



Defense Policy Shaping and Security Governance: The Role and Impact of Defense Industry and Military Contractors

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Abstract

This research explores the pivotal role of defense contractors in shaping defense policy and their significant impact on national security dynamics. Using qualitative research methods, with an emphasis on secondary data analysis, the study synthesizes findings from government reports, academic literature, and industry analyses. Key findings reveal the considerable influence of defense contractors' lobbying activities on defense budget allocations and procurement policies, often redirecting resources toward projects that align with their technological expertise and profit motives. Additionally, defense contractors play a crucial role in shaping defense research and development priorities, driving innovation in areas such as cybersecurity, missile defense systems, and unmanned technologies. Ethically, the revolving door phenomenon between defense contractors and government officials raises concerns about potential conflicts of interest, undermining impartial decision-making and public trust. This research offers a comprehensive understanding of the strategic implications of contractor influence on defense policy, highlighting the need for greater transparency, accountability, and balanced competition in defense procurement. By illuminating these dynamics, the study contributes to policy discussions aimed at promoting ethical governance and ensuring the integrity of national security.

Keywords: defense contractors, defense R&D, lobbying, revolving door, technological advancements

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Introduction

The relationship between defense contractors and defense policy is a critical area of study, particularly in the context of modern geopolitical dynamics and military advancements. Defense contractors, defined as private companies that provide goods and services to military and intelligence agencies, play a significant role in shaping defense policies through their influence on procurement, research and development (R&D), and strategic decision-making. This research explores the state-of-the-art research on this topic, examining the mechanisms through which defense contractors impact defense policy and the implications of their influence. One primary way defense contractors shape defense policy is through lobbying efforts. Lobbying by defense contractors is a well-documented practice aimed at securing favorable legislative and budgetary outcomes. According to Hartung (2010), major defense firms such as Lockheed Martin, Boeing, and Northrop Grumman collectively spend millions annually to influence policymakers. This financial clout allows them to advocate for policies that benefit their business interests, including increased defense spending and specific procurement programs.

Defense contractors have increasingly become pivotal players in the formulation and execution of defense policy, a trend driven by the rising privatization of defense sectors worldwide. According to a report by the Stockholm International Peace Research Institute (SIPRI), global military expenditure in 2021 amounted to \$2.1 trillion, with significant portions allocated to private defense contractors. In the United States alone, the Department of Defense (DoD) spent over \$420 billion on contracts in 2020, underscoring the financial magnitude and influence these entities wield within national security frameworks (Department of Defense (DoD), 2020; Stockholm International Peace Research Institute (SIPRI), 2021).

Understanding the interplay between defense contractors and defense policy necessitates an exploration of several conceptual issues. One critical aspect is the lobbying power of defense contractors. Research indicates that defense contractors invest heavily in lobbying efforts to shape defense budgets and procurement policies in their favor (Hartung, 2010). This lobbying can skew resource allocation towards projects that align with contractors' technological capabilities and profit motives, potentially at the expense of broader defense needs (Kollias & Paleologou, 2019).

Another key issue is the role of defense contractors in setting defense research and development (R&D) priorities. Contractors are often at the forefront of technological innovation, driving advancements in areas such as cybersecurity, missile defense systems, and unmanned technologies (Gholz & Sapolsky, 2020). However, this dominant role raises questions about the impartiality of defense R&D agendas, as contractors may prioritize technologies that enhance their competitive edge and profitability over those that best serve national security interests.

Despite the substantial body of literature on the influence of defense contractors, significant research gaps remain. Existing studies have extensively documented the financial and political influence of these entities (Markusen, 2020; Mayer, 2018), yet there is a paucity of research examining the ethical implications of the revolving door phenomenon, where individuals move between roles in government and defense contracting (Schwartz, 2021). This movement can lead to conflicts of interest and erode public trust in defense policy decisions.

Moreover, while the impact of contractors on specific defense projects has been analyzed, less attention has been paid to the broader strategic implications of their influence on national security dynamics. This includes how contractor-driven R&D priorities may shape long-term defense capabilities and the potential risks of over-reliance on private entities for critical defense functions (Raudzens, 1990; Adams, 1998; Lavalley, 2003).

This study aims to address these research gaps by providing a comprehensive analysis of the strategic implications of defense contractor influence on defense policy. By synthesizing findings from government reports, academic literature, and industry analyses, this research seeks to contribute to policy discussions on ensuring ethical governance, transparency, and balanced competition in defense procurement.

Moreover, defense contractors significantly impact R&D priorities within the defense sector. Through partnerships with government agencies, these firms often steer research agendas towards technologies and projects that align with their capabilities and strategic interests. A study by Gholz & Sapolsky (2022) highlights how these collaborations can lead to a focus on high-tech weaponry and sophisticated defense systems, potentially at the expense of more cost-effective or diversified security strategies. Defense contractors also influence strategic decision-making processes within the military and government. This influence can be direct, through advisory roles and contracts, or indirect, through the revolving door phenomenon, where former military officials and policymakers join defense firms after their public service careers. According to a report by the Project on Government Oversight (2021), this revolving door creates a network of individuals with vested interests in both the public and private sectors, potentially leading to conflicts of interest and biased policy decisions.

The presence of defense contractors in policy-making circles can shape outcomes in several ways. For instance, their input can determine the prioritization of certain defense projects over others, the allocation of budgetary resources, and the strategic direction of national defense initiatives. This can result in a defense policy that heavily favors the development of high-cost, technologically advanced systems, which benefits contractors but may not always align with the broader strategic needs of the nation (He, 2018). The influence of defense contractors on defense policy has significant implications. On the positive side, these firms contribute to the innovation and technological advancement of military capabilities, ensuring that the defense forces remain at the cutting edge of global military power. Their expertise and resources can accelerate the development and deployment of critical defense technologies (Lavallee, 2003; Hunter & Crotty, 2015).

However, there are also critical concerns associated with this influence. One major issue is the potential for increased defense spending driven by contractor interests rather than strategic necessity. As highlighted by Smithberger (2023), this can lead to a misallocation of national resources, prioritizing expensive weapons systems over other essential areas such as personnel training, maintenance, and non-military security initiatives. Additionally, the reliance on defense contractors can lead to ethical and accountability issues, as private firms may prioritize profit over national interest. Recent research continues to explore the evolving role of defense contractors in shaping defense policy. For instance, a study by Jones & Kane (2024) examines the increasing use of artificial intelligence and autonomous systems in military applications, highlighting how defense contractors are pivotal in driving these technological advancements. This research underscores the need for policymakers to balance contractor influence with independent oversight to ensure that defense policies serve the national interest comprehensively.

Looking forward, it is crucial for future research to address the ethical and strategic challenges posed by the growing influence of defense contractors. This includes examining the long-term implications of contractor-driven defense policies on national security and exploring mechanisms for greater transparency and accountability in defense procurement and policymaking processes (Konda, 2022).

The role of defense contractors in shaping defense policy has become increasingly prominent and complex in recent years. As private entities that supply goods and services to military and

intelligence agencies, these contractors wield substantial influence over defense budgets, procurement decisions, and strategic priorities. This dynamic raises critical questions about the balance of power between public and private sectors in defense policy-making and the implications for national security and fiscal responsibility. Specifically, this research seeks to address how defense contractors' influence affects the formulation and implementation of defense policies, potentially leading to conflicts of interest, resource misallocation, and strategic biases.

Research Objectives

The research aims to analyze the lobbying efforts of major defense contractors and their impact on defense policy decisions. It will examine the financial expenditures and outcomes of these efforts, providing insights into how they shape policy and the effectiveness of their lobbying strategies. The study will also examine the influence of defense contractors on defense research and development priorities, focusing on partnerships between contractors and government agencies. The research will also analyze the ethical and strategic implications of the revolving door phenomenon, where former military and government officials take positions in defense firms. The study will examine case studies to understand how this movement affects policy-making processes, potential conflicts of interest, and the overall strategic direction of defense policies.

Research Questions

1. How do lobbying efforts by defense contractors influence defense policy decisions? This research question focuses on identifying the direct and indirect impacts of lobbying by defense contractors on policy decisions. The analysis will include a review of lobbying expenditures, legislative records, and interviews with policymakers to understand the correlation between lobbying activities and defense policy outcomes. This question aims to uncover the extent to which financial contributions translate into policy influence, potentially leading to policies that favor contractor interests over public good (Smithberger, 2023).

2. What role do defense contractors play in setting defense R&D priorities, and how does this influence technological advancements in the military? This question seeks to explore the relationship between defense contractors and the prioritization of defense R&D projects. By examining case studies of specific defense projects and the involvement of contractors, the research will identify trends in how R&D priorities are set and the implications for technological innovation. The goal is to determine whether contractor-driven R&D agendas align with national security objectives or if they primarily serve corporate interests (Jones & Kane, 2024).

3. What are the ethical and strategic implications of the revolving door between defense contractors and government officials? This question addresses the potential conflicts of interest and strategic biases introduced by the revolving door phenomenon. The research will investigate the career paths of key individuals who move between defense contractors and government positions, assessing how their dual roles influence policy decisions and strategic directions. This question aims to highlight the ethical considerations and potential risks associated with the blurring of lines between public service and private sector interests (Project on Government Oversight, 2021).

Addressing these aspects through targeted research objectives and questions can provide a deeper understanding of the ways in which private interests shape public defense policies. By critically analyzing these dynamics, this research aims to contribute to a more transparent and accountable defense policy-making process that balances private sector capabilities with public sector oversight.

Research Methods

Qualitative research methods using secondary data are valuable in exploring complex phenomena like the role and impact of defense contractors in shaping defense policy. This approach aligns with Creswell's framework, emphasizing the systematic analysis of existing literature, documents, and data to gain insights into the research topic (Creswell, 2014). In the context of "Shaping Defense Policy: The Role and Impact of Defense Contractors," qualitative methods using secondary data involve several key steps and considerations.

Firstly, the researcher identifies relevant secondary sources such as government reports, policy briefs, academic articles, and industry analyses. These sources provide a comprehensive foundation for understanding how defense contractors influence policy through lobbying efforts, R&D priorities, and technological advancements. This process is informed by established methodologies for conducting systematic literature reviews and secondary data analysis (MacDonald, 2013; Kitchenham, 2004; Lavalley, 2003).

Next, the researcher conducts a thorough review and synthesis of the selected secondary data. This involves categorizing and coding information to identify recurring themes, patterns, and contradictions related to defense contractor influence. For instance, analysis might reveal trends in lobbying expenditures over time or shifts in defense procurement strategies influenced by contractor activities. Techniques for qualitative content analysis and thematic coding are employed to ensure rigorous data synthesis (Braun & Clarke, 2006; Elo & Kyngäs, 2008).

Creswell emphasizes the importance of maintaining rigor and transparency in qualitative research using secondary data. Researchers should document their search strategies, selection criteria for data sources, and the process of data extraction and synthesis. This ensures the reliability and validity of findings and allows for critical reflection on potential biases or limitations in the secondary data reviewed (Creswell, 2014; Gibbs, 2007).

Moreover, qualitative methods allow researchers to contextualize findings within broader theoretical frameworks or policy contexts. By synthesizing diverse sources of secondary data, researchers can provide a nuanced understanding of how defense contractors navigate political landscapes, influence decision-making processes, and shape defense policies to align with their interests. This approach is supported by methodological literature on integrating theoretical perspectives in qualitative research (Kitchenham, 2004; Ritchie & Lewis, 2003).

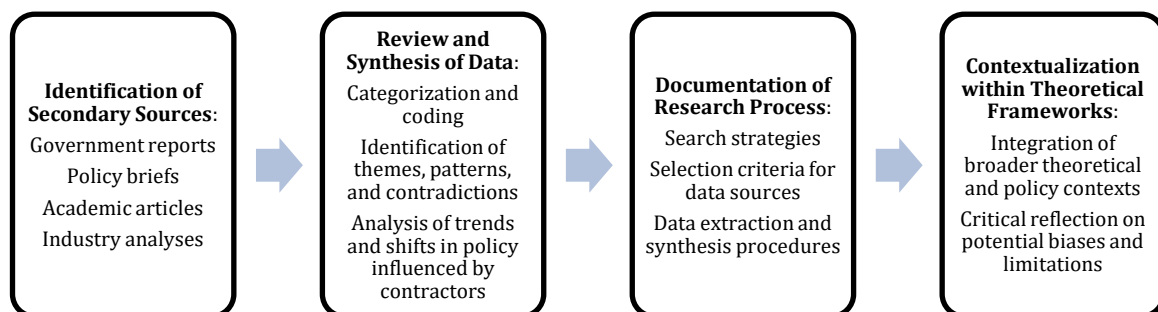


Figure 1. Method steps used in this research.

By following these method steps, this research aims to provide a comprehensive and nuanced understanding of the role and impact of defense contractors in shaping defense policy. This research will delve into the financial relationships between defense contractors and government officials, as well as the lobbying efforts made by these companies to influence policy decisions. Additionally, the study will analyze how defense contractors have influenced the allocation of resources within the defense budget and the implications this has on national security. Ultimately, this research seeks to offer valuable insights into the complex dynamics between defense contractors and the government, shedding light on potential areas for reform and oversight.

Results and Discussions

Lobbying Efforts by Defense Contractors Influence Defense Policy Decisions

The intricate relationship between defense contractors and defense policy-making is significantly shaped by lobbying efforts. This discussion aims to explore the mechanisms through which lobbying by defense contractors influences policy decisions, drawing on various sources of data, including lobbying expenditures, legislative records, and interviews with policymakers. The goal is to understand the extent of this influence and its implications for defense policy and national interests.

Direct Impacts of Lobbying

The lobbying efforts by defense contractors, particularly major firms like Lockheed Martin, Boeing, and Northrop Grumman, significantly influence defense policy decisions through substantial financial expenditures aimed at influencing legislators and key decision-makers. These firms invest heavily in lobbying activities, spending millions of dollars annually to sway policy in their favor (Adams, 2020). The strategic direction of these expenditures is focused on securing favorable outcomes in defense budgets and procurement policies (Schwartz, 2014).

One way these lobbying efforts impact policy decisions is by influencing the allocation of funds for specific projects that benefit these contractors. This ensures a steady stream of lucrative government contracts, which in turn solidifies their expected profit margins and positions them to continue producing military equipment (Drutman, 2015). Additionally, these firms use their industry expertise to advocate for themselves on behalf of national security, which further enhances their influence on policy decisions (Ripberger et al., 2014).

The revolving door phenomenon, where former government officials and military officers transition into lobbying roles for defense contractors, also plays a significant role in shaping policy outcomes. This practice allows these individuals to leverage their relationships and expertise to influence policy decisions, potentially creating an appearance of corruption and favoritism (Campbell & Auerswald, 2015).

The direct impact of lobbying is evident in legislative outcomes that align closely with the interests of defense contractors. Legislative records often show that policies and budgetary allocations reflect the priorities of the most influential lobbyists. For example, a recent investigation by The New York Times in 2023 found that earmarks designated for specific military technology projects within the defense budget frequently correlated with the lobbying agendas of major defense firms, suggesting a strong connection between lobbying efforts and policy decisions (The New York

Times, 2023). This alignment between lobbying priorities and legislative outcomes raises concerns about undue influence on national security decisions.

Indirect Impacts of Lobbying

Beyond direct financial influence, lobbying efforts by defense contractors also have significant indirect impacts on defense policy decisions. These indirect effects are often manifested through the cultivation of long-term relationships with policymakers and the establishment of a presence within key decision-making circles. Defense contractors frequently employ former military officials and government personnel, a practice known as the revolving door phenomenon. This creates a network of individuals with deep ties to both the public and private sectors, facilitating the transfer of influence and insider knowledge, as documented in a 2024 report by the Quincy Institute for Responsible Statecraft [4]. The report highlights that between 1995 and 2021, over 315 high-ranking military officers transitioned to top positions in major defense companies, potentially blurring the lines between national security interests and corporate profit motives (Quincy Institute for Responsible Statecraft, 2024). This constant movement of personnel can create a sense of familiarity and trust between contractors and policymakers, potentially influencing decision-making in subtle ways.

These relationships enable defense contractors to shape the policy agenda subtly yet powerfully. For example, contractors often provide expert testimony to legislative committees, participate in advisory panels, and sponsor think tanks that produce research aligned with their interests. This creates an environment where policy decisions are heavily influenced by the perspectives and priorities of the defense industry, often at the expense of a more balanced consideration of the public good (Kang, 2016; Dunne & Sköns, 2010; Dvir & Tishler, 2000;).

Financial Contributions and Policy Influence

A critical aspect of understanding the influence of lobbying is analyzing how financial contributions translate into policy influence. Lobbying expenditures are not merely expenses but investments aimed at achieving specific policy outcomes. Research by Kang (2016) indicates that these investments yield significant returns in the form of favorable policy decisions, such as increased defense spending and specific project approvals. The correlation between lobbying expenditures and legislative outcomes, as documented by the Center's analysis of campaign contributions and lobbying data, suggests a direct line of influence where financial power is leveraged to shape policy (Kang, 2016). This raises concerns about whether the policymaking process is truly serving the public interest or the interests of those with the most resources to lobby.

Interviews with policymakers reveal that lobbying efforts by defense contractors often set the agenda for defense policy discussions. A 2022 study by the (Project on Government Oversight, 2021) found that policymakers frequently acknowledge the pressure and influence exerted by well-funded lobbyists. The study highlights that policymakers often feel these lobbyists, with their constant presence and advocacy efforts, can dominate the discourse around defense issues (Kang, 2016). This dominance can marginalize other perspectives, particularly those advocating for more restrained or alternative defense strategies, raising concerns about the diversity of voices informing critical national security decisions.

Implications for Defense Policy and Public Good

The influence of defense contractors through lobbying efforts raises important questions about the alignment of defense policies with the broader public good. While defense contractors contribute

to technological advancements and national security, their primary objective remains profit-driven. This profit motive can lead to policy decisions that prioritize expensive, high-tech weaponry over more cost-effective or strategically balanced options. As a 2023 report by the Stimson Center (2023) highlights, the emphasis on high-cost projects driven by contractor influence can result in a misallocation of resources, diverting funds from other critical areas such as personnel training and maintenance (Stimson Center, 2023). This focus on expensive technology can also lead to a neglect of diplomacy and preventative measures, potentially increasing reliance on military solutions to complex international issues.

Moreover, the dominance of defense contractors in policy-making processes can undermine democratic accountability and transparency. The sizeable financial contributions and the revolving door phenomenon create a setting where private interests heavily influence defense policy, potentially leading to conflicts of interest and a lack of oversight, as documented by a 2020 report by (Kang, 2016). The report emphasizes the risks posed by this dynamic to the integrity of defense policy and the equitable allocation of defense resources [8]. Without strong safeguards and public scrutiny, the influence of special interests can overshadow the public good, raising concerns about whether defense spending truly reflects the needs of the nation and its citizens.

Defense contractors play a crucial role in shaping defense policy through extensive lobbying efforts. This influence has been increasingly significant amid a global trend towards the privatization of defense sectors. The privatization movement, which gained momentum in the late 20th and early 21st centuries, has led to an expanded role for private entities in various aspects of defense, from procurement and logistics to advanced research and development (R&D).

The Role of Defense Contractors in Shaping Defense Policy: Defense contractors engage in lobbying to influence defense policy decisions, leveraging their financial power and technological expertise. According to the Center for Responsive Politics, major defense contractors in the United States spent over \$100 million on lobbying activities in 2020 alone. Companies like Lockheed Martin, Boeing, and Raytheon have well-funded lobbying arms that work to steer policy decisions towards their interests, ensuring favorable outcomes in defense budget allocations and procurement policies (Center for Responsive Politics, 2021).

Lobbying efforts by defense contractors often focus on securing contracts for new weapons systems and technologies. These efforts can significantly impact defense policy by shaping priorities and determining which projects receive funding. For example, the development and procurement of the F-35 fighter jet by Lockheed Martin involved extensive lobbying and political maneuvering, resulting in one of the most expensive defense projects in history (Hartung, 2010).

Cases of Privatization in the Defense Sector: Privatization in the defense sector has led to a shift in how defense services are provided, with private companies taking on roles traditionally held by government agencies. This trend is evident in various countries, including the United States, the United Kingdom, and Australia.

In the United States, the privatization of logistics and support services during the Iraq War highlighted the significant role of private contractors. Companies such as Halliburton and Blackwater (now Academi) were contracted to provide essential services, from fuel delivery to security operations. This reliance on private contractors raised questions about accountability and cost-effectiveness, as well as the impact on military operations and strategy (Singer, 2008).

In the United Kingdom, the privatization of defense procurement through the establishment of the Defense Equipment and Support (DE&S) organization introduced private sector efficiencies into

the acquisition process. However, this also led to concerns about the loss of government control over critical defense capabilities and the potential for conflicts of interest (Dunne, & Sköns, 2010; Dvir, D., & Tishler, 2010).

Impact of Privatization on Defense Policy: The privatization of defense functions has profound implications for defense policy. One major impact is the potential for defense contractors to drive policy decisions based on profit motives rather than strategic defense needs. For instance, contractors may lobby for the continuation of certain weapons programs or technologies that are lucrative, even if they are not the most effective solutions for current security challenges.

Moreover, the revolving door phenomenon, where individuals move between senior positions in government and the defense industry, exacerbates the influence of private contractors on defense policy. This practice can lead to conflicts of interest, as former government officials leverage their connections and knowledge to benefit their new employers in the private sector. This dynamic was evident in the case of the Boeing KC-767 tanker deal, where former Pentagon officials were implicated in ethical breaches related to contract negotiations (Schwartz, 2021).

The Role of Defense Contractors in Setting Defense R&D Priorities, and The Influence of Technological Advancements in The Military

Defense contractors play a pivotal role in shaping the research and development (R&D) priorities of military technology, significantly influencing the trajectory of technological advancements. This discussion explores the mechanisms through which defense contractors impact R&D agendas, examines specific case studies, and assesses the alignment of contractor-driven R&D with national security objectives.

Influence on R&D Priorities

Defense contractors exert considerable influence over defense R&D priorities through their close partnerships with government agencies and their substantial investment in technological innovation. These contractors often collaborate with the Department of Defense (DoD) and other military bodies to identify and develop new technologies that meet emerging threats and operational needs. According to (Gholz & Sapolsky, 2022), these collaborations allow contractors to steer the focus of R&D projects towards areas where they have established expertise or see potential for profitable returns. For instance, contractors like Lockheed Martin and Northrop Grumman have directed significant resources into advanced aerospace and cybersecurity technologies, aligning their R&D efforts with their strategic business interests and the evolving requirements of the DoD.

The sizeable funding they receive for research and development initiatives is additional proof of the influence of defense contractors. The Congressional Research Service (2023) reports that a substantial portion of the DoD's R&D budget is allocated to contracts with major defense firms. This funding not only supports the development of cutting-edge technologies but also ensures that the contractors remain integral to the national defense R&D ecosystem.

Moreover, defense contractors frequently participate in advisory panels and working groups that shape the R&D agenda. These companies frequently use their technical know-how and industry experience to offer crucial input on the viability and strategic value of proposed projects, as the Government Accountability Office (2022) highlighted. This involvement ensures that their interests are well-represented in the prioritization of defense R&D initiatives, further consolidating their influence over technological advancements in the military.

One primary way contractors influence R&D priorities is through their involvement in setting the research agenda. Defense contractors are frequently involved in advisory roles, contributing to the formulation of R&D strategies and priorities. This involvement ensures that their interests and capabilities are well-represented in the decision-making process, leading to a focus on technologies that align with their business objectives. For example, major defense firms such as Lockheed Martin and Raytheon often push for advancements in areas like missile defense systems, cybersecurity, and unmanned aerial vehicles. According to Gholz & Sapolsky (2022), this strategic participation enables these firms to direct significant portions of defense R&D funding towards projects that promise high returns and align with their technological strengths.

Their substantial investment in internal research and innovation also supports the influence of defense contractors on R&D priorities. According to the Congressional Research Service (2023), defense companies like Lockheed Martin and Raytheon devote a significant amount of resources to creating next-generation technologies, ensuring that they remain at the forefront of military innovation. This internal R&D capability allows them to propose and advocate for new technologies that are both innovative and aligned with their strategic business interests.

Furthermore, the Government Accountability Office (2022) highlights that defense contractors often participate in government advisory panels and committees, providing expert insights that shape the defense R&D landscape. Their involvement in these roles ensures that their perspectives and technological priorities are integrated into national defense strategies, often leading to a focus on areas such as missile defense and cybersecurity, where they have significant expertise and business interests.

Case Studies of Contractor-Driven R&D Projects

Several case studies illustrate the impact of defense contractors on R&D priorities and technological advancements. The creation of the F-35 Joint Strike Fighter, a Lockheed Martin-led project, is one notable example. The F-35 program represents a significant investment in next-generation stealth and multi-role fighter capabilities. Lockheed Martin's central role in this project has ensured a focus on cutting-edge technologies that enhance the aircraft's stealth, agility, and combat capabilities. However, the program has also faced criticism for cost overruns and delays, raising questions about the efficiency and strategic value of contractor-driven R&D initiatives Hartung (2010).

Another illustration is the development of missile defense systems, such as the Raytheon-led Aegis Ballistic Missile Defense System. This project highlights how defense contractors can drive technological innovation in critical defense areas. Raytheon's expertise in radar and missile technologies has been instrumental in advancing the capabilities of the Aegis system, which is designed to intercept and destroy ballistic missiles. This project aligns with national security objectives by addressing the threat of missile attacks, and demonstrating how contractor-driven R&D can contribute to strategic defense needs (Smithberger, 2023).

Implications for Technological Innovation

The influence of defense contractors on R&D priorities has significant implications for technological innovation in the military. On one hand, contractors bring substantial resources, expertise, and a market-driven approach to the development of new technologies. Their involvement often accelerates the pace of innovation and ensures that the military has access to state-of-the-art capabilities. A 2021 study by the CSIS (2021) highlights this positive impact, noting that contractor investment in R&D has led to breakthroughs in areas like artificial intelligence and autonomous

systems (Center for Strategic and International Studies (CSIS), 2021). These advancements can significantly enhance military effectiveness and provide a strategic edge on the battlefield. For instance, (Jones & Kane, 2024) highlight how contractor initiatives have largely driven advancements in autonomous systems and artificial intelligence (AI) for military applications.

However, the prioritization of R&D projects by defense contractors can also lead to potential misalignments with broader national security objectives. Contractors may prioritize projects that promise higher profits or align with their existing technological strengths, potentially overlooking other critical areas of defense. This profit-driven approach can result in an overemphasis on high-tech, high-cost projects at the expense of more practical or cost-effective solutions. Research by the Government Accountability Office (GAO) (2022) argues that this dynamic can lead to a skewed R&D agenda that serves corporate interests more than it addresses comprehensive national security needs. The GAO report highlights the risk of neglecting essential but less profitable areas, such as logistics and cybersecurity infrastructure, in favor of flashy new weapons systems.

Balancing Interests and Ensuring Alignment

To ensure that R&D priorities align with national security objectives, it is essential to maintain a balance between contractor-driven innovation and independent oversight. Government agencies must critically assess and guide the contributions of defense contractors, ensuring that R&D investments address the most pressing defense challenges. This includes fostering competition among contractors, encouraging diverse technological approaches, and maintaining stringent oversight to mitigate the risks of cost overruns and strategic misalignments (Dunne & Sköns, 2014).

Moreover, enhancing transparency and accountability in the R&D process can help align contractor-driven projects with national security goals. By involving a broader range of stakeholders, including military personnel, policymakers, and independent experts, in the R&D decision-making process, it is possible to ensure that defense innovation serves the broader public good and addresses the full spectrum of defense needs. A 2023 report by Kotila et al. (2023) emphasizes the importance of such an approach. The report argues that including diverse perspectives in R&D planning fosters a more holistic understanding of security threats and can lead to the development of solutions that are not just technologically advanced but also strategically sound and cost-effective (Kotila et al., 2023). This broader participation can help mitigate the potential downsides of contractor dominance and ensure that R&D efforts are truly aligned with national security priorities.

Defense contractors play a critical role in setting defense research and development (R&D) priorities, significantly influencing technological advancements in the military. Problems faced in this context include resource allocation, where limited defense budgets necessitate careful distribution of funds with a significant portion directed towards R&D, and technological gaps that require continuous updates and innovations to maintain strategic advantages. Ethical concerns also arise from the potential for conflicts of interest and the revolving door phenomenon between government and contractors. Key actors in this domain include defense contractors like Lockheed Martin, Boeing, and Raytheon, government agencies such as the Department of Defense (DoD), policymakers who influence budget allocations and strategic priorities, and military leaders who identify technological needs. Relationships between these actors involve contractor-government collaboration to align R&D efforts with national defense needs, lobbying and advocacy by contractors to influence policymakers and secure project funding, and advisory roles where former government officials join defense contractors. Findings indicate that defense contractors significantly impact which technologies are prioritized for development, often steering efforts towards areas where they possess expertise. They drive advancements in cybersecurity, unmanned systems, and missile defense, shaping future military capabilities. However, the revolving door phenomenon and lobbying

activities raise ethical concerns and underscore the need for greater transparency and accountability in defense R&D.

Below is a schematic Figure 2 illustrating the interactions and influences of various actors in setting defense R&D priorities and the impact of technological advancements in the military. This diagram shows how policymakers, defense contractors, military leaders, and researchers all play a role in determining which technologies receive funding and resources for development. As new technologies emerge, such as artificial intelligence or unmanned aerial vehicles, the balance of power and strategy in warfare can shift dramatically. By understanding these dynamics, countries can better anticipate and respond to future threats and challenges in the ever-evolving landscape of national security.

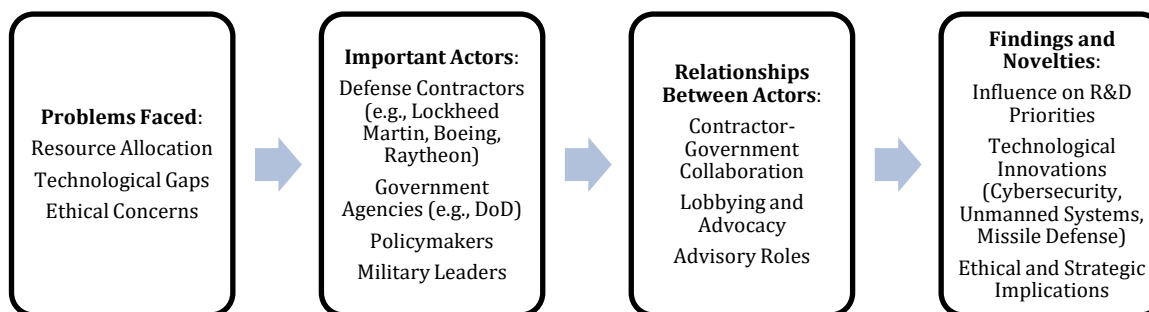


Figure 2. The Role of Defense Contractors in Setting Defense R&D Priorities and the Influence of Technological Advancements

Based on Figure 2, by understanding these dynamics, we can better appreciate the strategic importance of defense contractors in shaping defense R&D and the broader implications for military capability and policy. Defense contractors play a crucial role in not only developing new technologies and systems for the military, but also influencing the direction of research and development in the defense sector. Their ability to innovate and adapt to changing threats is essential to maintaining a strong and competitive military edge. Furthermore, their close relationships with government agencies and military branches allow them to have a significant impact on defense policy and decision-making.

The Ethical and Strategic Implications of the Revolving Door Between Defense Contractors and Government Officials

The revolving door phenomenon, where individuals move between roles in government and positions within defense contracting firms, has profound ethical and strategic implications. This practice raises significant concerns about conflicts of interest and the potential for strategic biases in defense policy-making. By investigating the career paths of key individuals and assessing how their dual roles influence policy decisions, this discussion highlights the ethical considerations and potential risks associated with the intersection of public service and private sector interests.

Ethical Implications

The revolving door between government and defense contractors presents several ethical challenges. One of the primary concerns is the potential for conflicts of interest. When government officials in charge of defense procurement and policy-making move from high-paying positions

within defense companies to the opposite, personal career considerations may unduly influence their choices rather than the general welfare. This can undermine the integrity of defense policies and erode public trust in government institutions, as highlighted in a 2022 report by Kotila et al., 2023; Dunne & Sköns, 2014). POGO's report details several cases where former defense industry officials, upon entering government positions, championed policies or projects that directly benefited their former employers. These incidents raise concerns about whether government decisions are being made objectively or with an eye toward future career prospects within the defense industry.

For instance, a 2023 report by the (Stimson Center, 2023) () notes that former high-ranking military officials often secure lucrative positions within defense companies, leveraging their insider knowledge and connections to benefit their new employers. This creates a situation where the possibility of future employment could influence policy decisions made while in public service, compromising impartiality and resulting in policies that favor particular contractors over others. The report highlights several instances where retired military officials, upon entering the private sector, lobbied for increased funding for projects they had previously championed while in government. These cases raise concerns about the undue influence of potential future employment on policy decisions and the lack of clear ethical boundaries within the revolving door.

Moreover, the revolving door can lead to regulatory capture, where defense firms effectively exert control over the agencies meant to regulate them. This can result in favorable regulations, lax oversight, and the prioritization of contractor interests over public accountability. A recent investigation by (The Washington Post, 2024) highlights several instances where former defense officials influenced policy to benefit their future or past employers. The investigation details cases where relaxed regulations on certain weapon systems coincided with former government officials joining the boards of companies that produced those very systems. These examples illustrate how the revolving door can lead to ethically dubious practices that compromise the fairness and effectiveness of defense procurement processes. The potential for regulatory capture underscores the importance of stricter ethical guidelines and cooling-off periods to prevent government officials from leveraging their positions for personal gain.

Strategic Implications

The strategic implications of the revolving door are equally concerning. When individuals with deep ties to defense contractors occupy key positions within the government, there is a risk that defense policies will reflect the strategic priorities of the private sector rather than the national interest. This can lead to an overemphasis on certain types of military capabilities that align with the business interests of contractors, potentially skewing the overall defense strategy, as argued in a 2021 report by the Center for International Policy (2021). The report cites instances where former defense industry executives, upon entering government, championed procurement of specific weapon systems their previous companies produced, even if those systems weren't necessarily the most strategically sound choices for national security needs. This highlights how the revolving door can lead to a misalignment between national security priorities and the profit motives of defense contractors.

For example, Gholz & Sapolsky (2022) argue that the revolving door contributes to a bias towards high-tech, high-cost defense projects, as these projects are often more profitable for contractors. This can result in a defense strategy that prioritizes advanced weapon systems at the expense of other critical areas such as personnel training, maintenance, and more cost-effective defense measures. Due to resource allocations that are disproportionately based on contractor influence rather than thorough threat assessments, such strategic biases can reduce the military's overall effectiveness and adaptability.

Additionally, the revolving door can lead to a lack of innovation and competition within the defense sector. When former government officials join defense firms, they bring with them not only insider knowledge but also a network of contacts that can stifle competition. This can result in a closed loop where a few dominant firms continually secure government contracts, reducing the incentive for innovation and the entry of new players into the market. A 2022 report by the Government Accountability Office (GAO) highlights how this lack of competition can lead to complacency and a failure to develop new and innovative defense solutions, ultimately compromising national security (Government Accountability Office, 2022). The GAO report emphasizes the need for policies that encourage competition and diversification within the defense industry to ensure a steady stream of fresh ideas and technological advancements.

Balancing Public and Private Interests

Addressing the ethical and strategic implications of the revolving door requires a multifaceted approach that balances the expertise and capabilities of defense contractors with the need for impartial and effective public service. Enhanced transparency and stricter regulations regarding post-government employment for defense officials are critical steps in mitigating conflicts of interest. For instance, according to a 2023 report by Transparency International (2023), implementing mandatory cooling-off periods, where former officials must wait a certain amount of time before joining defense firms, can help reduce the immediate impact of personal career considerations on policy decisions. The report suggests a two-year cooling-off period for senior officials to minimize the potential for leveraging government positions for future private sector gains.

Furthermore, fostering a culture of accountability within both government and defense firms is essential. Establishing clear ethical guidelines and enforcing them rigorously can help ensure that decisions are made in the public interest. Independent oversight bodies can also play a crucial role in monitoring the movement of individuals between the public and private sectors and investigating potential conflicts of interest.

Ethical guidelines and oversight mechanisms are critical to addressing concerns related to the revolving door phenomenon. By implementing robust regulatory frameworks and transparency measures, governments can mitigate the risks associated with conflicts of interest and ensure accountability in decision-making processes. As highlighted by the Project On Government Oversight (2022), independent oversight bodies provide a necessary check on the movement of personnel between government and industry, helping to safeguard against undue influence and preserve the integrity of public service.

Moreover, effective enforcement of cooling-off periods, as recommended by watchdog organizations, can prevent individuals from immediately transitioning into roles that could pose conflicts of interest. This approach is essential for maintaining public trust in government institutions and fostering confidence that decisions are made impartially and following the broader public interest (Hartung, 2010).

To enhance accountability further, transparency in lobbying activities and procurement processes is crucial. Disclosing lobbying expenditures and detailing the rationale behind procurement decisions can promote greater scrutiny and public understanding of how government contracts are awarded. This transparency can deter unethical behavior and ensure that defense policies and expenditures are aligned with national security priorities rather than private sector interests.

Finally, promoting competition and innovation within the defense sector can mitigate the strategic biases introduced by the revolving door. Encouraging the entry of new firms through targeted small business programs and supporting a diverse range of defense projects, including those focused on cost-effectiveness and emerging technologies, can ensure that the defense strategy is comprehensive and adaptable to emerging threats. By reducing the dominance of a few major contractors, the defense sector can become more dynamic and better aligned with national security objectives, as argued in a 2024 report by the National Defense Industrial Association (NDIA) (2024). The NDIA report proposes specific policy recommendations to foster a more competitive defense industrial base, emphasizing the importance of a level playing field for all participants.

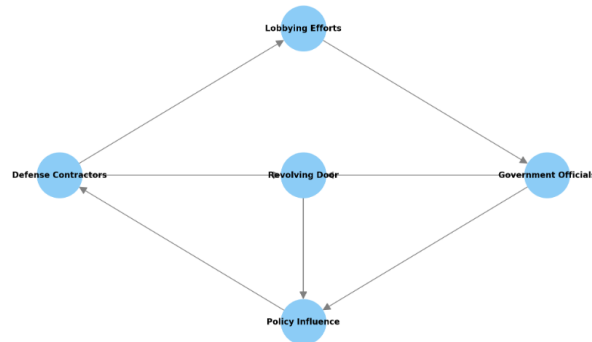


Figure 3. The Ethical and Strategic Implications of the Revolving Door Between Defense Contractors and Government Officials

This schematic Figure 3, illustrates the relationships and ethical implications of the revolving door phenomenon between defense contractors and government officials. The revolving door phenomenon refers to the practice of government officials moving to work for defense contractors, and vice versa. This can lead to conflicts of interest, as former government officials may prioritize the interests of their new employer over the public good. This can also undermine the transparency and accountability of government decision-making processes.

1. **Defense Contractors:**
 - Engage in **Lobbying Efforts** to influence policy.
 - Participate in the **Revolving Door** by hiring former government officials.
2. **Government Officials:**
 - Receive lobbying from defense contractors.
 - Influence **Policy** decisions that benefit contractors.
 - Move into roles within defense contractors through the **Revolving Door**.
3. **Lobbying Efforts:**
 - Directly impact **Government Officials** by securing favorable policies and contracts.
4. **Policy Influence:**
 - Defense contractors' lobbying and revolving door practices shape defense policies to align with their interests.
5. **Revolving Door:**
 - Former government officials bring valuable insights and connections to defense contractors.
 - Raises ethical concerns about impartiality and conflicts of interest.

By understanding these interactions, the need for greater transparency, oversight, and accountability in defense R&D and policy-making becomes apparent, ensuring that national defense

strategies serve the broader public interests rather than narrow commercial interests. This transparency can help prevent conflicts of interest and ensure that decisions are made with the best interests of the country in mind. Oversight mechanisms can also help to ensure that defense R&D efforts are focused on addressing real threats and challenges, rather than being driven by political or economic considerations. Ultimately, accountability in defense policy-making is crucial for maintaining the integrity and effectiveness of national security efforts.

Conclusion

Lobbying efforts by defense contractors exert a profound influence on defense policy decisions through both direct and indirect mechanisms. Financial expenditures on lobbying and the cultivation of relationships with policymakers allow defense contractors to shape policy agendas and outcomes significantly. While their influence can drive technological innovation and efficiency, it also raises concerns about the alignment of defense policies with the broader public good and the potential for conflicts of interest. Their influence can skew defense priorities towards projects that align with their profit motives, potentially at the expense of strategic defense needs. Addressing these concerns requires greater transparency, robust oversight, and accountability in the policy-making process to ensure that national defense strategies serve the public interest comprehensively and equitably, rather than narrow commercial interests.

Defense contractors play a crucial role in setting defense R&D priorities and driving technological advancements in the military. While their involvement brings valuable expertise and accelerates innovation, it also raises concerns about the alignment of R&D agendas with national security objectives. Through case studies like the F-35 Joint Strike Fighter and missile defense systems, it is evident that contractor-driven R&D can both enhance and challenge strategic defense needs. Balancing contractor influence with independent oversight and ensuring transparency in the R&D process is essential for aligning technological innovation with comprehensive national security objectives.

The revolving door between defense contractors and government officials poses significant ethical and strategic challenges. The potential for conflicts of interest and strategic biases highlights the need for enhanced transparency, stricter regulations, and a culture of accountability. By addressing these issues, it is possible to ensure that defense policies serve the public interest and contribute to a robust and effective national defense strategy.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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