $830 million in vendor purchases in the state supporting 27,000 indirect jobs, and donates over $1.2 million to Missouri charities every year.[168]

Boeing is the also the major defense PAC donor to Missouri MoC and it has provided considerable support over the years. Rep Hartzler (D-4) has received $24,000 from Boeing since 2010, as well as $30,000 from Northrop Grumman and $22,000 from Lockheed Martin. Rep Sam

[168] Based on FEC filings.

Graves (D-6) has received $10,000 from Boeing and $10,000 Raytheon since 2014. Senator Claire McCaskill has received $79,000 from Boeing since 2008, while Senator Roy Blunt has pocketed $117,000 from Boeing since 1998. It is no surprise that Boeing has donated to every MoC in the state with a seat on a defense committee, as well as to the MoC from the St. Louis area where its defense division is based.

In Missouri, as in most states, defense spending is an important part of the political environment. This is not to say that MoC are bought by the defense industry. Rather, campaign funding, constituent service and policy agendas all coalesce to form a composite picture of influences, each having greater or lesser impact depending upon the situation. What is common in all cases is that defense spending matters to the states and to the MoC who represent them.

### C. MoC and Incumbency

All of the discussion in the chapter boils down to how the individual MoC perceives defense spending to be personally beneficial. In determining why federal funds are distributed the way they are, no single theory (committee, party, or ideology) fully accounts for the behavior (Rundquist and Carsey, 2002), but some things are common. MoC must take care of their constituencies (Fenno, 1978) if they wish to stay in office, and defense spending affects a large range of constituents. We have discussed the defense industry and state economies, but there are also specific populations that are more sensitive to defense spending.

Gallup polling consistently indicates that the U.S. military is the most trusted institution in America; however, that does not mean most voters support continuous defense spending increases. However, there are significant groups that tend to support defense. Whether motivated out of ideology or self-interest, MoC are aware of the DoD and veteran populations as a viable

voting bloc. DoD is the largest employer in the U.S., with 2.1 million full-time workers constituting approximately two and a half percent of the workforce. Even more important are the 22 million veterans representing roughly 10% of the U.S. voting population, and who are 10-12% more likely to vote than the average citizen.[169] According to census data veterans tend to be white (78%), male (91%), older (50% are over 50) and married (53%). More often they are Republican (34%) vs. Democrat (29%) or Independent (33%), and they tend to be more conservative (46%) than liberal (14%) or moderate (40%). They also tend to support defense spending and consider defense matters as personally important.[170]

Defense and Veterans Affairs (VA) are two separate parts of the discretionary budget (Budget Code 050 and 700 respectively), but they are closely related. As VA's role is supporting the post military service population, some look at the VA budget as a mirror image of the DoD MILPERS budget. The higher the number of service members in DoD, the larger the MILPERS budget and the larger the pool of people potentially eligible for VA benefits. However, such a comparison has inherent errors. Even though they may appear tied, a great many factors drive VA costs. The VA's primary responsibility is to provide job training, education and medical benefits to former service members, particularly those wounded in service. Figure IV-21 is a comparison of the DoD and VA budgets, and you can see that conflicts such as the Vietnam War certainly drive VA costs. DoD policy is to discharge wounded soldiers who cannot be returned to active duty, and when they are discharged their medical care is transferred to the VA. With large numbers of service members returning from Vietnam, the VA had to expand to accommodate the growing wounded population. After the war ended, VA costs eventually subsided since the draft was discarded and no other active large-scale conflict occurred until 2001. This slow rate of

[169] U.S. Census reporting https://www.census.gov/hhes/www/socdemo/voting/publications/p20/2012/tables.html.
[170] Gallop polling.

decrease was unaffected by the Reagan defense buildup in the 1980s, as the bulk of the budget increase was for procurement, rather than large scale increases in personnel. The slow growth in the VA budget during the 1990s was affected by the discharge of large numbers of service members during the post-Cold War defense drawdown, but the primary driver was the ageing veteran population from WWII, Korea and Vietnam. The rapid growth in the VA budget post September 11, 2001 was driven by large number of returning wounded soldiers, but also by vastly increased education benefits from the Post-9/11 Veterans Educational Assistance Act of 2008.[171] Typically, VA increases follow active combat and are lagged by several years. The lag was more pronounced in the current conflict due to a change in DoD policy to keep wounded soldiers on active duty much longer, instead of immediately transferring them to VA, and the large numbers of service members reaching their minimum enlistment commitment and taking advantage of educational benefits.[172]

[171] Post -9/11 medical practices have resulted in the higher survival rate from wounds; however, this also produced higher numbers of wounded requiring VA care. Post-9/11 Veterans Educational Assistance cost over $45 billion.
[172] DoD engaged in a policy of holding wounded and disabled soldiers on active duty as a show of good faith. This policy changed with increased budget pressure in 2013, leading to large scale discharges and transfer to VA care.

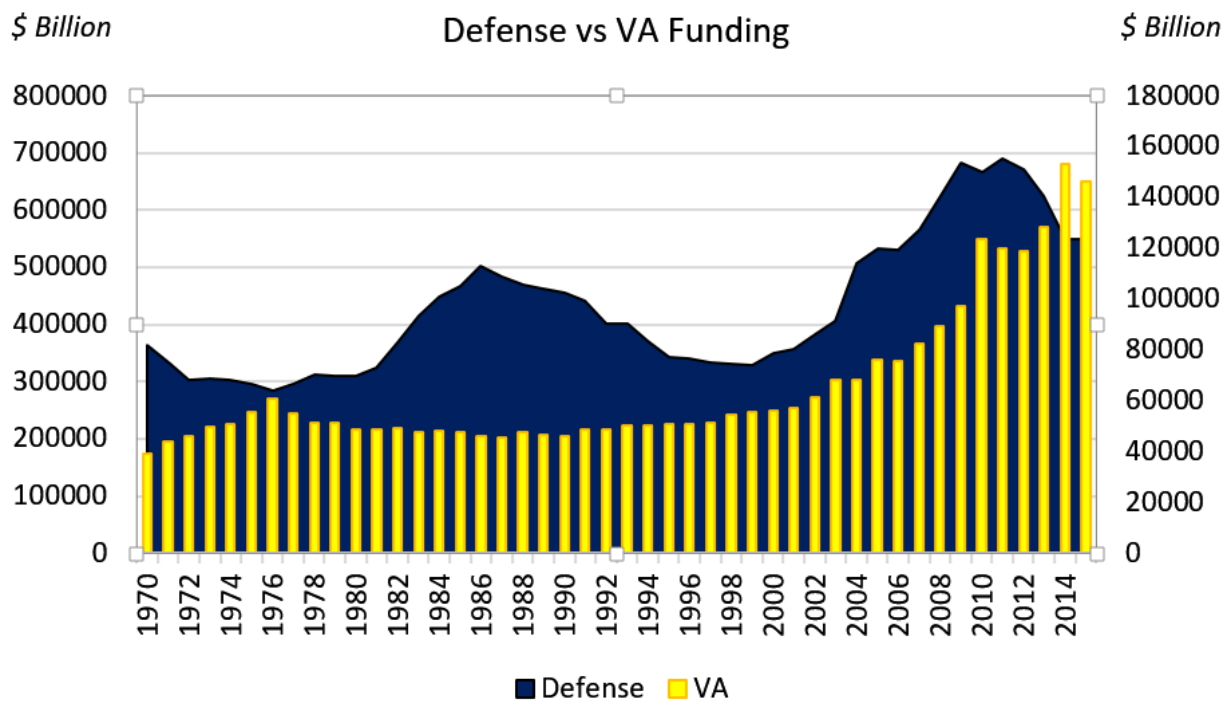



*Figure III-36: DoD Budget vs VA Budget*
*Source: VA and DoD Budget Records*

Perhaps the greatest single political factor in VA budget growth has simply been visibility. When there is focus on the defense budget and defense in general, there tends to be spill-over onto VA. The War on Terror put the focus on wounded soldiers, which led to visibility into VA problems with treatment times for all veterans. In consequence, with this increased congressional attention the VA budget expanded. Taken in this light, the VA budget can be seen as a collateral budget influenced by increased DoD growth, and hence another tool for MoC to reach a powerful voting group. The figures below will help to illustrate this point.

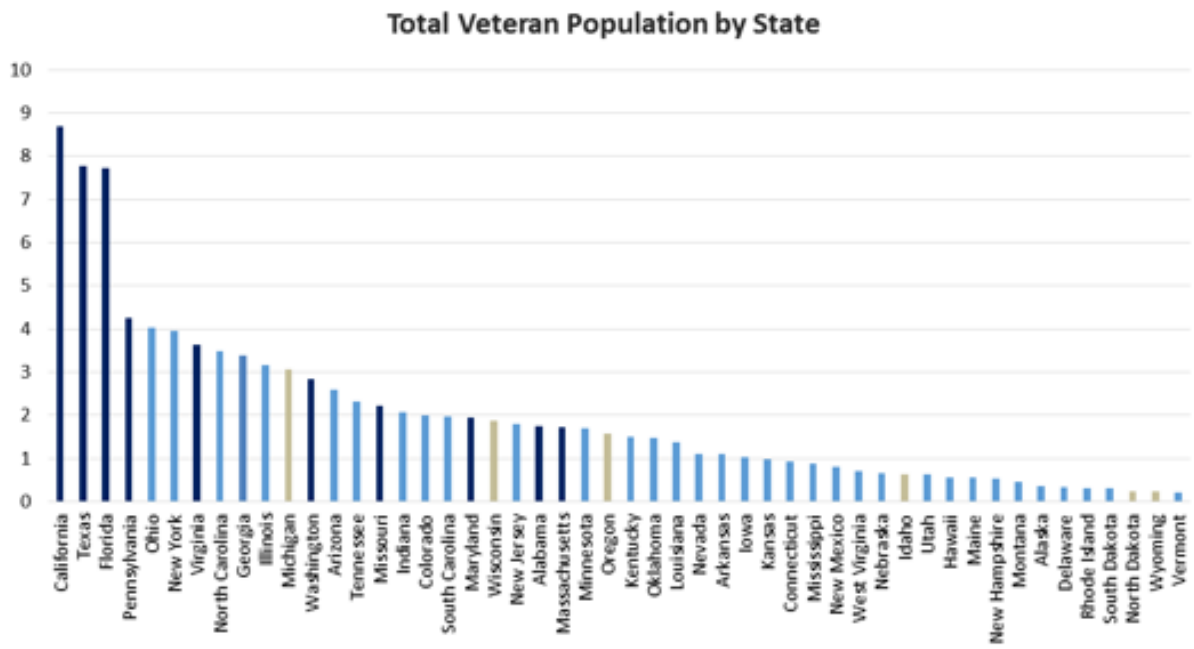
Figure IV-21 describes veteran population by state. The dark blue bars show the top ten states for defense contracts and the grey bars show the states that have no representation on a defense committee.[173] The top portion of the chart delineates the largest populations of veterans

[173] I used the committee assignments of the last two congresses to make these charts. States on defense committees can change with each new Congress, but historically the six states in grey have been under underrepresented.

by state, and it is clear that the top defense contracting states are clustered among the states with the largest veteran populations. Veterans tend to work in defense or government more than the average population and they prefer to live in close proximity to military bases for easier access to VA facilities, just as defense contractors tend to locate near DoD facilities for greater access to their customers.[174] The lower section of Figure IV-21 ranks the states by the percentage of the voting population made up by veterans. In this case, the top defense contracting states do not coincide with the states with the highest veteran percentage of voters. This is influenced by the fact that states with smaller populations tend to have fewer military bases and a smaller defense industry footprint.

What is most interesting about these two charts is the story they tell about representation on defense committees. The senate committees (SAC-D and SASC) are composed of a greater share of the states with higher veteran percentage of the overall voting population, while the House committees are composed of more of the states with higher overall veteran populations. This makes sense when you consider that the Senate is more concerned with a statewide voting bloc, and the House with high local concentrations of a voting bloc within a particular district. This is borne out in that the districts represented MoC on the HASC and HAC-D tend to have the highest veteran populations in their respective states. The logic is intuitive, but it helps explain the political motivation for particular MoC to seek seats on defense committees.[175]

[174] Retirees are a subset of veterans and do tend to live in close proximity to military bases since they have medical, exchange and commissary shopping privileges as part of their retirement benefits.
[175] Veteran employment and location information is drawn from U.S. Census data.



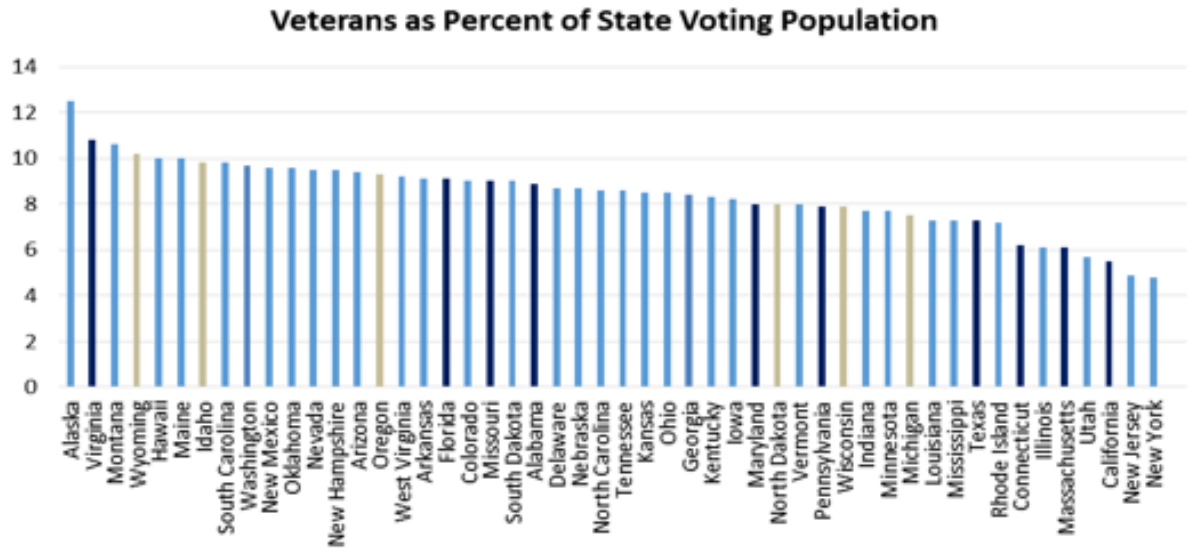




*Figure III-37: Veteran Population*
*Source: U.S. Census Bureau*

Figure IV-23 below expands the argument to include both veterans and DoD personnel. This chart is supportive of what we saw in Figure IV-22, in that the top defense spending states are clustered around the states with the largest veteran and DoD populations. It should be noted that although large DoD appropriations do tend to follow large DoD and veteran populations,

there are exceptions. Michigan, Wisconsin and Oregon are three of the states without representation on a defense committee. On the chart below we see that they have reasonably large DoD and veteran populations, but what is not shown on this chart is that they also have very small defense industry footprints that are two and a half times smaller than the average and each have less than 1% of GSP attributable to defense. It follows that the formula to determine the importance of defense to a particular MoC is reflected in a combination of a defense supportive electorate population and defense dependent industry.

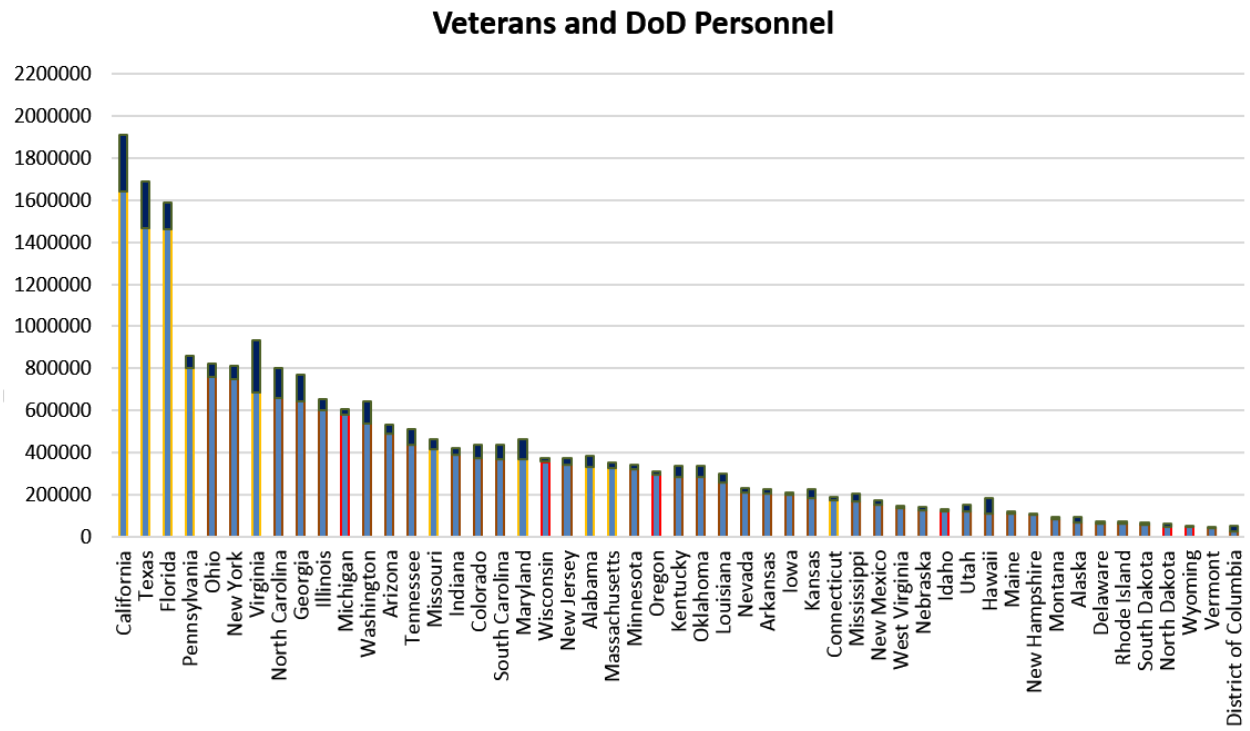



*Figure III-38: DoD and Veteran Population*
*Source: U.S. Census Bureau*

One significant measure of success for any MoC is incumbency. It has been shown that defense spending helps strengthen incumbents (Born, 1990; Levitt and Snyder, 1997; Schmit, 2000; McDermott and Jones, 2003; Jones, 2010), and when the incumbent is strong, high-quality candidates do not run and money stays away (Jacobson and Kernell 1983; Fowler and McClure, 1990; Patterson and Monson 1999; McDermott and Jones 2003). I have argued that increased

defense spending is perceived[176] by MoC to bolster individual and institutional congressional approval. It follows then that increased institutional and individual congressional approval should improve incumbency rates.

Figure IV-24 below looks at a time series comparison of congressional approval rates and House of Representatives incumbency rates. The results support the conclusion that in most cases, the institutional approval rate of Congress does impact the incumbency rate, at least in the House. If this is true, then it is logical to assume that MoC would use defense spending as a lever to turn congressional approval in their favor in order to stay in office.

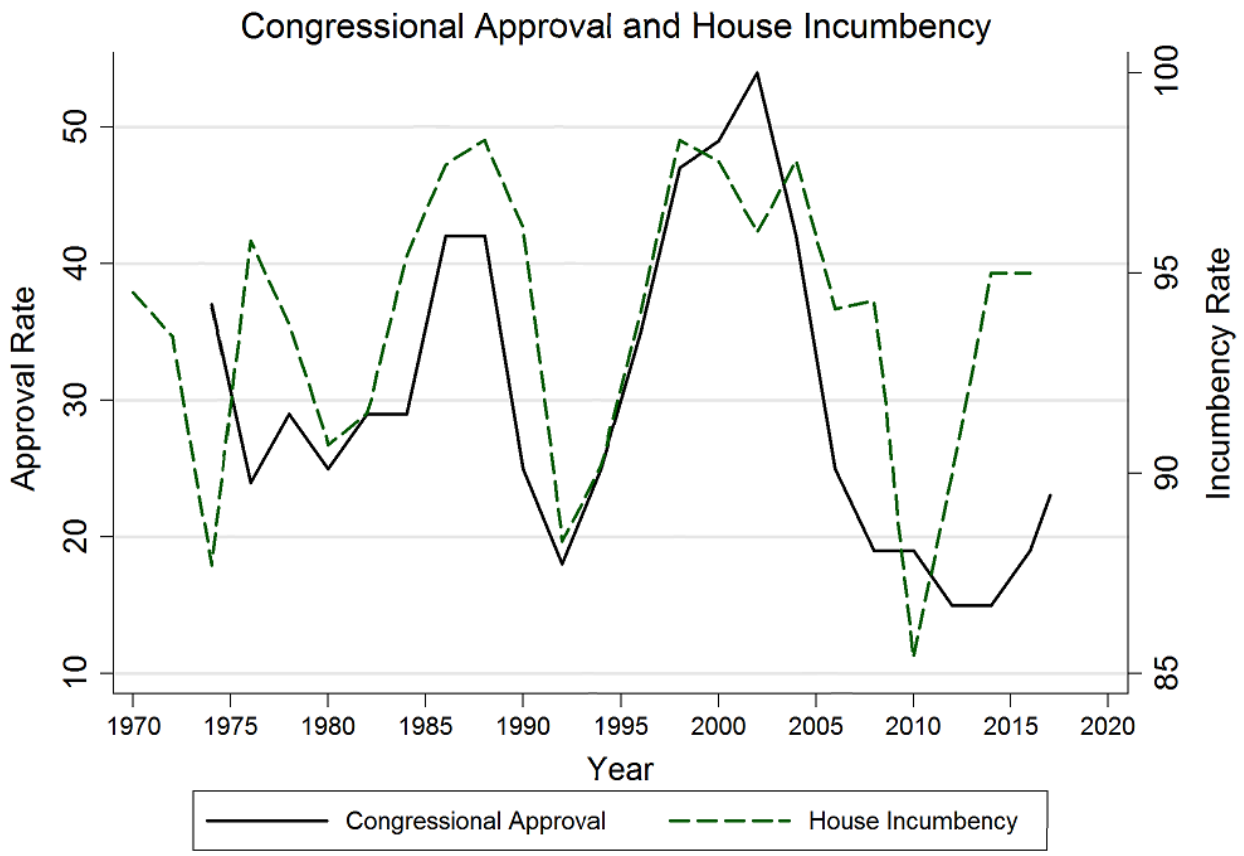



*Figure III-39 Incumbency and Congressional Approval*
*Source: Gallop polling and CQ Voting and Elections Collection*

[176] OLS regression shows a significant correlation at the .005 level.

### D. Summary

In this chapter, we have looked at the impact of the defense process from the perspective of the primary stakeholders. The defense industry, state economies, constituents and MoC all benefit from defense spending. The real question then is not why MoC increase defense spending when their public approval drops, but why they are not always pushing for greater defense spending.

The answer of course lies in the limited nature of available funds, and the pressure for MoC to lower taxes while satisfying the non-defense priorities of constituents, such as infrastructure, education and healthcare. With the increase of mandatory spending and little chance of MoC taking the decidedly unpopular tact of increasing revenues through tax increases, the discretionary budget will continue to shrink as a function of the overall national budget. However, if anything this contraction only makes defense spending more important as an electoral shaping tool. There is no other single budget with so broad an impact.

The defense industry's economic power and political capital executed through its PAC's is considerable. The states recognize the durability and profitability of defense both as a direct employer and as the facilitator of indirect jobs. MoC benefit from the contributions of PACs and the constituent support generated by defense jobs and defense supportive populations such as DoD employees and veterans. All of these factors make the defense budget a powerful and useful tool of MoC to shape public approval and influence their incumbency opportunities.

# V. Methods and Results

*In this and like communities, public sentiment is everything. With public sentiment, nothing can fail; without it nothing can succeed.*

**– Abraham Lincoln**[177]

## A. Introduction and Note on Time Series

This project was conducted as a time series examination of the effects of congressional approval on defense spending between 1970 and 2015. As expected, the presence of war and significant shifts in economic health led to large fluctuations in defense spending; however, public opinion on the adequacy of overall defense spending and congressional approval ratings also acted to modulate changes in defense spending both during and between cycles of war and severe economic turbulence. It was also observed that the overall defense budget behavior conformed to leptokurtic expectations of Punctuated Equilibrium Theory (PET).

The particular time span was chosen due to the availability of data and the scarcity of scholarly work on defense spending over this period. It also allowed for the preclusion of wars of national survival (WWI or WWII), which would have skewed the results due to the nature and scale of those conflicts.[178] Complete datasets were available or constructed for all variables of interest and could in all cases be verified by multiple sources.

Budget data naturally lends itself to time series analysis, and the defense budget describes a particularly punctuated stochastic process whose future values are correlated to some degree

[177] Lincoln reply in the first debate with Senator Stephen A. Douglas, Ottawa, Illinois (August 21, 1858); in Roy P. Basler, ed., The Collected Works of Abraham Lincoln (1953), vol. 3, p. 27.
[178] Wars of survival operate differently than regional wars or interventions due to the level of impact war mobilization has upon the economy.

with past values. Since no budget as large as the U.S. defense budget is restarted from zero with each new iteration, the previous year's budget provides a baseline which is either maintained or modified.[179] Since budget data is ordered over time, it is not necessarily identically or independently distributed. As I was interested in obtaining accurate interpretations of significant relationships and predictions with continuous time ordered data, a time series model was chosen.

The variables in this study (Table V-1 below) were selected to represent the primary drivers of the defense budget process. The variable of interest is congressional approval and the control variables of public opinion on the adequacy of defense spending, economic health and the presence of war, were selected as the result of a thorough literature review of past research, and represent the accepted major drivers of defense spending.

*Table V-1: Dependent and Independent Variables*

| | |
|---|---|
| **Dependent Variable (DV)** | **Annual Real Growth in US Defense Budget** |
| **Independent Variable One (IV1)** | **Congressional Approval** |
| **Independent Variable Two (IV2)** | **Public Opinion on Sufficiency of Defense Spending** |
| **Independent Variable Three (IV3)** | **Presence of War** |
| **Independent Variable Four (IV4)** | **Annual GDP Growth** |
| **Independent Variable Five (IV5)** | **Annual Unemployment Rate** |

### B. Punctuation in Budgets

Before delving into the model selection and results, I examine the punctuated nature of defense budgets. Baumgartner and Jones were the first to describe the defense budget as highly

[179] Wildavsky (1992) rightly described that the defense budget is too large to start from scratch each year. However, this does not necessarily imply an incremental process, only one that manifests a relationship with its past values. However, the amount of change from year to year is dependent upon much more than simply its past state.

kurtotic and experiencing periodic punctuated shifts rather than incremental adjustments. They determined that this was a function of both external shocks and internal friction. As punctuation is expected to increase with the number of internal friction points, and the defense budget is uniquely subject to political, economic and environmental influences, they reasoned that the defense budget should show significant Kurtosis. This high kurtosis was expected to manifest itself as a leptokurtotic curve, displaying high central peaks and fat shoulders indicating more outcomes resulting outside of the normal distribution expected of an incremental process (Baumgartner and Jones, 1999).

However, Baumgartner and Jones looked at the entire defense budget from 1781 to 2015, and their analysis was dominated by the dramatic shifts resulting from three major wars of national survival in U.S. history: The Civil War, World War One (WWI), and World War Two (WWII).[180] To determine if their theory held during the much smaller period of my investigation, I decided to run a series of tests to compare defense and other budgets under less than major war conditions.

Figure V-1 below shows the overall punctuated characteristics of the defense budget during the full period of defense spending (left side) and the period under my investigation (right side). The period from 1970 -2015 is not as kurtotic as the full period of 1791–2015[181] due to the absence of major wars of national survival; however, it still demonstrates a punctuated process. In the time series line charts in Figure V-1, I have labeled significant events corresponding to large punctuations.[182] Of note are the large numbers of smaller punctuations between those

[180] Jones et al. followed this up in 2014.
[181] Obtained from the Comparative Agendas Project. The data used here were originally collected by Frank R. Baumgartner and Bryan D. Jones, with the support of National Science Foundation grant numbers SBR 9320922 and 0111611, and are distributed through the Department of Government at the University of Texas at Austin. Neither NSF nor the original collectors of the data bear any responsibility for the analysis reported here."
[182] The Reagan defense buildup of the early 1980s, the first Gulf War in 1991, the Invasion of Iraq and the Budget Control Act of 2011 (budget enforcement began in 2013).

events. These represent the bends in the exponential path caused by localized policy dynamics such as the effect of congressional approval on spending, which Brian Jones, et al (2014) could not explain in their Disrupted Exponential Incrementalism Theory.[183] The histograms show higher than normal central peaks and fat tails associated with a leptokurtic distribution, and the quantile probability (Q-Q) plots confirm the telltale crossing and re-crossing of the expected trend line ("s" curve) associated with this distribution. Defense is not the only budget to display punctuated characteristic, only the most severe. To compare this phenomenon, I looked at the punctuation patterns of eight other discretionary budgets.

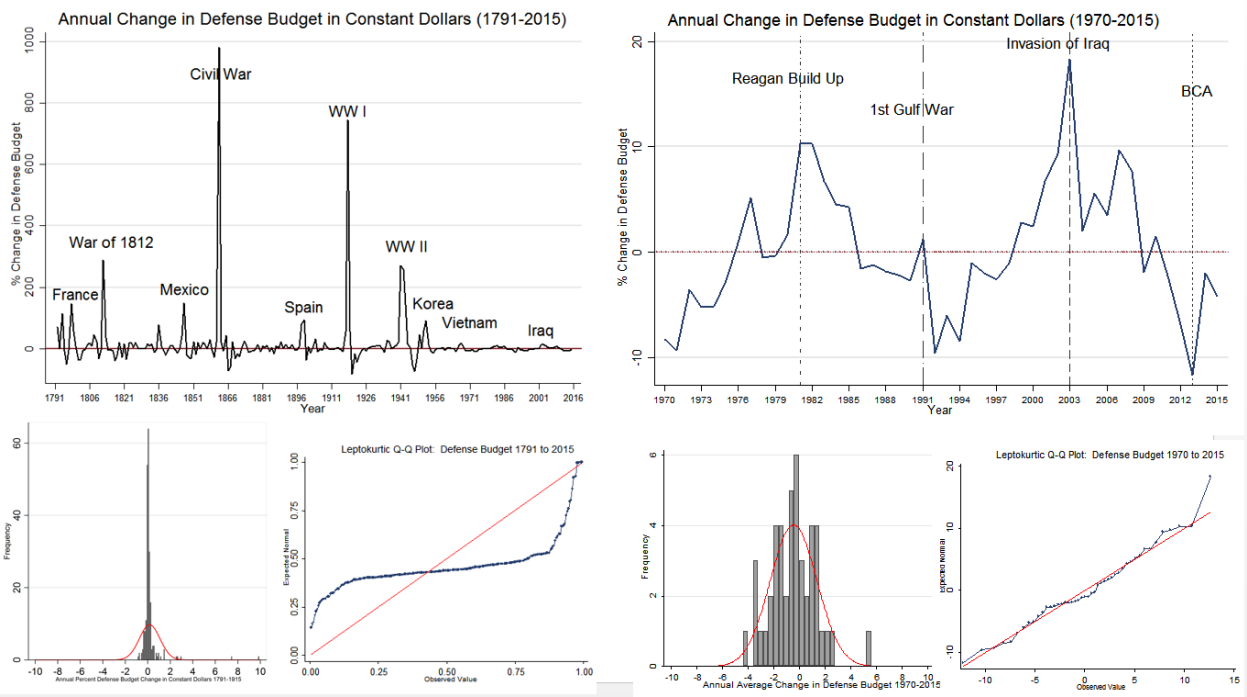



*Figure V-1: Punctuation in Defense Spending*
*Source: Comparative Agendas Project and DoD Greenbook 2017*

All discretionary spending bills should theoretically operate under similar constraints as defense spending, reacting to external shocks and internal friction. Opportunities for friction

[183] Derivation of PET theory.

points are influenced by the size of each budget, its salience and extensibility.[184] The size of each budget acts as an indicator of potential per capita influence in the state or district where it takes effect. Salience provides a measure of relative importance to the general electorate of the programs affected and thus the expected political pressure to pass its associated spending bill. Extensibility seeks to describe the degree to which the benefits of a particular budget can be stretched across multiple states and districts, thus attracting more congressional advocates. The defense budget scores highly in each of these areas.

In sheer magnitude alone, no other discretionary budget approaches defense spending. Determinations of relative salience and extensibility of other budgets are debatable, and a definitive determination is beyond the scope of this paper. Fortunately, the intention here was simply to demonstrate that each budget describes a punctuated process and not to establish individual causality. A time series regression was undertaken to determine the comparative influence of congressional approval on budgets other than defense.

The budgets chosen for analysis were not comprehensive, but were representative of budgets funded by the 12 appropriation bills considered by Congress each fiscal year.[185] As expected, each budget displayed leptokurtic properties of varying intensity (see Figure V-2 below). In no case did any of the budgets conform to continuous incremental (normal) distributions, although none displayed levels of punctuation as extreme as those of defense spending.

[184] The larger, more impactful and important to the electorate a budget, the more legislators and entrepreneurs are interested in possible outcomes.
[185] For those budgets which receive both discretionary and mandatory funds, only the amounts provided by discretionary appropriations were considered.

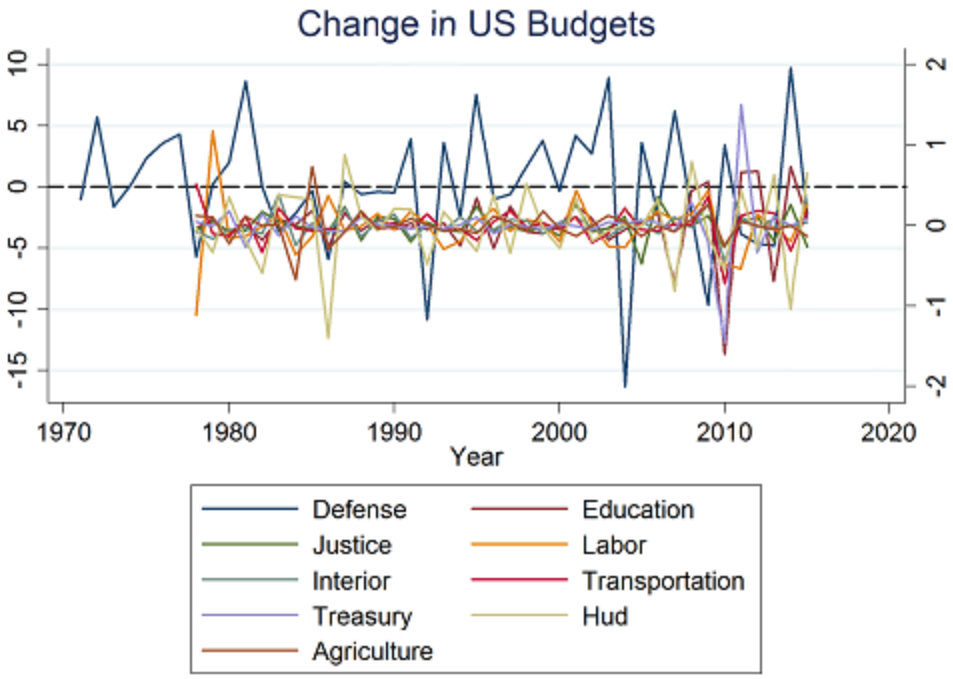



*Figure V-2: Punctuation of Discretionary Budgets*
*Source: Congressional Budget Office*

Mandatory budgets were also examined. Medicare was the best example for comparison since it is comparable in size, salience and extensibility to the defense budget.[186] Figure V-3 below demonstrates that basic punctuated characteristics was present. The histogram and Q-Q plot exhibited the same leptokurtic characteristics as the defense budget even though it is not a budget facing appropriation changes each year. This seems to confirm that most, if not all, U.S. federal budgets tend to fall (for multiple reasons) outside simple incremental forecasts, even when the political and environmental forces acting upon them are quite different.[187]

[186] Size was a measure of $ amount allocated per year. Salience was determined by an examination of Most Important Problem polling by Gallop over the period in question. Extensibility was determined by the degree of Medicare funding per state estimated by BEA over the time period.
[187] A more detailed examination of mandatory and discretionary budget behavior is beyond the scope of this paper. The intent here is limited to demonstrating that congressional approval affects defense spending and that congressional approval does not affect any other budget, even though they all show punctuated characteristics.

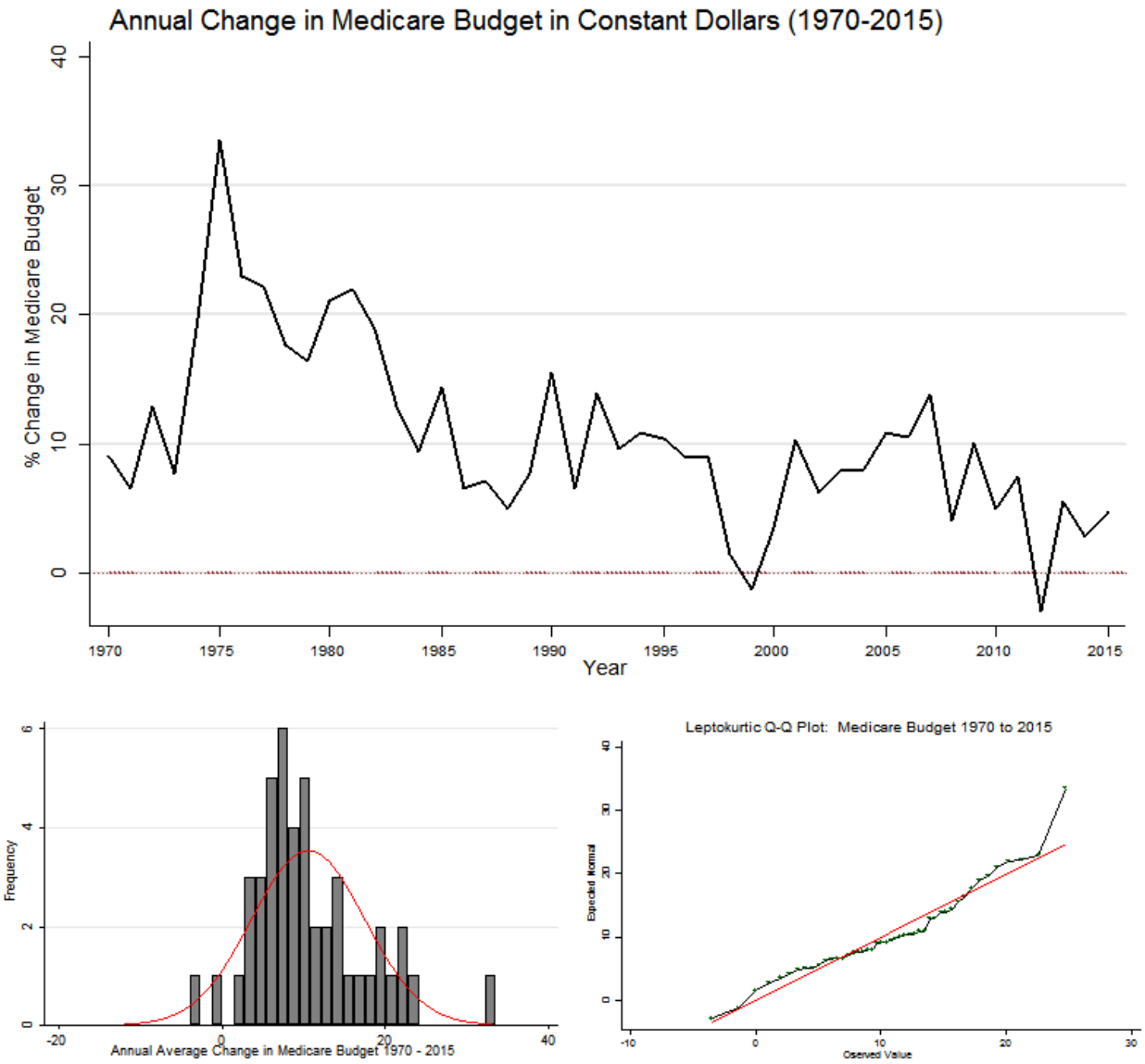



*Figure V-3: Medicare Budget Punctuation*
*Source: Congressional Budget Office*

### C. Measuring Defense Spending

The primary problem with operationalizing military budget change lay with the vast number of government and private sources which each calculate the defense budget slightly differently. With such vast sums of money, even small accounting discrepancies could have significant impact on the resultant data. The Department of Defense (DoD), the Office of Management and Budget (OMB), the Congressional Budget Office (CBO), the Treasury

Department, The Bureau of Economic Analysis (BEA), the Congressional Research Service (CRS), the Government Printing Office (GPO), as well as academic projects such as the Correlates of War and the Comparative Agendas, all provide unique interpretations of defense budget data, including their own collection sources and deflator calculations.[188]

I compared the four most published data bases, and chose as the metric of interest their measures of annual defense Budget Authority (BA).[189] BA is defined as the authority to incur legally binding obligations of the federal government resulting in immediate or future outlays.[190] BA is the most technically accurate measure of defense spending as it reflects the amount of money Congress intended to spend in any given year.[191] The data bases examined were from DoD, OMB, CBO and Comparative Agendas Project.

Each database contained discrepancies from the others based on three basic areas of disagreement.[192] The first is the calculation of the total amount spent on defense. The U.S. budget is composed of budget functions and sub-functions. National Defense (budget function code 050) captures all elements of the budget which pertain to defense of the nation and includes military spending (sub-function 051), [193] atomic energy defense activities (sub-function 053) and defense-related activities of other federal agencies (sub-function-054).[194] The military budget is

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[188] The data used here were originally collected by Frank R. Baumgartner and Bryan D. Jones, with the support of National Science Foundation grant numbers SBR 9320922 and 0111611, and are distributed through the Department of Government at the University of Texas at Austin. Neither NSF nor the original collectors of the data bear any responsibility for the analysis reported here.

[189] Calculated from online reference count and my literature review.

[190] Most Defense BA is provided by the Congress in the form of enacted appropriations (see earlier discussion of the defense budget process).

[191] The two competing choices were "outlays" or "Total Obligational Authority" (TOA). However, both outlay and TOA can include money from previous fiscal years or exclude money which is not executed in the current fiscal year, and therefore don't necessarily reflect the intent of Congress in a given year.

[192] For example, beginning with the FY 1998 budget, the OMB worked with data that had been rounded to the millions of dollars, while the DoD data were derived from numbers rounded to the thousands (DoD 2017 Green Book). It matters when comparing

[193] 051 includes Overseas Contingency Operation Funds (OCO).

[194] This includes national defense related activities of the Department of Justice, Department of Homeland Security, Central intelligence Agency, and other agencies as required (Congressional Research Service 7-5700, 17 Mar 2017)

by far the largest part of the budget, but the other sub-functions add billions of dollars to the total. Adding to the confusion, some databases use the National Defense and DoD budget terms interchangeably, leaving the reader to guess if the sums listed include all sub-functions. I chose to utilize the National Defense Budget (sub-function-050) in my analysis, as it offers a more complete picture of the expanse of programs touched by defense spending, and thus available for manipulation by the congressional authorization and appropriation processes.[195]

An even more perplexing issue is the choice of deflation index. When transforming budget data into constant dollars a multiplier is applied to account for inflation. This multiplier is determined by measuring prices from a fixed point in time, setting the base year equal to one, and then multiplying the index value of each year by one plus the annual rate of change of the next year. The problem is that the annual rate of change is measured differently by individual organizations and is then applied to different base years depending upon the organizations preference. When applied independently, or in conjunction, these non-standardized index practices can lead to significant variance in the transformed data.

This problem was avoided by utilizing the DoD comptroller database. Published annually for over 30 years and containing complete datasets and detailed justifications for indexes and deflation calculations, it was the most transparent database available. The level of detail and the ability to validate each year's data through cross reference with previous year's documents was not available from any other source.[196]

[195] These codes are explained in the DoD Comptroller 2017 Green Book.
[196] The DoD Green Book has been published by the office of the Undersecretary of Defense (Comptroller) since 1985 and contains a complete data set of military budget metrics from 1948 to the current year. It also contains detailed explanations of sources, rounding, indexes, deflation calculations, other relevant economic data and current (year of authorization) and constant year (inflation adjusted) figures.

The next issue was to determine whether to reference defense spending as constant dollars or as a percentage of Gross National Product (GDP). Contemporary studies utilize both approaches. Employing defense spending as a percentage of GDP captures the budget change as a percentage of the overall economy. The problem with this is that if the economy were to grow and defense spending stayed the same (dollar amount), the defense budget would appear to shrink, even though the actual dollar expenditure remained constant. Percent GDP is a preferred method by some authors as a way to show national priority for defense. This is similar to the way that NATO members are expected to spend two percent of their GDP on defense regardless of the threat, to demonstrate their commitment to the alliance (Goel and Saunoris, 2014; Barro and de Rugy, 2013; Heo and Bohte, 2012; Barro and Redlick, 2011; Heo, 2010; Pieroni, d'Agostino and Lorusso, 2008; Fordham and Walker, 2005). [197]

The second common approach utilizes "real growth" in the budget as determined by annual change in constant year inflation adjusted dollars. Real growth demonstrates actual buying power of the defense budget by accounting for inflation over time, and is purposely disconnected from GDP to show actual defense expenditures without regard for the size of the economy. The strength of this approach is that, by showing how much money Congress actually carves out and programs toward major defense programs, it can demonstrate what Congress actually determined to be politically or militarily necessary, regardless of other economic pressures or influences.[198] For example, if the economy were to contract and the defense budget remained constant, a percentage GDP comparison would show a growth in defense spending,

[197] In 2006, NATO member countries agreed to commit a minimum of two per cent of their Gross Domestic Product (GDP) to spending on defense. This guideline served as an indicator of a country's political will to contribute to the Alliance's common defense effort (Riga Summit 29 November, 2006).
[198] Every budget decision is a political trade off, and the defense budget may rise or fall during a weakening economy based upon political rather than economic decisions. This distinction may not be seen when tied to GDP.

while a real growth comparison would show the defense budget as flat (Jones et al. 2014; Owyang, Ramey, and Zubairy, 2011; Fisher and Peters, 2010; Hall, 2009; Jones and Baumgartner, 2005; Knopf, 1998; Bartels, 1991).[199] We can conclude from this example that despite the appearance of growth, there was no intent on the part of Congress to add money to the defense budget.[200]

After careful consideration and testing for serial correlation, I utilized the annual real growth in the defense budget.[201] Statistically, this provided a stationary time series dependent variable with no unit root and no differencing required. Theoretically, comparing annual inflation adjusted BA allowed a more straightforward comparison of defense related buying power without involving a more complicated disentangling from non-defense related GDP inflation factors.[202] In particular, I could better unpack the level of urgency with which Congress approached the defense budget on any given year. Rather than relying upon the size of the economy to determine defense spending commitments, I could use the dollar amounts applied to specific appropriations[203] to determine Congress' relative spending priorities.[204]

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[199] Or even declining if inflation rates were high and dollar amounts remained constant.
[200] It could be argued that by not decreasing spending during an economic downturn Congress was showing commitment to the defense budget, but that is not the same as adding funds to the defense economy.
[201] Also known as program growth; is the amount of growth that does not come from inflation. It is year-to-year growth in constant dollars – usually expressed as a percentage, and is computed by dividing the constant dollars for one year by the constant dollars of the previous year, and subtracting one. Real growth always implies a relationship between two or more time periods. This variable is commonly used in evaluating the defense budget and it is transformed through annual differencing and the application of a deflation index to eliminate inflationary trends.
[202] GDP may increase/decrease from a variety of factors, indicating a shrinking or growth of defense spending, when actual buying power has not changed.
[203] See chapter 4 for discussion of political ramifications of appropriation types.
[204] Did they choose to increase procurement or manpower, or reduce operations and maintenance? Each decision has tradeoffs as well as political and military consequences.

### D. Congressional Approval

Gallup public polling data for the years 1970 - 2015 measured public approval of the performance of Congress.[205] Gallup provided a nearly complete congressional approval datasets and the structure of their questions remained unaltered over the time span in question.[206] No other dataset, or compilation of datasets, could meet the same standard of coverage and question stability.[207] Three years were missing in the Gallup surveys (1984, 1985 and 1989). To fill in the gaps data from the years on either side was averaged and applied as the value for the year in question. There were numerous cases of multiple surveys conducted over the course of a single year, and in these instances, the average of those surveys was applied as a composite value for the entire year. The Gallup surveys allowed for a "yes," "no" or "no opinion" response, and I operationalized the "yes" response to represent general public approval of Congress.[208] The expectation was that defense spending would grow with increasingly negative congressional approval rates.

[205] Gallup Question: Do you approve or disapprove of the way Congress is handling its job?
[206] A second database existed asking a question on Confidence in Congress: "Now I am going to read you a list of institutions in American society. Please tell me how much confidence you, yourself, have in each one -- a great deal, quite a lot, some, very little or no opinion?" (Institutions were given in a random order and included Congress). This was rejected as it focused more on the stability of the institution, rather than on situational issues and the actions of current membership/leadership.
[207] In many cases the survey question changes over time. Gallup's questions remained constant.
[208] The "No" option was discarded as it is simply the reciprocal of "Yes." The "No Opinion" option was discarded since it reflected ambivalence to the question of congressional job performance and thus would be expected to be of less concern to MoC. I.e. there is no urgency to fix a problem the public does not care about.

### E. Control Variables

Public opinion on the appropriate level of defense spending was determined from Gallup polling during the years 1970–2015.[209] Unlike congressional approval, there were a handful of databases available, and following the example of previous research, I compared the GSS and Gallop databases for completeness and appropriateness (Eichenberg and Stoll, 2003). In each case, the questions asked and data results were very similar. Both were also nearly continuous over the period in question, however the GSS database contained wider and more numerous gaps. In the Gallop data only three years where missing between 1970 and 1978. To answer this problem a placeholder variable was created by averaging the difference between the value the proceeding and following years. Both the Gallop and GSS survey provided three responses (too much spending, about right, and too little). The "too little" answer was used in the model to represented public opinion toward inadequate resourcing for defense. The status quo value (about right) was also rejected, as it did not reflect a preference for change in either direction, and the budget did not remain static over the period of investigation. The expectation was that strong and consistent public support for increased defense spending signals to MoC a relatively easy win with constituents can be made by increasing the defense budget.

Unlike smaller scale military interventions, war is a primary driver of military spending. To establish the presence of war, a system of conditions must be satisfied. Although DoD does not publish a formal empirical qualification for war,[210] it is commonly (anecdotally) defined by academics and military personnel as meeting all three of the following criteria: (1) Being of

[209] Gallup Question: "There is much discussion as to the amount of money the government in Washington should spend for national defense and military purposes. How do you feel about this? Do you think we are spending too little, about the right amount, or too much?"
[210] U.S. Law of War Manual (2015) and 1956 FM 27-10 (Change No. 1 1976)

duration greater than 1 year; (2) deploying significant numbers of troops (greater than 10,000)[211] in direct combat operations; and (3) involving a direct threat to the United States. Humanitarian interventions, in all cases examined, failed to meet at least two out of three of these criteria and were not considered as war. The Cold War was a bit of a challenge, as its nature was very different than that of a classic 'hot war.' However, it did not meet all three criteria and was not included as a war in this analysis.[212] I also consulted the Correlates of War (COW)[213] Project data base which utilizes the Small and Singer classification of war.[214] In all cases my classification and that of COW were in concurrence. Years where war was present were labeled as "1" and years where war was not present were labeled as "0."

War does not bring an instantaneous increase in defense spending. The defense budget maintains the military at a readiness level to engage in low level conflict, but it is not intended to be sufficient to fund the active prosecution of war. DoD operates under the expectation that budgets will ramp up to meet operational requirements in time of crisis.[215] In anticipation of this I modeled both immediate (supplemental budgets) and lagged increases to defense spending.

In most cases supplemental increases were retroactively included in defense spending totals for the year in question. However, where they were not I manually included them so that each year of the war reflected Congress' intended funding level (in or out of budget cycle). The expectation was that the presence of war would force increases in defense spending; however,

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[211] 10,000 soldiers is the low end of Division Strength in the U.S. Army. (https://www.army.mil/info/organization/)
[212] Regional conflicts such as Korea and Vietnam, which are considered part of the Cold War, would have been included, but they fell outside of the period of examination.
[213] Sarkees, Meredith Reid and Frank Wayman, *Resort to War: 1816 - 2007*. (Washington DC: CQ Press, 2010).
[214] Their overarching definition of war was: sustained combat, involving organized armed forces, resulting in a minimum of 1,000 battle-related fatalities (later specified as 1,000 battle-related fatalities within a twelve-month period). (Small, Melvin and J. David Singer. Resort to Arms: International and Civil War, 1816–1980. Beverly Hills, CA: Sage, 1982: 205-206.).
[215] This expectation is explicit in each services mobilization plans.

those increases would not necessarily continue to rise throughout the duration of the conflict, but rather will rise and fall in accordance to changing political, military and economic conditions.

Overall economic health in this model was represented by measurements of annual change in Gross National Product (GDP) and unemployment. These datasets were draw from the Bureau of Economic Analysis and allow for continuous stable time series data. These metrics were commonly included in studies on defense spending (Nakamura and Steinsson, 2014; Owyang, Ramey, and Zubairy, 2013; Barro and de Rugy, 2013; Whitten and Williams, 2011; Heo, 2010; Suzanna De Boef and Kellstedt, 2004; Fordham, 2002; Derouen and Heo, 2000; Carsey and Rundquist, 1999). GDP allows us to look at defense spending change as a function of the overall economic growth or contraction of the economy. If defense spending diminishes as GDP decreases and grows as it increases, it would represent government acknowledgment of the available pool of resources for defense expenditures. However, if defense spending increases during GDP decline it could indicate a military Keynesian attempt to stimulate the economy through government spending (Brace, 1993; Rundquist, 1999; Levitt and Snyder, 1997; Schmit, 2000; Pieroni, d'Agostino and Lorusso, 2008). Similarly, when defense spending increases during times of increased unemployment it may indicate a desire for government to increase investment in the economy to spur job creation (Nakamura and Jon Steinsson, 2014; Whitten and Williams, 2011; Carsey and Rundquist, 1999). Both of these variables were needed in the model to account for variation due to economic effects, which cannot be ignored in any study of budgets. The expectation was that defense budgets would increase with growth in GDP as well as with a rise in unemployment rates.

### F. Model Selection

I adopted a Box Jenkins approach to model selection. I began with a preliminary analysis to ensure that the intended series described a time ordered, continuous, stationary and stochastic process. A series of Augmented Dickey Fuller tests were performed to determine if the process exhibited a unit root, and the results showed stationary variables appropriate for an ARIMA time series model. I then compared seven different AR (p), MA (q) and ARMA combinations. The estimates of these candidate models are shown in Table V-2 below. In determining the best fit, I looked at the significance of the coefficients from the ARMA models, the Autocorrelation Functions (ACF), and the Partial Autocorrelation Function (PACF) of the residuals from the models. I evaluated the candidate models using Akaike's information criterion (AIC), Schwarz's Bayesian information criterion (SBIC), and Ljung Box portmanteau tests for serial correlation. The final model had to be sufficient (no serial correlation in the residuals) and parsimonious. The AR (1) model below provided both the best fit and the most parsimonious option.

$$\boldsymbol{y_t} = \boldsymbol{\alpha}0 + \sum_{\boldsymbol{i=1}}^{\boldsymbol{p}} \boldsymbol{\phi_p y_{t-p}} + \sum_{\boldsymbol{i=1}}^{\boldsymbol{q}} \boldsymbol{\theta_q \epsilon_{t-q}} + \boldsymbol{\varepsilon_t}$$

*Table V-2: Candidate Models*

**ARIMA Model Comparison for Growth in Defense Budget**

| | AR(1) | AR(1,2) | AR(1) MA(1) | MA(1) | AR(1,2,7) MA(1) | AR(1,7) | AR(7) MA(1) | AR(1) MA(1,2) |
|---|---|---|---|---|---|---|---|---|
| **Growth in Defense Budget** | | | | | | | | |
| **Constant** | -0.260 | -0.523 | -0.537 | 0.139 | 0.614 | 0.339 | 0.395 | -0.426 |
| | (1.978) | (2.319) | (2.319) | (1.127) | (0.378) | (1.343) | (0.950) | (2.253) |
| **ARMA** | | | | | | | | |
| **AR Lag 1** | 0.654*** | 0.550** | 0.772*** | | 1.160*** | 0.628*** | | 0.730* |
| | (0.088) | (0.173) | (0.206) | | (0.177) | (0.094) | | (0.357) |
| **AR Lag 2** | | 0.165 | | | -0.240 | | | |
| | | (0.245) | | | (0.150) | | | |
| **AR Lag 7** | | | | | -0.191** | -0.166 | -0.189 | |
| | | | | | (0.065) | (0.134) | (0.208) | |
| **MA Lag 1** | | | -0.200 | 0.432** | -1.000 | | 0.420** | -0.166 |
| | | | (0.325) | (0.155) | (3285.786) | | (0.153) | (0.432) |
| **MA Lag 2** | | | | | | | | 0.065 |
| | | | | | | | | (0.362) |
| **Sigma** | | | | | | | | |
| **Constant** | 4.606*** | 4.542*** | 4.555*** | 5.187*** | 3.721 | 4.502*** | 5.096*** | 4.544*** |
| | (0.457) | (0.450) | (0.450) | (0.514) | (6113.101) | (0.453) | (0.551) | (0.446) |
| **N** | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| **AIC** | 277.627 | 278.387 | 278.635 | 288.197 | 269.601 | 277.804 | 288.800 | 280.435 |
| **BIC** | 283.113 | 285.701 | 285.949 | 293.683 | 280.573 | 285.118 | 296.114 | 289.578 |
| $Q^{JB}_{10}$ | 11.3338 | 11.6542 | 11.1343 | 35.3822*** | 10.5508 | 10.5387 | 29.0788*** | 11.5988 |

*Standard errors in parentheses*
***p<0.05 ** p<0.01 *** p<0.001***

After selecting the dynamic model for annual real growth in defense spending, I used a general to specific modeling strategy to build the final model. I began with a large number of lags of the independent variables and parsed the model down based on t-tests and portmanteau tests. Again, the final model was chosen based on sufficiency and parsimony. Theoretically, it was expected that public opinion would require some degree of lag to allow for the timing of the defense budgeting cycle. This lag was calculated to be on the order of one to three years,[216] representing the optimum and latest time at which a significant change could be reasonably introduced to the defense planning cycle.[217] A series of models were formulated to test the

[216] See section on Defense Budget Process in the theory section for details.
[217] This precludes the use of a supplemental budget request, which could be introduced at any time after the normal budget, but is normally reserved for war or other significant event. Although supplemental requests were utilized early in the Iraq and Afghanistan Wars, these processes were subsumed by Overseas Contingency Operation (OCO)

effects of public opinion, war and economic variables alone and in conjunction. In the full AR (1) model below $\delta_{it}$ is a vector of the coefficients for control variables and $C_{it}$ is a vector of the control variables:

$$y_t = \alpha_0 + \phi_1 y_{t-1} + \beta_0 x_t + \beta_1 x_{t-1} + \gamma_0 z_t + \gamma_1 z_{t-1} + \delta_{it} C_{it} + \varepsilon_t$$

### G. Results

The results of the time series modeling as noted in Table V-3 below were as expected. The three hypotheses stated in this paper were confirmed by the results of the time series modeling. Hypothesis one stated that negative approval rates of Congress were inversely related to military budget growth**.** In all models, public confidence in Congress had a statistically significant and inverse impact on the annual change in military spending (as confidence in Congress fell, defense spending rose). Significantly, these effects were most pronounced with a lag of only one year, and had an immediate effect upon the next year defense budget, even though this was well within the 18 month to two-year planning cycle of the defense budget. In other words, congressional concerns were injected inside the normal planning process, requiring adjustment to the pentagon budget proposal. This effect was evident even in the absence of significant economic or military events.

Hypothesis two stated that public opinion on the level of military spending was positively related to military budget growth. The model confirmed that public opinion on military spending was both statistically significant and had a positive effect on annual budget growth. These results were most pronounced with a lag of two years, which corresponded to the normal 18-month to two-year military budget planning cycle. This indicated an acknowledgement of electorate

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included in the normal budget process. Where OCO or supplemental funds were employed, they are included in annual real growth of the defense budget (DV). Money that was reprogrammed or transferred between programs is not included as it does not represent new funds, but simply the repurposing of funds already budgeted.

concerns, however without the demonstrated necessity of breaking the budgeting cycle in response to those concerns. Put simply, congressional input could be incorporated into the Pentagon budget plan without significant disruption in the normal planning and budget cycle.

The third hypothesis stated that the strength of the U.S. economy is positively related to military budget growth. The models demonstrated that defense spending showed greater and more sustained growth when the economy was strong, as measured by GDP growth. Although unemployment did not show statistical significance in the model, it was very close (p value of .08). In every case, it demonstrated a positive relationship, as evidenced by the growth of defense spending as the rate of unemployment increased. This was keeping with the expectation that government spending (particularly defense spending) increases with higher unemployment rates.

*Table V-3: Model Results*

**Impact of Congressional Approval on US Defense Spending**

| | (Model 1) | (Model 2) | (Model 3) | (Model 4) | (Model 5) | (Model 6) | (Model 7) |
|---|---|---|---|---|---|---|---|
| **Real Growth in Defense Budget** | | | | | | | |
| **Negative Congressional Approval** | | 0.199** | | | 0.206** | 0.136* | 0.133* |
| | | (0.072) | | | (0.063) | (0.059) | (0.063) |
| **Too Little Spent on Defense** | | 0.378*** | | | 0.385*** | 0.335*** | 0.330*** |
| | | (0.067) | | | (0.060) | (0.065) | (0.072) |
| **Unemployment** | | | -0.026 | | | 0.683 | 0.949 |
| | | | (1.258) | | | (0.753) | (0.549) |
| **Change in GDP** | | | 0.162 | | | 0.465* | 0.509** |
| | | | (0.453) | | | (0.218) | (0.178) |
| **Presence of War** | | | | 7.381** | | 5.162** | 5.393** |
| | | | | (2.513) | | (1.674) | (1.892) |
| **Change in Total US Budget** | | | | | 0.300 | 0.124 | |
| | | | | | (0.198) | (0.256) | |
| **Constant** | -0.260 | -14.043* | -1.304 | -1.366 | -15.234*** | -15.272*** | -15.033*** |
| | (1.978) | (2.421) | (3.625) | (1.602) | (2.005) | (2.375) | (2.532) |
| **ARMA** | | | | | | | |
| **AR Lag** | 0.654*** | 0.121 | 0.656*** | 0.597*** | -0.112 | -0.080 | -0.019 |
| | (0.088) | (0.159) | (0.086) | (0.111) | (0.181) | (0.189) | (0.177) |
| **Sigma** | | | | | | | |
| **Constant** | 4.606*** | 3.877*** | 4.592*** | 4.156*** | 3.805*** | 3.228*** | 3.241*** |
| | (0.457) | (0.501) | (0.459) | (0.403) | (0.538) | (0.469) | (0.446) |
| **N** | 46 | 41 | 46 | 46 | 41 | 41 | 41 |
| **AIC** | 277.627 | 237.475 | 281.334 | 270.050 | 237.949 | 230.436 | 228.776 |
| **BIC** | 283.113 | 246.043 | 290.478 | 277.364 | 248.230 | 245.858 | 242.485 |
| $Q^{JB}_{10}$ | 11.3338 | 3.3076 | 10.4491 | 13.692 | 9.8315 | 5.5616 | 5.9198 |

*Standard errors in parentheses*
**** p<0.05 ** p<0.01 *** p<0.001***

In order to determine if congressional approval had any influence on other discretionary budgets a new set of time series models were created. The results in Table V-4 below indicate that the defense budget was the only budget with a causal relationship to congressional approval. This would coincide with expectations that the defense budget is viewed as a unique tool by Congress for reacting to negative public opinion.[218] As the largest single discretionary budget,

[218] This not intended to be a definitive test but rather to demonstrate the unique nature of the defense budget with regard to congressional approval.

with the greatest extensibility and salience to the electorate, manipulation of the defense budget is a relatively easy way to provide economic and security benefits to the widest number of constituents.

*Table V-4: Effect of Congressional Approval on Non-Defense Budgets*

**Impact of Congressional Approval on US Government Budgets**

| **Budget** | **(Defense)** | **(Medicare)** | **(Welfare)** | **(Education)** | **(Interior)** | **(Justice)** | **(Labor)** | **(Transport)** | **(Hud)** | **(Agriculture)** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Neg Cong** | 0.212* | -0.016 | 0.024 | 0.179 | 0.170 | 0.229 | 0.599 | 0.058 | 0.078 | -0.058 |
| **Approval** | (0.100) | (0.107) | (0.202) | (0.327) | (0.293) | (0.196) | (0.768) | (0.294) | (0.387) | (0.286) |
| **Constant** | -6.052 | 11.389** | 8.721 | 2.940 | -0.798 | 0.519 | -13.027 | 4.644 | 2.363 | 7.838 |
| | (3.269) | (4.007) | (6.710) | (8.753) | (9.839) | (6.750) | (24.834) | (9.155) | (12.723) | (8.984) |
| **ARMA** | | | | | | | | | | |
| **AR Lag** | 0.539*** | 0.703*** | 0.298 | -0.278* | -0.047 | -0.150 | 0.197 | -0.099 | -0.309 | -0.079 |
| | (0.122) | (0.151) | (0.169) | (0.116) | (0.145) | (0.196) | (0.230) | (0.128) | (0.162) | (0.155) |
| **Sigma** | | | | | | | | | | |
| **Constant** | 4.425*** | 5.097*** | 8.316*** | 24.623*** | 11.858*** | 11.635*** | 32.723*** | 16.787*** | 26.982*** | 13.566*** |
| | (0.505) | (0.559) | (0.611) | (2.023) | (1.413) | (1.269) | (2.515) | (1.645) | (3.478) | (1.385) |
| **N** | 42 | 42 | 42 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |
| **AIC** | 252.469 | 264.674 | 305.215 | 368.646 | 311.576 | 310.108 | 390.791 | 338.689 | 375.799 | 322.075 |
| **BIC** | 259.420 | 271.625 | 312.166 | 375.300 | 318.230 | 316.763 | 397.445 | 345.344 | 382.453 | 328.729 |
| $Q^{JB}_{10}$ | 10.1196 | 7.1916 | 4.1796 | 15.8393 | 6.8162 | 23.4107 | 6.3054 | 4.4897 | 8.2167 | 2.5895 |

*Standard errors in parentheses*
**** p<0.05 ** p<0.01 *** p<0.001***

The evidence strongly indicates that negative approval rates of Congress significantly affect defense spending levels, even when accounting for the presence of war, general public opinion on spending sufficiency, and economic health. It is also clear that U.S. federal budgets in general, and the defense budget in particular, display punctuated highly kurtotic characteristics indicating the presence of a dynamic and non-incremental budgeting process even in the absence of major wars. These findings provide evidence that congressional approval is a significant driver in defense spending fluctuations and are in accordance with expectations drawn from PET scholarship on defense spending.

### H. Alternative Explanations

What about other factors that influence defense spending? The length of the time series for annual real growth in defense spending places a limit on the number of variables that could be included in the model. Despite this, I took great pains to consider a wide variety of control variables. Political variables including partisan control of Congress (percentage of seats in House and Senate), incumbency, and congressional polarization were rejected due to lack of statistical significance in the model. Lobbyist variables for total number of military lobbyists and total amount spent by lobbyists were promising;[219] however, since data was only publically available from 1998,[220] there were insufficient observations for inclusion in the time series.

Military combat casualties and total number of troops deployed in combat also contained very few observations (1970 – 1973, 1991 and 2002 – 2015) and were difficult to utilize within a time series analysis. It would be expected that the larger the number of troops employed, the greater the pressure on the budget, particularly if these increases were to overall troop numbers and not just a function of deploying current troops from CONUS to a theatre of operations.[221] Figure V-4 below shows rough time series graph comparisons of the available data. There appears to be some potential for correlation between the number of troops deployed (as expected) with a one-year lag on when the defense budget catches up to the increased cost.[222] Budget spikes occur one year after significant increases in troop numbers. Casualty rates do not

[219] One would expect that the resources of lobbyists (information and funding) would be relevant.
[220] Lobbying Disclosure Act PUBLIC LAW 104-65-DEC. 19, 1995 was passed by the 104th Congress in December of 1995, but did not take effect until Dec of 1997.
[221] This was the case during the U.S. wars in Iraq and Afghanistan. USA and USMC end strength grew by approximately 100,000 and 30,000 respectively (DoD Manpower Data Center, Office of the Secretary of Defense, and U.S. Department of Defense).
[222] As discussed in the theory section of this paper, manpower increases result in approximately $1.2B per 10,000 new personnel (Clark, 2003), mostly in the form of high burn rate MILPERS and O&M funds.

show the same correlation, which is to be expected unless there were a subsequent need to procure replacement equipment personnel.[223]

Although these results deserve further study, they do not in themselves influence the overall results, as the war variable accounts for increases in overall defense spending during time of active combat operations when deployed forces and casualties can be expected to be greatest. Consequently, congressional approval is highest during the period with the highest casualty rates and only begins to fall as casualty rates fall. This seems counter intuitive, but could be due to rally "round the flag" effects during the height of fighting, or other factors. Unfortunately, definitive answers to these questions are beyond the scope of this paper.

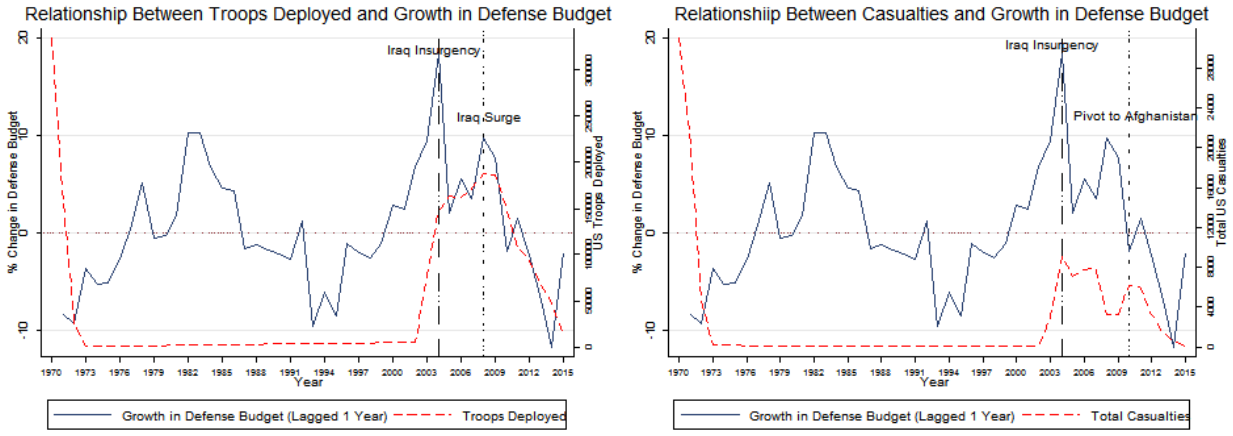


*Figure V-4: Deployed Troops and Casualties vs. Defense Spending*
*Source: DoD Casualty Analysis System (DCAS) and DoD Greenbook 2017*

[223] An example of this was the emergency procurement of up-armored High Mobility Multipurpose Wheeled Vehicle (HMMWV) and Mine Resistant Ambush Protected (MRAP) Armored Vehicles was a $10B program executed in FY2007-2009. However, the cost of this program was absorbed into the Overseas Contingency Operation funding for those years and thus did not register as significant bump in the overall budget. The details of these types of budget maneuvers are beyond the scope of this paper, but are worthy of further study. Casualties also incur long term medical and compensation expenses, but these are typically shifted to the Veterans Administration which has its own budget line (Not included in the DoD budget).

Other economic and public opinion variables were examined. Inflation and changes in the federal deficit were tested but found to be statistically insignificant during the time period under examination. The "Most Important Problem"[224] variable, derived from public polling of what the sample population believed were the most pressing problems facing the country at the time, was likewise tested. However, it exhibited repeated traits of a unit root, which could not be rendered stationary, and was discarded.[225]

Each of the above variables holds promise for future studies, but for concerns with parsimony, sufficiency of data and over-fitting, they were not included in the final model. This does not exclude their potential significance; however, in keeping with the theoretical proposition of this paper, the final model provides meaningful and significant results without their inclusion.

[224] Obtained from the Comparative Agendas Project and is derived from a composite of public opinion polls asking what each person considered was the most important problem facing the country. The poll taker then ranked a list of prepared alternatives with included defense. The database gives a ratio of how important people felt defense was and how that feeling changed over time.

[225] MIP is an interesting variable that should be examined in more detail in follow on work; however, it is somewhat repetitious of polling data regarding sufficiency of defense spending. The trend line for both was similar.

# VI. Discussion

*First, learn the meaning of what you say, and then speak.*

**– Epictetus**

## A. Defense spending as a tool for MoC

This dissertation establishes that MoC often utilize defense spending as a political lever to mitigate the effects of poor approval ratings. The literature indicates that congressional approval influences incumbency, and my time series analysis confirms a causal relationship between congressional approval and defense spending. Additionally, I find support for Punctuated Equilibrium Theory and Disrupted Exponential Incrementalism Theory by demonstrating that congressional approval can act as a localized policy dynamic resulting in punctuated defense spending both during and in the absence of war or significant economic turmoil.

As it constitutes the majority of discretionary spending and consumes more of the U.S. budget than any single expenditure, other than social security, the enormous scale of defense spending is difficult to overemphasize. The sheer scope and complexity of the budget, as well as the opaqueness of defense accounting, lends itself toward political manipulation. It is telling that since the Chief Financial Officers Act of 1990 required every government agency to complete an audit of their financial practices by 1993, DoD is the only agency still not in compliance.[226] The 2010 NDAA established another audit deadline of 30 September 2017 for DoD to accomplish this requirement. True to form, DoD is billions over budget in government contracts with

[226] Performance website is a government website that hosts agency financial management information. https://www.performance.gov/content/dod-financial-statement-audit-readiness#overview

industry contractors to implement accurate accounting processes, with little success.[227] This does not necessarily imply that DoD is improperly disposing of its allocations, but it does make it difficult to prove precisely what it does with them. With over 1.4 million active duty, 1.1 million reserve and 861,000 civilian employees, a budget over $600 billion dollars, and questionable accounting, the DoD budget provides an environment ripe for exploitation.

The extensibility of defense economic impact to industry and the states is without question. Millions of DoD and defense industry employees live, shop and pay taxes in every state in America. Defense industries contract for billions of dollars in goods and services from non-defense companies and sub-contractors (Procurement appropriations). Military pay and bonuses (MILPERS) increase state tax and retail profits. DoD facilities spend billions in administrative support, supplies and service contracts in the communities where they are located (O&M), as well as contracting with local construction companies for facility and infrastructure construction and improvement (MILCON). Universities and defense industry think tanks also receive billions from DoD for studies on everything from artificial intelligence to zoology (RDT&E).[228] It is not difficult to follow the money trail to every state and congressional district.

Defense and defense spending are also ubiquitously salient to the electorate. It is difficult to look at a news feed or read a newspaper without encountering an article about national security. The world is a dangerous place, and DoD is seen by many as the barrier between terror and the average citizen. From 1947 to the current day, Gallup has surveyed what people believe to be the most important problems in America, and in all those years, defense has consistently made the list of top concerns (although usually trailing the economy).[229] In 1993, Gallup first

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[227] Scot J. Paltrow and Kelly Carr, "How the Pentagon's payroll quagmire traps America's soldiers," *Reuters*, 9 July, 2013, http://www.reuters.com/investigates/pentagon/#article/part1.
[228] DoD maintains a veterinary and animal studies mission component.
[229] Comparative Agendas Project.

asked the question, “Do you feel that it's important for the United States to be number one in the world militarily, or that being number one is not that important, as long as the U.S. is among the leading military powers?” Not surprisingly, an average of 64% of people over the years have felt that it is important or very important that the U.S. maintain the most powerful military in the world.[230] Although 55% of people surveyed in 2016 believe that the U.S. should cut federal government spending; only 22% thought that should include defense spending.[231] As of 2017, 37% of Americans feel that we spend too little on defense, these are the highest numbers since 2001 (41%) and 1981 (51%), which in both cases were followed by large increases in defense spending.[232] This indicates that public opinion generally stays supportive of defense spending.

Even when factoring partisan differences, with Republicans typically favoring defense spending more than Democrats, politicians have historically proved largely bi-partisan in support for the defense budget. Perhaps this is because according to polling in 2016, public confidence in the military stood at 73%, while at the same time Congress registered only 9%. In fact, the military has always scored higher than Congress in polling for public trust. Why would MoC not want to be seen as supporting increased spending for an institution that is significantly more popular with the electorate than they are?

All of this leads to the inevitable conclusion that defense spending is very important to MoC. If we couple this with the results of time series testing which demonstrates conclusively that defense spending reacts to congressional approval, and is affected when other budgets (discretionary or mandatory) are not, then it follows that MoC seek to utilize defense spending as a lever to shift public approval. This does not imply that congressional approval is the only

[230] Gallup Jeff Jones, Lydia Saad  February 3-7, 2016
[231] Gallup Jeff Jones, Lydia Saad  February 1-5, 2017
[232] Gallup Special Report: Proposals to Fix the American Economy by Frank Newport

causal influence to defense spending, but it does provide strong evidence that it is at least one important consideration. It also aids in explaining why defense spending is punctuated in times of military or economic conflict and as well as those of relative peace and prosperity.

### B. Next Steps

Although this dissertation has accomplished its stated goals of establishing a causal relationship between defense spending and congressional approval, there was never any claim for this to be the final word on the subject. It is clearly only the first step in reopening a fresh investigation into the causal factors influencing U.S. defense spending. The next of many steps to follow must be to continue the expansion of data collection. The greater the quantity of data points, the stronger the time series analysis becomes. This is frustrating, as it requires patience, but when dealing with an annual budget, there is no alternative to waiting for time to pass. In the interim, there are a number of other avenues to pursue.

Although I chose a time series approach as a valid and logical method for examining defense spending, it is not the only approach available. Other statistical methods could be used to fill gaps where insufficient data is available for a full time series analysis. Variations on OLS could allow a closer inspection of variables with brief duration datasets such as casualties, troop numbers and political contributions (PACs, etc.). This would allow for refinements to the general model and the potential development of new theoretical foundations to guide future research.

Additionally, every federal budget should be examined in the model over the time span in question; to see if congressional approval has any impact. The nine budgets chosen for comparison in this paper were representative, but not exhaustive. Although unlikely, it is important to determine if there are any other budgets with similar (albeit smaller scale) reactions.

Although measures of polarization were not significant in the model, they are important in determining the voting tendencies of the electorate. Logically, polarization has bearing to congressional approval. For example, with both houses in control of one party we would expect to see congressional approval rise in that party and a drop in the other.[233] Similarly, if the Republican electorate were overall more supportive of defense spending, then why do Democrats continue to generally support increased spending as well? One assumption might be that democrats are courting not only their core constituency, but also the independent voter, and therefore might take a more moderate approach than supported by more core liberal voters. In this study, I was not able to devote time to operationalizing these effects, and it might prove beneficial to look at the district and state ideological demographics in comparison with MoC votes on defense appropriations. The intent would be empirically testing the proclivity of a particular MoC, and Congress as a whole, to support greater or lesser defense expenditures. In other words, based upon electorate ideological leaning and district or state economic dependencies, can we predict which MoC would be most likely to view defense spending as tied to both individual and institutional positive congressional approval?

To support this approach, more data is required in almost every category of investigation. In order to determine defense industry and state economic pressure on MoC, it would be necessary to dig down to the district level for every MoC and examine in detail the nature of political contributions (from whom and what ties each has to defense or defense supporting industry). I was able to do this for the Missouri example, but every state should be similarly examined. The example I used of Boeing was instructive, but this also should be expanded to at least the top ten companies to see to what extent they impact state economies and political

[233] These partisan shifts may balance each other, but their impact to congressional approval and defense in unproven.

contributions. I was able to examine in detail the defense committees of the HASC, SASC, HAC-D and SAC-D, for the 114th and 115th Congress, but this needs to extend to include as many Congresses as data allows. The goal would be the creation of a theoretical model for defense committee membership based on the conditions that prompt a MoC to seek a seat on a defense committee and which committees they perceive as best serving their purpose.

These are only the first few steps in what promises to be a long journey. However, they do provide the beginnings of a fresh approach to shed new empirical light on the causal factors and underlying conditions contributing to strong punctuations in defense spending. Far from being a requiem to the study of defense spending and budgets, this dissertation is a call to action of sorts. If interest in political science can again be focused on the defense budget, greater insight could be gained into studies involving American politics, international affairs and policy.

## Post Script

I close this dissertation with a quote from the same speech with which it began. In describing, what he feared was the growing institutionalization of defense spending, President Eisenhower stated,

> "The total influence -- economic, political, and even spiritual -- is felt in every city, every State house, and every office of the Federal government. Only an alert and knowledgeable citizenry can compel the proper meshing of the huge industrial and military machinery of defense with our peaceful methods and goals, so that security and liberty may prosper together.[234]

I include this passage out of respect for the fearsome political inertia driving the enormous cultural and economic force that is the U.S. defense budget. I feel a debt of culpability, having played a small role in the process as a service member, to become an academic warder of its effects. Of course, as Oscar Wilde observed, "The truth is rarely pure and never simple."[235] Only a concerted multi-disciplined inquiry by academic and policy practitioners alike can lead to a true understanding of the defense budget process and its appropriate place in American politics.

Eisenhower placed the onus for controlling defense spending on a watchful and informed electorate. However, with complex issues such as defense and national security some entity must provide clarity into the motivations of government and the dangers of blindly following the established norm of ever greater spending on defense. If the media's role is to inform, who educates them? It is a charge that academia must accept, and one to which I hope to contribute.

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[234] Public Papers of the Presidents, Dwight D. Eisenhower, 1960, p. 1035- 1040.
[235] Oscar Wilde, The Importance of Being Earnest, 1895, Act I.

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# Appendix A: Data Sets

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