

A Study of Prime Defense Contractor Consolidation since the 1990s and its Effects

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

President Dwight D. Eisenhower coined the term “military-industrial complex” in his farewell address in 1961. He defined it as the, “conjunction of an immense military establishment and a large arms industry,” and proclaimed its, “economic, political, even spiritual,” influence was already present in every level of government. President Eisenhower warned that this combination will have the potential to capture immense amounts of power and influence over America’s society and its military actions (*President Dwight D. Eisenhower’s Farewell Address (1961)*, 2021). However, at the time of delivering this speech, the landscape of the defense industry and its interactions with the government were entirely different than they are today. Lockheed Martin, Boeing, Northrup Grumman, Raytheon (RTX), and General Dynamics are all that remain of the numerous prime defense contractors that were present at the time of President Eisenhower’s farewell address. Jonathan Miller says he issued this warning when the defense industry was rife with competition and producing one innovation after another that then trickled down from the Pentagon to improve everyday Americans’ quality of life (Miller, 2020).

Ian McGregor of the Harvard Model Congress details how, today, these massive corporations rake in billions of dollars with far less competition in the market, and far more money being spent lobbying politicians. Cost and schedule overruns are becoming more and more regular, meaning that it takes significantly more time and money, on average, for military capability to be delivered from conception to the front lines (McGregor, 2021). Additionally, with less competition and variety in the market, the defense supply chain has become increasingly more fragile. Government reports show that many key pieces of military technology,

like solid rocket engines, aircraft, tanks, etc. are now only supplied to the U.S. military by three, two, or even one defense contractors (“State-of-Competition-Within-the-Defense-Industrial-Base,” 2022).

I discuss how this drastic change in the landscape of the defense industry has occurred, in large part, due to a little-known meeting that took place in the Pentagon in 1993. First, this paper provides background knowledge about the state of, and processes within, the system of defense acquisitions. I then detail the Actor-Network Theory framework and the methods used in the literary review. The causes and effects of the drastic change seen in the military-industrial complex since the end of the Cold War are illustrated and discussed. Finally, I argue that we should return to a more competition-based model in defense contracting for the benefit of our military readiness and our taxpayer’s wallets.

Background

Contrary to what some may think, the Pentagon does not design, manufacture, or deliver most technologies to our nation’s soldiers. Instead, the military usually merely issues contracts for goods and services it needs to buy – analysts, submarines, mechanics, knives. It is therefore defense contractors, not the government or military, which designs and produces the equipment necessary to maintain American national security interests. “Defense Acquisitions” is this complex system of systems by which industry in the United States supplies its warfighters (Chadwick, 2007). Heidi Peters at the Congressional Research Service establishes that this process intensified following the Cold War as the Pentagon, “embraced outsourcing, increasing reliance on contractors instead of using military servicemembers or government civilians” (Peters, 2023, Page 1).

The company that is awarded a contract is known as the prime contractor. They are responsible for the project, including the delivery of the final product to the military, and leading communications with the government regarding progress, delays, additional costs, etc. Prime contractors then have the ability, if needed, to enlist the services of other companies, called subcontractors, to fill in any gaps in knowledge or technology necessary to deliver the final product (*Prime and Subcontracting | U.S. Small Business Administration, 2023*). For example, one entity (the prime) may be awarded a contract to deliver a new missile to the Army but would need to buy solid rocket engines from another (a subcontractor) needed to power the missile. Today, few of these entities receive nearly all the large, multi-million- or billion-dollar contracts. The “Big 5,” as they have come to be called, include: Lockheed Martin, Boeing, Northrup Grumman, Raytheon (RTX), and General Dynamics (Peters, 2023).

Traditionally, these contracts have been awarded through competition. A military entity would derive requirements and specifications for some technology and release them to spark a bidding war that, hopefully, “drives industry to offer its best technical solutions at a best-value cost and price” (“State-of-Competition-Within-the-Defense-Industrial-Base,” 2022). However, in recent years, the number of contracts awarded non-competitively has increased to nearly two-thirds (Kang & Miller, 2022). With this Background in mind, I now detail the research and analysis tools and methods I used to examine the system of defense industry consolidation.

Framework and Methods

Actor-Network Theory

Actor-Network Theory, pioneered by Bruno Latour, Michel Callon, and John Law, is an analytical framework that emphasizes the connections between various parts of a system. As E.J.

Roe puts it, ANT studies structures, “through conceiving materially heterogeneous associations between human and nonhuman entities to produce a network constituted through the links rather than the nodes of its making” (Roe, 2009, Page 251-257). When surveying prime defense contractor consolidations since the Cold War, it is important to value interactions between the federal government, the military, world events, and the corporations themselves. Therefore, utilizing ANT in an investigation into the causes and effects of this consolidation led to a complete analysis.

John Law and Michael Callon illustrated the effectiveness with which ANT can be applied to socio-technical military systems with their study of a cancelled British Military aircraft project. Law and Callon argue that, “people, organizations, machines, or scientific findings,” serve, “social, political, technical, or bureaucratic,” roles and that the execution of these roles creates a system (Law & Callon, 1988, Page 285). They showed that the process of defense acquisitions itself can be regarded as both a technical system, and a political one that is responsible for both predicting and creating a certain future. Law and Callon pointed out that there is not only competition in the defense market for manufacturers (contractors), but also within different military organizations for funding. While their case study detailed the relevant system surrounding the procurement process for a single aircraft, ANT as a framework can be more broadly applied to the entire military-industrial complex, especially in a time where competition for companies to stay alive can replace that over a single contract (Law & Callon, 1988).

The idea of translation is central to Actor-Network Theory. Translation is broken into four parts: problematization, whereby the actor-network is set up to run through an obligatory passage

point (OPP) that is perceived as essential to all actors' interests; intersement, where actors are bound to their roles in the network; enrollment, where alliances are formed among the actors; and mobilization, where spokespeople for these actor-alliances are established (Callon, 1986). I show that the actor-network of politicians, military officials, defense contractors, and defense contractors had been organized around an obligatory passage point of defense contractor consolidation in hopes to achieve their common goal of creating a healthy defense industrial base after the economic uncertainty forecasted after the Cold War. Intersement and enrollment resulted in a few immensely powerful defense contractors while mobilization transferred this power to CEOs and lobbyists.

Research Methods

I utilized a historical and public policy investigation to study and explain the conditions and environment that led to, and resulted from, prime defense contractor consolidation in the post-Cold War United States. Recorded interviews with individuals involved in the defense acquisitions system at this time, along with relevant news and journal articles from the period, were used to understand the ideas held by those in power. Additionally, these sources provided details regarding specific events that occurred before, and during, this rapid change in the defense industry landscape. Previous pieces of synthesis on this topic also offered context regarding the atmosphere that kicked-off and sustained this market transition. Lastly, more current government and private analyses of the defense industrial base as it operates today allowed me to draw conclusions regarding any effects this change has had on its economics or innovation.

Therefore, this analysis first details the environment present in post-Cold War America at the top of contractor companies, federal agencies, and military branches. I conclude what ideas ultimately influenced leaders in government to feel the necessity to orchestrate such a radical change. Next, I highlight events that started, and sustained, this flurry of mergers and acquisitions among defense contractors. I present the processes by which these organizations purchased or otherwise combined with others to create the large, powerful conglomerates of today. Last, I discuss the impact of this industry transformation since the early 1990's on the current economics and production of the private defense sector, along with potential improvements.

Before the Secret Meeting

Society's Hopefulness: Democratic Peace Theory

After the collapse of the Soviet Union, American societal opinions and politics surrounding foreign policy shifted greatly. Jerel Rosati and his colleagues, “found that between the Cold War eighties and the Post-Cold War nineties foreign policy attitudes were marked by...greater optimism for the future of U.S. foreign policy” (Rosati et al., 1998, Page 461).

“Democratic states never (or almost never) wage war on one another” (Oren, 2015, Page 1). That is the central observation around which Democratic Peace Theory revolves. This idea was proposed as early as 1795 when German philosopher Immanuel Kant wrote about “Perpetual Peace” among Republics. After the Cold War, Democratic Peace, “became one of the most-popular subjects of research in international relations,” since the collapse of the Soviet Union led to a, “wave of democratization throughout the former Soviet bloc and the developing world” (Elman, 2001, Page 762; Oren, 2015, Page 1). Eric Ruben, who worked in the Bureau of Soviet

Union Affairs at the end of the Cold War, writes that the period was marked with overwhelming feelings of hope and optimism. He says that himself and his coworkers truly believed, “a page in history had been turned,” and the world was headed towards the principles of Western democracies (Ruben, n.d.).

The end of the Cold War had a drastic impact on the American and Western morale. Americans, including those in government, breathed an overwhelming sigh of relief as the Soviet Union fell. This idea that peace was on the horizon not only affected views about the future of foreign policy, but also views of the economic future of the military-industrial base.

The Need to Shrink Military Spending

Jerrold Lundquist wrote in the Harvard Business Review Magazine in 1992 that the, “disappearance of the communist threat and the desperate need to revive the U.S. economy have taken the defense industry for a wild pendulum ride...the industry faces the most profound shift it has seen since the end of World War II” (Lundquist, 1992). He noted that there would be a steep downturn in defense spending, but that there will still be a huge amount of money left on the table for the corporations that are able to survive (Lundquist, 1992). A Congressional Budget Office report from 1992 explained that The Future Years Defense Program (FYDP) issued in 1991 forecasted a 20% reduction in defense spending over the period 1992-1997. Additionally, the report highlighted that Congress would likely consider additional cuts due to the collapse of the Soviet Union. The report also predicted major revenue losses for companies whose main client is the U.S. military since other possible consumers (foreign militaries) were also facing a decline in funding. The report predicts a net loss of about 300,000 jobs as a result of the lower defense spending.

With leaders in government attempting to decide the best path forward in light of these projections, William Thomas and coauthors at the Office of Technology Assessment laid out the likely advantages and disadvantages of mass consolidation in a 1992 report examining this phenomenon in France occurring in the few years prior. Among the advantages: senior acquisitions officials had long stints on a given project (and were therefore able to provide great amounts of expertise), the system of monopoly suppliers created a more cooperative connection between these suppliers and the government, R&D programs consolidated to prevent redundancy, and the ability to pursue a, “coherent strategy,” that accounted for foreign policy and industrial interests in addition to the capabilities of specific weapons systems. The main disadvantages were the lack of competition – and the higher prices and reduced innovation that comes along with it – and the brittleness of the industry due to critical capabilities being restricted to one supplier (Thomas et al., 1992).

Era of Consolidation

The Last Supper

In the Fall of 1993, about 25 CEOs of the Nation’s largest aerospace defense companies were invited to an in-person dinner at the Pentagon by Secretary of Defense, Les Aspin. Norman Augustine was the CEO of Martin Marietta Corporation at the time, and was one of the attendees since, “needless to say, that’s an invitation you don’t refuse” (Chang & Chakrabarti, 2023).

After eating, the CEOs were taken to a conference room where Deputy Secretary of Defense, William Perry, gave a shocking presentation. Included in the presentation was a slide that listed various categories of military equipment such as tanks and fighter jets, how many suppliers for each of these items were currently available, and how many the Pentagon would be

able to support. Augustine says that most of these categories were expected to be decreased to three, two, or even one supplier. Perry said that, “the government was not in the business of redesigning companies or consolidating industries or putting people in or out of business. That was up to us, the CEOs.” Augustine dubbed the meeting “The Last Supper” the following morning when being questioned by a reporter (Chang & Chakrabarti, 2023).

This meeting organized the Actor-Network of defense acquisitions around the Obligatory Passage Point of industry consolidation. It was agreed upon that the only way for all Actors to achieve their goals was through just that. Figure 1 shows an example Actor-Network where all Actors are connected to their roles through an OPP.

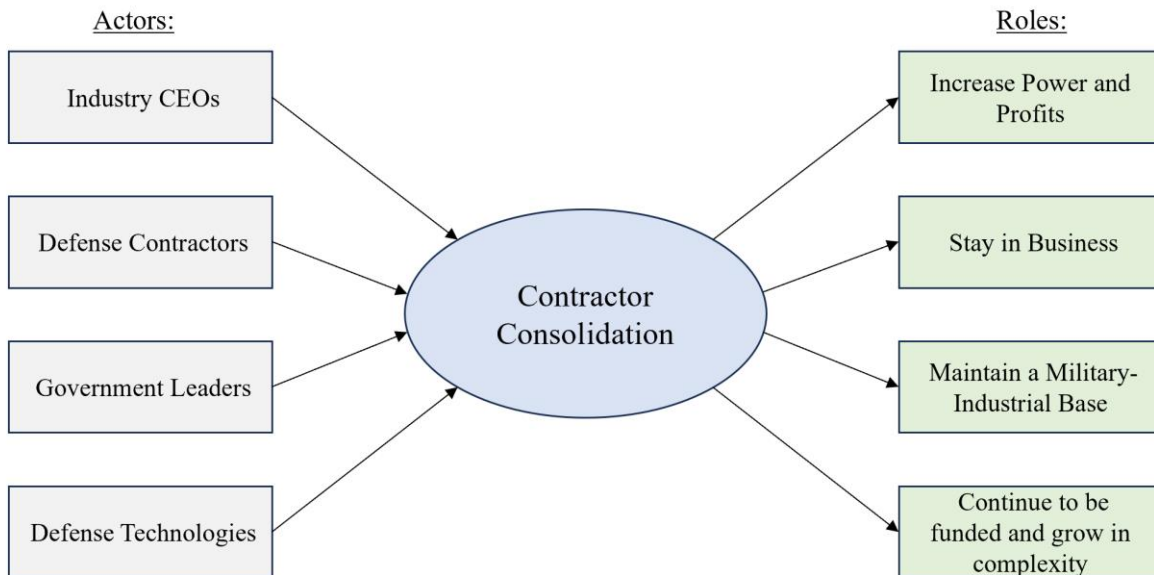


Figure 1: Illustration of Obligatory Passage Point in Actor-Network of Defense Contracting

The Aftermath

John Mintz says, “Perry's warnings helped set off one of the fastest transformations of any modern U.S. industry,” as the vast landscape of military contractors that existed in the early

1990s began to shrink to a mere few (Mintz, 1997). Norman Augustine says that the conditions after The Last Supper created an environment in which, “there are only two kinds of companies — those that are changing and those that are going out of business” (Augustine, 1997). Change they did. Figure 2 shows the stark difference between the landscape of the defense industry in 1991 and 1997, respectively.

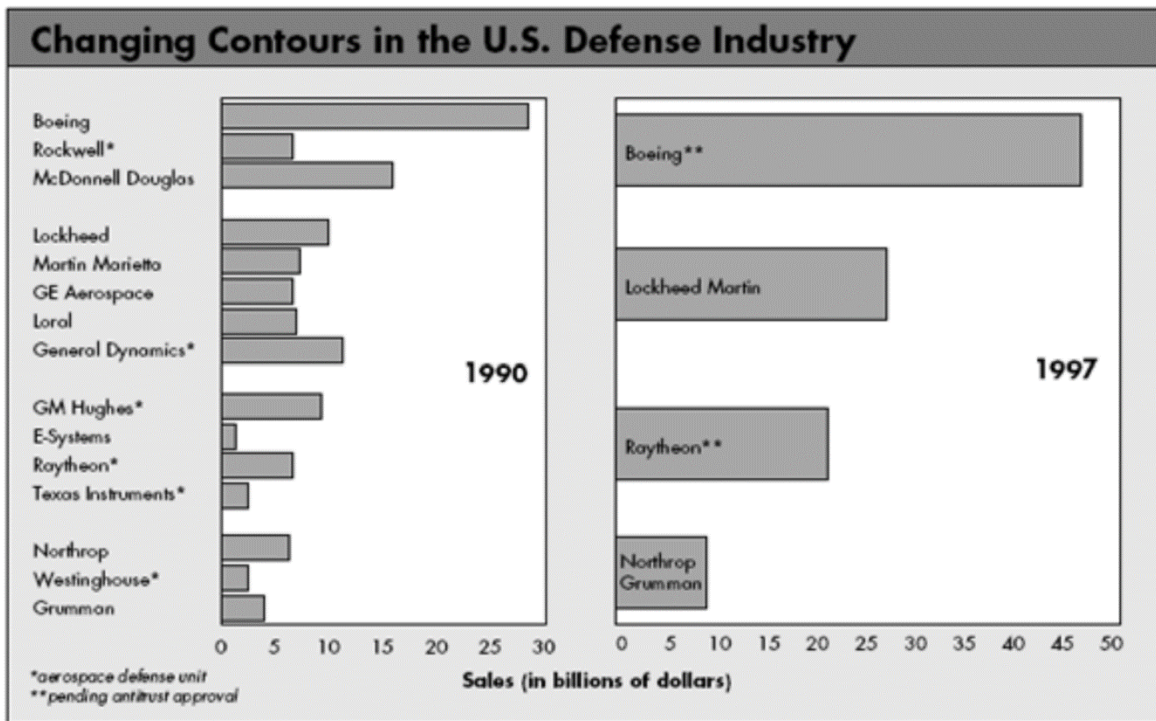


Figure 2: Changing Contours in the U.S. Defense Industry (Augustine, 1997)

A few years after The Last Supper, and \$55 billion worth of mergers later, over forty aerospace and defense contractors had become five (Hooke, 2005). While the Clinton Administration, Defense officials, and corporate CEOs cited the sharp decline in defense spending and an increased number of mergers and acquisitions in the private sector outside of the defense industry as the only driving forces behind this phenomenon, there was another, unpublished policy that encouraged consolidation. According to Lawrence Korb at the Brookings Institute, the government was actively subsidizing it. John Deutch, Undersecretary of Defense

for William Perry, decided, “to allow defense companies to bill the Pentagon for the costs of mergers and acquisitions” (Korb, 1996). As he regarded this decision as a clarification of previous law, the decision was published silently, without discussing with military leaders or lawmakers (Korb, 1996).

Joseph Kattan also pointed out in 1993 that many in the defense industry felt that these mergers and acquisitions should be exempt from antitrust laws since these companies have, essentially, one customer: the U.S. government (Kattan, 1993). Mark Shwartz noted that, while the Department of Justice and the Federal Trade Commission have the final say in terms of accepting or rejecting mergers and acquisitions from an antitrust law point of view, the Pentagon and even the private defense community certainly have had their voices heard in many of the larger consolidation events, such as the Lockheed, Martin Marietta merger that created the modern superpower that is Lockheed Martin (Shwartz, 1996). The Federal Trade Commission often struck these deals with specific “rules” regarding the exchange of information between companies in order to avoid breaking antitrust laws. Lockheed’s acquisition of Loral Space is a prime example of this (*Lockheed Martin To Settle Charges in Loral Acquisition*, 1996).

This consolidation clearly shows the principles of interestment and enrollment. Actors in the network were bound to a specific purpose through the OPP of contractor consolidation. In the case of the contractors themselves: survive. Alliances were formed between different companies to merge together, and between these companies and the government to allow these mergers.

Those Who Dissented

While the writing was on the wall after the Cold War that the defense budget would shrink throughout the 1990s, and the top of government saw the best option as cutting down on

the size of the industrial base, there were those that predicted this move would end poorly. Lawrence Korb, in addition to writing about the government paying for these companies to merge, called the policy, “not necessary,” and added that, “it will not save money” (Korb, 1996). John Mintz remarked in 1997 that, “President Clinton's most enduring legacy in national security will be his role in creating a handful of extraordinarily powerful defense contractors” (Mintz, 1997). The Defense Science Board delivered a report to the Secretary of Defense in 1998 that argued that these monopolistic practices could lead to an increase in cost, and a decrease in quality in the equipment that is delivered to the warfighter moving forward. An anonymous congressional military analyst remarked that, “Power has shifted from the Defense Department to the defense contractors” (Wayne, 1998).

The feeling at the time was that the end of the Cold War would bring a new era of large-scale peace. The United States no longer had a direct competitor over geopolitical control the world over, and thus would lower defense spending and shrink its defense industrial base to reflect this new time. Even then, there were those that regarded this path as a bad one. Many argued that shrinking the defense sector would inevitably lead to a loss of competition and innovation, ultimately raising prices for the American taxpayer while producing fewer new technologies for both the armed services and civilians at home.

The Current State of the Defense Industrial Base

Increase in Price

The fact that prices are soaring in defense procurements as of late is no secret. A recent episode of the popular news broadcast *60 Minutes* dove into a six-month investigation into this phenomenon. Host, Bill Whitaker, said, “it has less to do with foreign entanglements than

domestic ones,” and asserted that U.S. defense contractors are actively engaged in price gouging over equipment the military needs. Shay Assad, former Director of Pricing at the Pentagon, says the U.S. military overpays for everything from submarines and radars to small oil pressure switches. He shows that a comparable product used to be purchased by NASA for a few hundred dollars, while the Pentagon now pays over ten thousand dollars. He adds on that this, “gouging,” is affecting our military’s readiness and is comparable to not, “giving a Marine enough bullets to put in his clip.” Before 1993, the market was rife with competition and the government had leverage over the contractors, but that is no longer the case (Whitaker, 2023).

In addition to the number of prime defense contractors decreasing, the Department of Defense now awards more contracts without competition altogether. Leslie Wayne at the New York Times reported in 2004 that 74% of Lockheed’s money in won contracts since 1998 had been awarded non-competitively (Wayne, 2004). A model created by Rodrigo Carril and Mark Duggan predicts this result. They found that industry consolidation leads to an increase in non-competitive contract awards. Additionally, consolidation accounts for an increase in cost-plus contracts, where the taxpayer must pay the bill for cost overruns, awarded over fixed-price contracts, which the government prefers (Carril & Duggan, 2020).

Decrease in Innovation

President Clinton’s administration remarked, “[t]echnological superiority underpins our national military strategy,” and, “[i]t is essential for the United States to maintain superiority in those technologies of critical importance to our security” (*Maintaining Military Advantage Through Science & Technology Investment*, n.d.). However, the United States no longer enjoys such a large advantage over our potential adversaries. Mackenzie Eaglen and Julia Pollack

warned that China is increasing their Research and Development (R&D) spending and is primed to outpace that of the United States while Russia and Israel are also approaching technological superiority in certain sectors (Eaglen & Pollack, 2012). Most notably, the United States has fallen behind potential adversaries, Russia and China, in the development of, “potentially game-changing,” hypersonic missiles. Brad Dress at *The Hill* points out that the U.S. had begun investigating the technology in the 1950s but that research was largely abandoned until other nations had already leapfrogged America in their development (Dress, 2023). Donald Gribbin and his team reported that decreased R&D intensity at defense contractors after 1993, despite non-defense technology giants increasing their R&D spending (Gribbin et al., 2012).

While contractor consolidation has provided less incentive for defense firms to create novel products for the military, this has also impacted innovations and new technologies for private citizens. NATO points out that inventions from the internet and GPS down to super glue have all come from the United States defense sector (NATO, n.d.). I have illustrated that government-incentivized defense contractor consolidation has not only negatively impacted the readiness of the United States military through higher prices and fewer innovative technologies, but it also stands to reason that less R&D investment in the defense sector impacts civilians.

The Power of the Big Five

In addition to urging defense contractors to consolidate, the Pentagon also gave them unprecedented power to regulate themselves. Shay Assad said that over fifty percent of the “watchdogs” and “negotiators” were cut. Figure 3 shows this decline in the civilian workforce hired to keep the contractors under control. Recent investigations into defense programs, such as that for the Patriot missile defense system, have shown that the Pentagon has paid at least hundreds of millions of dollars extra due to this lack of oversight (Whitaker, 2023).

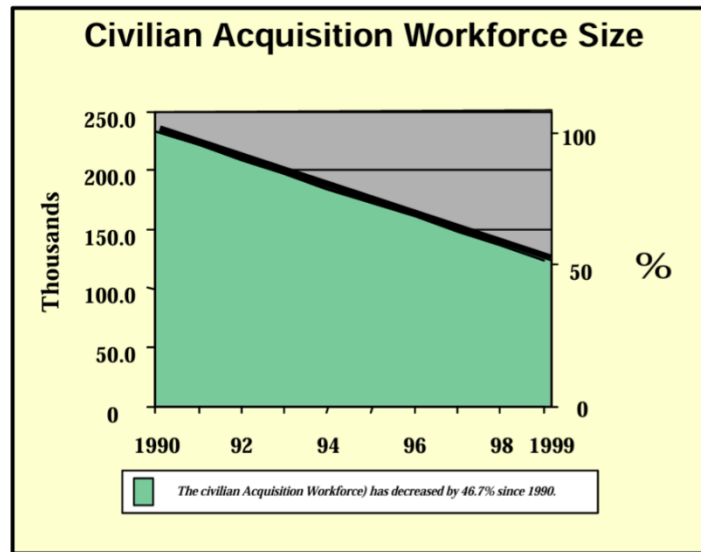


Figure 3: Civilian Acquisition Workforce Size (Charles, 2000, Page 3).

Ian McGregor details how the “revolving door” between major defense contractors and the DoD has given the largest defense contractors immense power and advantage over any potential competition due to insider knowledge and connections. Mandy Smithberger tracked the employments of DoD and contractor officials and found 645 instances of high-ranking government officials being hired by the top government contractors, most often as lobbyists (Smithberger, 2018).

The “Big Five” contractors – Lockheed Martin, Boeing, Raytheon (RTX), Northrup Grumman, and General Dynamics – are immensely powerful. They rake in billions of dollars on military contracts, often without competition, and hire lobbyists to drive more profits for their shareholders. This has been achieved through the ANT concept of mobilization. Lobbyists and politicians have become the “spokespeople” for the Actors that make up the network. In doing so they have formed further alliances to maintain power for themselves and those they represent.

Repairing the Broken System

Our military readiness depends, in large part, on our defense industrial base. While it would likely be impossible to reverse the systemic changes that have occurred since the Cold War, there are things that can be done to improve the health of the U.S. defense sector. We must work to change the Actor-Network itself to run through the principle of competition, not of power and consolidation.

Firstly, we should revive the core of civilian defense acquisitions employees we once had in this country. Defense contracts, especially long-term, expensive ones, should be investigated and monitored from their inception through their termination. Secondly, any and all future mergers and acquisitions among defense contractors should be seriously examined, not only for their potential to violate antitrust laws, but for their potential impact on the defense industry as a whole. William Perry, one of the main orchestrators of the modern system, said later that he hopes, “we are not going to encourage more industry consolidation, because that would be moving in the wrong direction. We should learn that lesson from the 1990s” (Erwin, 2015). Third, laws preventing the “revolving door” between high-ranking government jobs and defense contractors should be strengthened. Current legislation has been largely ineffective, and, “may be

costing American taxpayers billions” (Smithberger, 2018). Lastly, the Pentagon should play a more active role in ensuring the maximum number of defense contracts are awarded through competition, and smaller contractors are not left out or stunted from growth. The Small Business Innovation Research (SBIR) Program that funds small businesses to do research is a step in the right direction (*SBIR | Homeland Security, 2024*).

Conclusion

I have shown that economic and cultural changes following the conclusion of the Cold War prompted a secretive Pentagon meeting in 1993 that led to a flurry of consolidation amongst U.S. defense contractors. This consolidation was encouraged and incentivized by the federal government and has led to decreased competition and innovation, and increased prices from the private defense sector, now dominated by a few, powerful giants of industry. These changes have negatively impacted our technological superiority and military readiness. However, we are not past the point of no return. Increased oversight of these entities, updates to legislation regarding the “revolving door” between the government and contractors, and continued focus on competition in the market could help reverse some of the damage of “The Last Supper.”

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