From D.C. to VC: Leveraging Government Expertise in Venture Capital

Alice Eliet

April 2026

Abstract

Venture capitalists hire skilled professionals to screen and mentor portfolio companies from a variety of backgrounds. I build a new dataset linking career transitions from U.S. agencies into VC firms and document a rising flow of senior government officials into decision-making roles at startups and VC firms. Using a plausibly exogenous shock to the supply of former officials, I find that startups in which a former official serves as lead partner or VC-appointed director secure more federal awards and are more likely to obtain follow-on financing. Evidence from the timing of awards around cooling-off rules indicates that, beyond procedural know-how, relational access contributes to these gains.

I am very grateful to Ruediger Fahlenbrach for his continuous guidance and support. I also thank Melissa Crumling, Luise Eisfeld, Michael Ewens, Laurent Fresard, William Fuchs, Andreas Fuster, Blake Jackson, Javad Kashizadeh, Ernst Maug, Erwan Morellec, Clemens Sialm, Laura Starks, and Federica Zeni, as well as seminar participants at UT Austin, Baylor University and the WEFI PhD Workshop, for their valuable comments and suggestions. Portions of this paper were written during my visit to UT Austin McCombs School of Business.

Startups operate at the technological frontier, where uncertainty, regulatory ambiguity, and financing constraints are acute. In this environment, the government has become a pivotal counterparty, not only as rule-maker, but also as a funder and early customer of innovation. Federal R&D and procurement programs now channel roughly USD 750 billion annually, with instruments targeted at young firms such as Small Business Innovation Research (SBIR) grants and flexible "Other Transaction" agreements (OTAs) more than doubling over the past decade. Agencies such as ARPA-E, DARPA, and the Defense Innovation Unit have institutionalized direct engagement with early-stage ventures, expanding the pool of government-facing capital and expertise. These shifts change the skill set that venture investors must mobilize. Where venture capital once relied primarily on technological or financial specialists, a growing number of firms now recruit former government officials into investment and board roles, turning what the political-economy literature views as a "revolving door" into a potential channel of value creation.

This paper documents the growing presence of former government officials in venture capital and examines how their participation affects startups' access to public funding, private financing, and ultimate success. In most contexts, movements from public service to the private sector raise concerns about influence and rent extraction. The prevailing evidence from regulation, procurement, and lobbying portrays revolving doors as channels for favoritism rather than productive expertise. I show that in the venture capital setting, these transitions can instead create value. By combining a new dataset of career moves from U.S. agencies into venture capital firms with data on portfolio outcomes, and exploiting the 2019 federal government shutdown as a shock to the supply of former officials, I find that startups backed by such investors secure more federal awards, raise more follow-on capital, and advance further toward commercialization. Evidence from post-employment restrictions indicates that both procedural know-how and relational access contribute to these effects, revealing a productive channel of government-to-private mobility overlooked in prior work.

To conduct this analysis, I assemble a novel dataset linking individual career trajectories and skills to startup financing, innovation, and federal contracting outcomes. I identify former U.S. government employees who join venture firms and take active, decision-making roles in portfolio

companies, serving as the VC's lead partner on an investment or as the VC-appointed board representative (Lerner, 1995).

I document that transitions of former U.S. government officials into venture capital are both widespread across government agencies and increasingly common over recent years (Figure A.4). My dataset comprises over 400 individuals who have moved from public-sector roles, spanning various seniority levels, into active positions at VC firms. Prominent agencies supplying talent to the venture industry include innovation-oriented entities such as the Advanced Research Projects Agency-Energy (ARPA-E), the Department of Defense, and government-affiliated venture capital entities like In-Q-Tel, the Central Intelligence Agency's venture capital arm.

Using LinkedIn-based career histories and text similarity between individual biographies and startup technologies, I quantify two dimensions of human capital: deal-making capacity and subject-matter alignment. Across the sample, I find that very few appointees are "pure government" hires; most pair policy experience with either venture deal-making (often via In-Q-Tel or finance backgrounds) or technical expertise matched to the startup. This result is consistent with a skill-weights view (Lazear, 2009), in which generalists are especially valuable for resource-constrained startups (Kaplan and Strömberg, 2001; Ewens and Malenko, 2025). This contrasts with large incumbents' revolving-door hires, who are typically placed in specialist policy roles.

Startups with VC-appointed former government officials fall into three economically salient categories that are not mutually exclusive. First, a significant share operate in government-regulated industries such as biotech, healthcare, and energy, where regulatory approvals and policy environments directly shape commercialization. Second, another group competes in markets where the U.S. government is itself a major customer, including defense, aerospace, and dual-use technologies. Third, some firms are in capital-intensive sectors less suited to the canonical VC model, such as hardware-heavy deep-tech, where long development cycles make access to government funding particularly valuable. Nearly all of the ten largest VC firms have employed at least one former government official, with an even greater concentration among specialized funds operating in government-regulated sectors.

While these patterns highlight where and how former officials participate, assessing their causal impact on portfolio companies' performance is particularly challenging due to two key endogeneity challenges. First, former officials may sort into stronger VCs and startups already poised to succeed with government agencies. Second, VCs may time these hires precisely when a portfolio company approaches procurement or regulatory milestones. To address these concerns, I exploit the 2019 U.S. federal government shutdown as a plausibly exogenous supply-side shock that expanded the pool of officials available to the private sector (Resh et al., 2023). I construct a shift-share instrument (Card, 2009) that maps each firm's pre-shutdown exposure to specific government agencies with agencies' heterogeneous exposure to the shutdown.

Implementing this design at the deal level, I define the focal round as the first deal in which a former official joins as the VC's lead partner or VC-appointed board member, and I estimate changes in federal award access after that round. Over the subsequent five years, treated startups secure about USD 1.0 million more in cumulative federal awards. Relative to the sample mean of USD 0.26 million, this effect is large, approximately three to four times the average award, and economically meaningful for firms with limited early revenues. The effect is also sizable relative to initial private investment in that focal round. In a specification that scales outcomes by the focal deal size, I find that federal obligations rise by about 0.48 per initial dollar raised, roughly USD 1.0 million on a USD 2 million seed round and USD 2.4 million on a USD 5 million Series A, showing that government support expands in both levels and intensity.

To distinguish between quid pro quo arrangements that reward favorable treatment received while the person was still in government and the alternative explanation that ex-government officials provide unique human capital and connections, I conduct an event study analysis following Emery and Faccio (2025). I measure within-firm changes in the amount of government awards startups receive before and after the focal private round. I find limited evidence of increased awards in the pre-hiring period, which would be consistent with compensation for prior favorable treatment. Instead, I observe a significant increase in government awards primarily in the post-hiring period. Notably, the increase is concentrated within the same parent government organization where the hired officials previously served.

Former officials may create value for venture-backed startups through two channels. The first is an expertise channel, in which procedural fluency with federal programs, eligibility rules, and compliance requirements helps startups navigate complex award and procurement processes. The second is an access channel, whereby relational capital accumulated during public service facilitates communication and trust between startups and agencies.

With complex award procedures, the post-hire increase in award amounts implies at least some procedural know-how; the within-parent concentration further points to a potential access component operating beyond know-how. To precisely separate the two, I exploit the one-year post-employment cooling-off rule, which bars representational contact with an official's home unit but permits contact with other units in the same parent and within other parent agencies. This rule creates a wedge that shuts off direct access to one unit while leaving knowledge portable. Using a duration design for time-to-first award and classifying awards as Own (home unit), Same-parent, or Cross-parent, I find that Own awards are essentially absent during the ban and appear once it expires, whereas Same-parent and Cross-parent awards arrive even during the ban. The selective post-expiry jump in Own awards is diagnostic of an access channel operating in addition to know-how.

Do former officials help VCs pick better startups, or do they raise the performance of incumbents already in the portfolio? I compare outcomes for deals funded before versus after the hire; the design separates pure mentoring effects from improvements in portfolio construction, allowing me to ask whether former officials help VCs pick better government-facing startups or improve those already in the portfolio. Both are evaluated relative to a common reference group, startups funded before the hire and observed in periods that are both pre-deal and pre-hire. The estimates show that only the post-hire deals exhibit large and reliable gains in government awards: point estimates imply $\exp(1.533) - 1 \approx +363\%$ relative to the reference group. By contrast, the mentoring-only effects for pre-existing portfolio companies are small and statistically indistinguishable from zero. This pattern indicates that the primary channel is improved screening and portfolio composition, rather than mentoring incumbents.

The value created by such hires, and whether it extends beyond their ability to help startups

secure awards, remains unclear. On the one hand, government expertise and funding can reduce informational and contracting frictions, accelerating growth for resource-constrained startups. On the other hand, reliance on public funding or perceived preferential access could distort firms' incentives, crowd out private investment, or generate reputational costs.

I evaluate why these startups pursue government awards. A first motive is a certification mechanism, in which awards act as credible quality signals that reduce information asymmetries and facilitate the raising of private capital (Howell, 2017). The second is a hedging mechanism, in which government agencies serve as large and stable customers capable of awarding contracts for innovative but unproven products (Cioaca, 2024). In the latter, government contracts can replace more volatile private funding, although reliance on these revenues may also weaken incentives for innovation (Cohen and Malloy, 2016). I assess the relative importance of these mechanisms by studying the timing and size of follow-on private funding rounds. Among startups outside defense, aerospace, and infrastructure, government awards are followed by shorter intervals to the next private round and an increase of about USD 1 million in follow-on capital, consistent with certification. In sectors where the government is itself the primary customer, I observe longer intervals to the next round, consistent with some hedging. Yet even in these cases, follow-on rounds are larger by about USD 0.6 million, indicating a residual certification effect. Overall, the evidence points to certification as the dominant mechanism.

I finally examine whether hiring former government officials improves startup performance, providing a channel for VCs to create value. For more common outcomes such as securing follow-on funding, I find that startups equipped with former officials are significantly more likely to obtain subsequent private investment. This improvement extends beyond the effect attributable to increased government awards, as it persists after accounting for award amounts. In contrast, I find little evidence that these hires influence the likelihood of major success, defined as an IPO or acquisition at a valuation exceeding total venture capital investment.

Taken together, my findings highlight a new channel through which venture capitalists reduce frictions for their portfolio firms: hiring former U.S. government officials into active portfolio

roles. I find that venture investors strategically deploy multi-skilled former officials as an input to entrepreneurial finance, harnessing government's roles as funder, customer, and regulator of innovation. In doing so, VCs support startups, especially those in capital-intensive or highly regulated markets, that are not fully suited to the canonical VC funding model.

Related Literature First, my paper contributes to the literature examining the mechanisms through which VCs create value, particularly emphasizing their active involvement on portfolio companies' boards. Lerner (1995) highlights that VC investments commonly include direct participation on boards, enabling VCs to influence critical strategic decisions. Amornsiripanitch et al. (2019) find that VCs play an essential role in constructing effective boards, showing that the presence of VC directors significantly facilitates recruitment from their professional networks and relationship-based acquisitions. More generally, Kaplan and Strömberg (2001) and Gompers et al. (2020) underscore the critical role VCs play as matchmakers, successfully connecting entrepreneurs with innovative ideas to investors searching for profitable investment opportunities. To the best of my knowledge, my paper is the first to demonstrate that this matchmaking role of VCs extends beyond purely private-sector interactions, as they also leverage relevant government expertise and facilitate access to public funding for their portfolio firms.

Second, my paper contributes to the literature on the "revolving door," which examines the movement of government officials into private-sector firms. Prior research has documented these movements across various regulatory settings, including banking (Lucca et al., 2014), insurance (Tenekedjieva, 2021), agriculture (Katic and Kim, 2024), patents (Tabakovic and Wollmann, 2018), and trade policy (Cen et al., 2024). A core question within this literature, articulated by Bertrand et al. (2014) in the context of Congressional lobbying, centers on firms' motivations for hiring former government officials. Two primary rationales emerge: firms either seek direct influence through established political connections or aim to leverage officials' specialized policy knowledge and expertise. Recent research further highlights broader societal concerns linked to these movements, particularly regarding declining public trust in contexts such as FDA drug approvals (Karas, 2023). Beyond the regulatory role of the government, prior studies also

document another important channel through which firms benefit from revolving-door hires: government procurement contracts and public funding allocation (Duchin and Sosyura, 2012; Emery and Faccio, 2025). Conversely, Bertrand et al. (2018) emphasize possible inefficiencies associated with these connections, notably suboptimal employment decisions during election cycles.

In contrast to these prior studies, which primarily examine publicly traded or large private firms, my paper explicitly focuses on private, innovative startups. Such entrepreneurial ventures face significant resource constraints, substantial uncertainty, and limited access to government resources. My study is the first to examine whether hiring former government personnel benefits innovative startups by facilitating access to government expertise and public funding opportunities. In this context, my paper closely relates to Kempf (2020), who documents performance improvements associated with employees' enhanced career incentives.

Finally, my paper contributes to the literature examining the role of government as both a funder and consumer of innovation. A substantial body of research highlights the importance of government support for innovation. Gross and Sampat (2023) document the formative impact of large-scale U.S. government-funded R&D initiatives during World War II, emphasizing their lasting effects in creating technological clusters fundamental to the American innovation system. While the share of total R&D performed directly by governments has significantly declined since the 1960s (National Science Foundation, 2025), public funding remains critical, as shown by the rising proportion of government-funded patents (Fleming et al., 2019). Governments continue to invest heavily in sectors critically dependent on innovation, such as defense (Howell et al., 2024), and sectors where market-driven financing is particularly challenging due to high uncertainty, such as energy (Howell, 2017; Nanda, 2020). My paper shows that VC firms recognize this important dual role of government, especially for startups whose characteristics do not fully align with the traditional VC investment model. Consequently, VCs actively facilitate the integration of relevant government expertise into their portfolio firms, strategically leveraging public funding to generate value for their investors.

I. Institutional Background

I first illustrate the institutional context with Radiant, a nuclear-energy startup in my sample. Founded in 2019 by a former SpaceX engineer, Radiant is developing a portable micro-reactor intended as a cleaner and more reliable substitute for diesel generators. The company faces three binding constraints that shape its trajectory: (i) hard to access customers, (ii) scarcity of capital, and (iii) slow and uncertain regulatory approval.[1]

In March 2022, Radiant raised a USD 12.6 million Series A round, led in part by Dr. Rachel Slaybaugh, a nuclear scientist who that year joined the deep-technology venture firm DCVC after serving as Program Director at the Department of Energy's (DOE) Advanced Research Projects Agency–Energy (ARPA-E). Slaybaugh first engaged with Radiant during her tenure at ARPA-E, where she designed a research program in which the startup participated.[2]

Prior to the Series A, Radiant had secured a small Department of Defense (DoD) award, precisely a USD 50,000 R&D services contract from the Air Force (see Figure A.7 for an exhaustive timeline). Government support scaled after the Series A, coinciding with the entry of ex-government officials on the board of the startup. In 2023, Radiant received two awards of roughly USD 1.3 million each: a DoD (Air Force) R&D services contract and a DOE grant enabling testing at Idaho National Laboratory, the U.S.'s primary reactor testing facility.

Private capital scaled alongside these awards: a USD 40.7 million Series B (2023) and a USD 165 million Series C (2025) were raised. In parallel, interactions with the federal government diversified: Radiant entered an Other Transaction Agreement (OTA) with the Defense Innovation Unit to advance micro-reactor technologies for military installations (July 2025).[3] In the same year, the Department of Energy selected Radiant to receive nuclear fuel for reactor testing, directly addressing a key bottleneck in the sector: access to fuel. While still facing challenges ahead of the planned 2026 prototype, Radiant has continued to expand, notably deepening its human capital

[1] See remarks by Radiant's CEO in John Coogan's interview: https://www.youtube.com/watch?v=uT86vtI7hEw.

[2] See Ignition interview with Rachel Slaybaugh: https://ignition-news.com/a-qa-with-dcvcs-rachel-slaybaugh/.

[3] See American Nuclear Society News (2025): https://www.ans.org/news/2025-04-14/article-6931/us-advances-microreactor-program-for-military-sites/.

in specialized roles, by hiring Dr. Rita Baranwal (former Assistant Secretary for Nuclear Energy) as Chief Nuclear Officer.

Taken together, the Radiant case illustrates how, under financing frictions, demand uncertainty, and regulatory risk, former government officials can create value by facilitating access to the government in its multiple roles, as early customer, capital provider, regulator, including here as allocator of critical complements such as nuclear fuel.

Radiant is representative of the diversity of U.S. government funding instruments, which fall into three broad categories that differ in their deliverable expectations and in how financial risk is allocated between the government and the recipient. Grants, competitively awarded on technical merit and innovation potential, typically finance early-stage R&D, do not require delivery of market-ready products, and generally do not involve profit-sharing or repayment if projects fail (Howell, 2017). By contrast, R&D service contracts, such as Radiant's agreements with the Air Force, fund clearly defined research tasks, are often structured as cost-reimbursable (cost-plus) arrangements that cover allowable costs plus a fee, and condition payment on completion of specified milestones rather than commercialization, thereby sharing cost risk while imposing deliverable discipline. Product contracts, often the largest category in dollar terms, explicitly require delivery of specified goods or services and shift substantial performance and delivery risk to the contractor. Procurement contracts, comprising both R&D services and product contracts, are governed by the Federal Acquisition Regulation (FAR) and agency supplements such as the Defense Federal Acquisition Regulation Supplement (DFARS), whereas grants are administered under a uniform rule (Uniform Guidance, codified as 2 CFR Part 200). Compliance across these regimes is complex and experience-intensive, creating sizable entry barriers for startups and tending to favor large incumbents (GAO, 2021; Carril and Duggan, 2020).

Recognizing that the U.S. procurement system often underserves innovative startups, particularly amid intensifying technological competition with China (GAO, 2021), the federal government has introduced mechanisms to lower contracting frictions and broaden participation. Two developments are particularly important in the context of this paper.

First, the share of government R&D funding explicitly startup-facing has increased. Set-asides for small-business R&D have risen over time, expanding the slice of federal R&D explicitly reserved for small firms. In FY2022, agencies obligated USD 4.4 billion to small businesses through SBIR, compared to roughly USD 2.0 billion in 2010, more than doubling over the period.[4] At the same time, flexible procurement instruments suited to young firms have scaled sharply. Other Transaction Agreements (OTAs), which are intended to attract nontraditional vendors and are not bound by many FAR requirements, grew from USD 1.8 billion in FY2016 to more than USD 18 billion in FY2024 (GAO, 2020). Taken together, these changes indicate that the pool of federal R&D capital available to startups today is both larger and more flexible than it was two decades ago (Howell et al., 2024).

A second margin is institutional: dedicated innovation agencies, exemplified by ARPA-E, or its equivalent in the Defense Department, DARPA, for advanced research, and In-Q-Tel for strategic equity investments, deploy tools that target high-risk technologies and engage directly with early-stage firms and venture investors. The continuing growth of this architecture expands the government's innovation-oriented human capital and increases the likelihood of human-capital flows between government and startups.

As the pool of startup-facing federal R&D capital expands and innovation agencies deepen the government's stock of technical talent, the returns to engagement between startups and the federal government rise. Mobility across this boundary, however, is governed by post-employment restrictions that bind all former U.S. government employees. These rules embody a clear trade-off: they curb the scope for undue influence by limiting the use of personal ties, yet they raise the opportunity cost of public service and may tilt selection toward officials with stronger non-pecuniary motives (Fisman et al., 2025). They are distinct from lobbying statutes, which regulate conduct based on activity rather than prior public status.

Specifically, post-employment restrictions, codified at 18 U.S.C. § 207, limit communications

[4]SBIR obligations to small businesses rose from about USD 2.0 billion to USD 4.4 billion, which is a 120 percent nominal increase. Even after adjusting for cumulative CPI inflation, the real increase is on the order of 60–70 percent, so the expansion reflects a genuine increase in the share of federal R&D funding directed to small firms.

and other representational activities after public service. They create one- and two-year agency-specific cooling-off periods whose horizons depend on seniority and on involvement in particular matters. A former official is barred from representational contact with the official's home component for a fixed period, while contact with other components in the same parent agency and with other parent agencies remains permitted. In the paper, I exploit this structure to separate an access channel, which should activate only once the ban expires at the home component, from a know-how channel. In contrast to the access channel, know-how entails procedural expertise that is portable, and can be used to advise portfolio companies on program priorities, procurement pathways, and regulatory strategy.

II. Hypotheses Development

In some sectors where venture capitalists invest, such as defense, health, and energy, the government is a critical customer and regulator. Startups in these markets face procurement complexity and regulatory oversight that can shape their growth trajectories. Former government officials may affect venture outcomes through several distinct channels. In the selection stage, they can help investors identify startups with stronger prospects in government-facing markets. In the post-investment stage, they can create value by opening networks, transferring procedural expertise, or enhancing the perceived legitimacy of the firm among key stakeholders. A central trade-off in recruiting former officials is that while it may allow to transfer government-specific human capital and relational ties, it may also deepen reliance on public procurement and reduce exposure to private-market discipline. Ex ante, the net effect on overall startup performance is therefore ambiguous.

Hypothesis 1: Government Contracting Performance Startups that appoint former government officials are more likely to obtain government awards, and to receive larger or more frequent awards, than comparable startups without such appointments. Officials' prior experience and relationships are expected to improve firms' ability to identify opportunities, prepare bids, and

navigate the procurement process.

If this hypothesis is correct, regression estimates of contracting outcomes on the presence of former officials should reveal positive and statistically significant effects. Startups with such appointments should have a higher probability of winning awards, receive awards of greater value, or secure them more frequently relative to otherwise similar firms.

An alternative hypothesis is that the appointment of former government officials reflects rewards for prior connections or services rendered while in office. Under this interpretation, improvements in contracting outcomes are not the result of officials' expertise or networks being deployed ex post, but rather a manifestation of pre-existing ties between the firm and the government. In this case, the increase in award performance should materialize prior to the official's appointment, consistent with a favor-exchange or reward for past favors mechanism.

Hypothesis 2: Mechanisms of Value Creation The contribution of former officials may arise through different mechanisms. At the selection stage, venture capitalists may rely on their insights to identify startups with stronger potential in government-facing markets. The association with prominent officials may also serve as a certification device, attracting higher-quality startups to VC firms that employ them. After investment, value may be generated through network access - where officials leverage personal and institutional ties to open contracting opportunities - through bureaucratic expertise that enables firms to navigate procurement across agencies, or through certification effects that enhance the startup's legitimacy with customers, investors, and regulators.

These mechanisms yield distinct empirical patterns. If appointments primarily reflect selection, improvements in contracting outcomes should accrue only to firms that enter a venture capital firm's portfolio after the official has been appointed, with no corresponding gains for firms already in the portfolio. If appointments provide network access, gains should be concentrated in the official's former agency, and only appear after the expiry of the former official's cooling off period. If bureaucratic expertise is central, improvements should extend across agencies and persist. If certification dominates, effects should be visible in downstream outcomes, such as

follow-on venture funding, even when contracting outcomes do not change substantially.

Hypothesis 3: Overall Startup Performance Should VC firms hire former officials who help startups access public funding, if the resulting government ties increase contract opportunities but potentially constrain innovation and private-market growth? Even if former officials increase the probability of obtaining government awards, the net effect on overall startup performance remains uncertain. On the one hand, awards can stabilize revenue and provide credible signals to private investors. On the other hand, reliance on government demand may reduce strategic flexibility and limit growth in private markets. As a result, the overall impact of such appointments on venture funding outcomes and exit performance may be weak or non-linear.

To evaluate this hypothesis, one can examine whether startups with former officials, and the contracting activity they generate, translate into improved venture funding outcomes such as higher valuations, larger syndicates, or shorter times to the next round. In addition, assessing IPO exits allows a test of whether government contracting advantages persist into later stages. Strong positive effects would indicate that contracting success carries over into broader measures of startup performance; weak or negative effects would be consistent with dependency concerns.

III. Data and Summary Statistics

A. Data Sources

I construct my dataset from four sources. The first is *PitchBook*, which reports deal-level information on venture investors and investment rounds. PitchBook identifies lead partners on deals and the VC-appointed board members, together with their appointment dates. These fields enable me to link individual decision-makers to specific startups and to focus on senior actors: lead partners, who represent the VC firm in the transaction, and VC-appointed board members, who join the startup's board following the investment. I focus on these senior individuals because they are directly exposed to the success of the investment, typically holding equity in the portfolio company.

To detect prior U.S. federal government service, I parse biographies available on PitchBook. Using an exhaustive list of U.S. federal agencies (as detailed in Appendix Table A.1), I detect references to prior government employment within individual biographies. To ensure accurate classification, I manually review and validate each biography, verifying that references to government-related terms reflect genuine employment within a federal agency.[5] Since the coverage of investor biographies in PitchBook is incomplete, I supplement my data with additional information from public announcements and news articles.

In addition, to further enrich career histories, I integrate two external datasets based on LinkedIn profiles: ProxyCurl and Revelio Labs. These datasets allow to reconstruct comprehensive career trajectories for each senior individual, including the timing, job titles, and employers for all positions held.

From PitchBook, I also obtain detailed information on startup funding rounds, including company descriptions, industry classifications, founding year, and geographic location. Investment data include the names of investors, fund identifiers, and round characteristics. Following prior VC research, I restrict attention to completed equity investments made by venture capital firms. I focus on funding rounds that took place between 2012 and 2023, a period characterized by high-quality data coverage in PitchBook (Retterath and Braun, 2020), which also aligns with the rise in ex-government hiring observed in the data (see Figure A.4). Finally, to ensure relevance to federal procurement, I restrict the sample to startups with at least one U.S. office.

For the outcome analysis, I restrict attention to investments made by 2023 and track outcomes through 2025, ensuring at least a two-year realization window. I construct two complementary performance measures. First, I define a "Follow-on Round" indicator, equal to one if the firm successfully raises additional VC funding by 2025, and zero otherwise. Follow-on financing is frequent and provides an early signal of quality: under staged venture capital financing, continuation is contingent on milestones and private information revealed to investors, so receiving a follow-on round predicts survival, scaling, and eventual exits while mitigating right-censoring

[5]This validation process explicitly excludes spurious mentions, for example, instances where an individual only interacted with the Food and Drug Administration as an external stakeholder.

concerns in short panels (Gompers and Lerner, 2001; Kaplan and Strömberg, 2001; Kerr et al., 2014). Second, I define a "Major Success" indicator, which equals one if the startup completes an IPO or is acquired by 2025 at a valuation that exceeds the cumulative amount of VC invested, and zero otherwise. This metric aligns the outcome with value creation and investor payoffs, and avoids reliance on potentially overstated private-round valuations, as well as mapping directly into the power-law nature of VC returns where a few large exits drive performance (Korteweg and Sorensen, 2017; Gornall and Strebulaev, 2021).

Second, I use administrative data from *USASpending.gov* to measure startup access to government awards. I focus on the Departments of Defense, Health and Human Services, Veterans Affairs, and Energy, together with NASA and the Department of Homeland Security, which in the 2023 fiscal year accounted for 85% of all federal awards. I also include the National Science Foundation (NSF) and the Small Business Administration (SBA), which, although more peripheral to procurement, are central to early-stage R&D and startup financing. Including these agencies ensures that both scale and innovation dynamics within federal activity are represented.[6]

These federal awards include both contracts and grants. For each award, I observe detailed transaction-level data, including the obligated dollar amount, the total number of transactions, the awarding agency and sub-agency, and the procurement rationale. For contracts, I also collect product classification codes, which allow differentiation between R&D contracts and product sales. Paycheck Protection Program (PPP) loans, which were issued during the pandemic to stabilize payrolls, are excluded throughout the analysis. To avoid double counting, I retain only the first occurrence of each award. Finally, I link these federal awards to startups using fuzzy matching on entity names.

Finally, I measure innovation outcomes using patent-level data from *PatentsView*, which compiles records from the U.S. Patent and Trademark Office (USPTO). For each startup, I

[6]The National Science Foundation (NSF) primarily funds academic research through grants to universities and research institutions. The Small Business Administration (SBA) does not directly issue R&D awards; it establishes policy and coordinates inter-agency programs such as SBIR and STTR. Obligations under these programs are made by the participating agencies and are reported in *USASpending.gov* under those agencies' names. The SBA primarily guarantees loans rather than issuing them directly, and these guarantees do not constitute federal expenditures; consequently, they are not recorded in USASpending.

examine patent application dates, technology classes, and assignees, and I analyze patent titles and abstracts to assess how well a founder's prior expertise aligns with the startup's technological domain (Hoberg and Phillips, 2010).

B. Advantages and Limitations

My data collection strategy presents several key advantages. First, it enables me to directly link venture capital investments to specific additions of human capital made by VC firms, allowing me to trace the relation between government expertise and subsequent public funding and private-sector outcomes. Second, my focus on senior individuals identified as lead partners or board members is consistent with prior research highlighting these individuals as the primary locus of strategic influence (Ewens and Malenko, 2025). Finally, my focus on agents occupying decision-making positions aligns with the revolving door literature (Tabakovic and Wollmann, 2018; Cen et al., 2024).

One important limitation of this approach is that PitchBook's coverage, while very fine-grained, is not comprehensive. As discussed by Ewens and Malenko (2025), the dataset may omit certain senior individuals, which implies that my measure likely constitutes a lower bound on the true number of senior professionals with prior government experience.

C. Descriptive Statistics

My dataset comprises 416 former U.S. federal officials who transitioned into 340 distinct VC firms and assumed senior, equity-linked roles in 1,057 startups (Table 1). At the time of entry into VC, they had on average 4.26 years of cumulative federal service (median 2.17), including 3.95 years in their most recent government job (median 2.00). The median time since their last government position was 1.83 years, placing most transitions within two years of exit (Panel B of Table 1).

This profile differs from the type of movements studied in revolving-door research, even within the Executive Branch. First, whereas Emery and Faccio (2025) find that the revolving door is concentrated in regulatory and financial agencies such as the Federal Reserve, SEC, FDIC, Treasury,

and Justice, the officials in my sample come predominantly from innovation- and defense-oriented organizations. These include the Department of Defense and its branches, DARPA, the Defense Innovation Unit, NASA, the National Science Foundation, the Department of Energy and ARPA-E, national laboratories, In-Q-Tel, and the Executive Office of the President (Figure 1). These agencies are central to the federal innovation pipeline: they fund basic and applied R&D, administer SBIR/STTR programs, finance high-risk technological bets, operate flexible procurement pathways, and maintain budgets that can scale new technologies. Second, whereas Emery and Faccio (2025) observe that direct transitions typically involve longer government tenures (median 5 years), my officials spend less time in government and experience a longer gap before entering VC. Finally, unlike the cyclicality noted broadly in the revolving-door literature (Duchin et al., 2024), transitions in my sample show little relationship to electoral cycles. Instead, there has been a persistent increase in such moves since 2014, consistent with the growing strategic role of government as both a funder and customer of innovation-intensive startups (Figure A.4).

The distinctive profile of former officials entering venture capital raises the question of which types of startups attract their involvement. In my sample, startups with VC-appointed former government officials fall into three economically salient categories, which are not mutually exclusive. First, a significant share (41%) operate in government-regulated industries such as biotech, healthcare, and energy, where regulatory approvals and policy environments directly shape commercialization. Second, a subset (37%) are in capital-intensive sectors that fit poorly with the canonical VC model, such as energy infrastructure or hardware-heavy deep-tech, where long development cycles make access to government awards particularly valuable. Third, another group (18%) competes in markets where the U.S. government is itself a major customer, including defense, aerospace, and dual-use technologies. The remainder (35%) are active in more conventional VC markets, including software, SaaS, consumer sectors, and do not fall into any of the three categories above.

For the firms in my sample, government grants account for only a small share of total public funding. The bulk of support takes the form of R&D service contracts and product contracts, particularly with the Department of Defense, which is the largest government spender on R&D

(Figure 3). These awards can be sizable: for instance, DNANexus, a biomedical informatics startup, secured approximately USD 30 million from the Department of Health and Human Services. This amount represents about 5% of its total VC funds raised (USD 600 million), a ratio reflective of the average across firms in my sample (Panel B, Table 1).

D. The Role of Multi-Skilled Individuals

I examine the human-capital contributions of VC-appointed former government officials. Their comparative advantage differs from that of private-sector executives, whose strength may lie in scaling commercial products. At a minimum, these appointees supply government-specific capabilities: an understanding of how programs are budgeted, how procurement pathways are structured, how to navigate complex regulatory regimes, or how to access government awards. Given the size, scope, and patience associated with public funding, and the fact that a large share of startups in the sample operate in markets where the government is a regulator, funder, or direct customer, this procedural and institutional knowledge is of first-order importance.

However, these appointees also differ from those placed on boards assembled primarily for prestige. Theranos's board, for example, consisted almost entirely of prominent statesmen and business leaders.[7] By contrast, the officials in my sample typically occupy operational seats and take on hands-on responsibilities across product, partnerships, and financing, roles that demand substantive expertise rather than symbolic presence.

To bring evidence to this view, I draw on LinkedIn career histories, augmented with biographies generated by large language models, to obtain a comprehensive picture of the human capital these individuals bring. Beyond their bureaucratic expertise, which I measure using years spent in government roles, I code two additional dimensions of human capital. The first is deal-making capability, i.e. the skill set associated with sourcing, evaluating, structuring, and negotiating investments, acquired either in government vehicles such as In-Q-Tel or in private financial

[7] Members of Theranos's board included George P. Shultz (former U.S. Secretary of State), Henry A. Kissinger (former U.S. Secretary of State and National Security Advisor), William J. Perry (former U.S. Secretary of Defense), and James N. Mattis (retired U.S. Marine Corps general and future U.S. Secretary of Defense). None of these directors had medical or scientific expertise relevant to laboratory testing: see https://www.businessinsider.com/theranos-board-of-directors-2015-10/.

institutions. The second is subject-matter alignment with the startup's technological domain. I quantify this alignment by computing semantic similarity scores with Sentence-BERT between the textual record of an individual's career and the startup's technological descriptions, including the company description and the titles and abstracts of its patents.

Figure 2 summarizes the distribution of these skills across appointments. Each point is one deal in which a former official joins a startup, plotted by the individual's loading on government expertise and, alternately, on subject expertise or on deal-making capability. Two facts emerge. First, "pure" government profiles are uncommon; most appointees also score highly on either subject expertise or financial/deal skills. Second, a substantial mass combines multiple competencies, consistent with VCs selecting individuals who can cover several functions simultaneously. In line with the startups' needs documented above, this evidence supports the interpretation that former officials are hired less for access alone and more as multi-skilled human capital suited to the organizational realities of early-stage ventures (Lazear, 2009).

Taken together, these patterns point to a mix of capabilities that matches the constraints of venture-backed startups. Resource-limited firms cannot staff narrowly specialized positions for every function; they disproportionately benefit from individuals who can span several margins: government process and funding, commercial deal-making, and/or technical domain expertise. Consistent with this interpretation, prior work shows that multi-skilled hires reduce hiring and coordination costs and increase strategic flexibility (Kaplan and Strömberg, 2001; Ewens and Malenko, 2025).

IV. Government Awards and Former Official Appointments

In this section, I test whether appointing a former government official to a VC-backed startup increases the value and frequency of federal awards, as detailed in Section II. I first provide some descriptive evidence on award outcomes around the appointment. I then present the identification strategy used to estimate the causal effect of such appointments on post-deal federal obligations. Finally, I test the reward-for-past-favors alternative by examining whether any award gains materialize before the hire.

A. Post-Hire Government Award Outcomes

Figure 4 presents the distribution of the ratio between the cumulative dollar amount of government awards received by a startup and the size of its focal venture deal, which I use as a proxy for the intensity of public support relative to initial private-market funding. The figure partitions this distribution along two axes: timing, defined over symmetric five-year windows before (Pre) and after (Post) the focal deal, and on whether the focal deal involves a former U.S. government official in a senior role, or not. I hold the denominator fixed at the focal deal size to preserve comparability across windows, even though additional private rounds may occur within the five-year horizon: the ratio thus captures the intensity of public support relative to the initial private commitment rather than scaling of private capital.

Formally, for each startup i, I define

$$\text{Amount-to-Deal Size}_i^{g,t} = \frac{1}{\text{Focal Deal Size}_i} \times \begin{cases} \displaystyle\sum_{\tau:\, F_i - 5\text{y} \le \tau < F_i} \text{Government Awards}_i(\tau), & t = \text{Pre}, \\ \displaystyle\sum_{\tau:\, F_i \le \tau < F_i + 5\text{y}} \text{Government Awards}_i(\tau), & t = \text{Post}. \end{cases} \tag{1}$$

where g indexes the startup group: Former Official as Lead/Board or No Former Official. In the first group, the focal deal is the firm's first round on which a former official serves as the VC's lead partner or as the VC-appointed board representative. In the control group without such involvement, the focal deal is the firm's first round in which at least one participating VC has

already hired or appointed the former official, but the official does not serve as lead partner or as the VC-appointed director on that specific round. Outcomes in both cases are measured over the five-year windows centered on the focal deal date, a horizon that corresponds to the medium-term operating window of VC directors (Ewens and Malenko, 2025). Robustness checks consider alternative horizon lengths (see Appendix B).

Two key patterns emerge from Figure 4. First, in the five-year window before the focal deal, award-to-deal ratios are low and relatively similar across groups. The median ratio is 0.029× (2.9%) among startups without a former official involved and 0.033× (3.3%) among those in which a former official later participates as lead partner or board member. This indicates that, prior to the focal deal, startups receive modest levels of public support relative to their private capital base, with little distinction between the two groups.

Second, the post-deal period is characterized by a marked increase in ratios, but with substantial heterogeneity across groups. In the absence of a former official, the median ratio rises from 2.9% to 6.9%, corresponding to a 138% increase. When a former official is present in the focal deal, the median ratio increases more sharply, from 3.3% to 10%, a 203% increase. These shifts indicate that ex-government appointments are associated with a stronger intensification of public support relative to private capital.

The means, shown as dashed diamonds, sit well above the medians in all cases, reflecting the right-skewed distribution of award intensity. In the no-former-official group, both the median and the mean rise modestly after the focal deal, suggesting that typical firms receive somewhat more public support while the upper tail remains stable. In contrast, in the post-deal period, both the mean and median levels of the ratio are noticeably higher for startups with former officials, underscoring that government support intensifies more strongly when a former official is involved in the focal deal.

Although these patterns are descriptive rather than causal, the increase in award intensity when a former government official is involved is consistent with two broad mechanisms. A skills channel would imply that former officials contribute specialized knowledge that helps portfolio companies navigate federal programs and secure contracts more effectively. By contrast, the

second is a selection channel: venture investors deploy former officials precisely on deals that are already positioned to benefit from government funding, either because of their industry focus or their underlying quality. A related possibility is that the observed increase partly reflects the natural maturation of startups following a major financing round, which makes them more eligible and competitive for government awards regardless of ex-government involvement.

Among the competing explanations, selection effects pose the most serious threat to causal inference. Former public officials who enter VCs may disproportionately join those that back high-quality startups. If these individuals possess superior private information about a firm's potential, including its alignment with government priorities, their decision to join reflects latent quality rather than serving as a causal driver of subsequent public funding. In this case, the higher post-deal government awards I document would capture an equilibrium matching process: high-quality startups attract both well-connected VCs and former government hires, who then appear to "cause" the increase in awards when they are merely co-moving with underlying firm quality. Without addressing this channel, estimates risk conflating the returns to pre-existing quality with the incremental effect of the government expertise these hires bring.

A second concern is reverse causality through anticipatory hiring around awards already in the pipeline. Venture capitalists may recruit a former government professional precisely because the portfolio company expects imminent government engagement, for example, an application is under review, negotiations are underway, or a contract is awaiting formal obligation. In this scenario, the hire responds to an impending award rather than causing it, and the observed post-hire increase simply coincides with the administrative finalization of deals set in motion earlier. Disentangling this timing channel requires a design that is orthogonal to deal-level award pipelines.

I leverage a quasi-natural experiment: the 2018-2019 U.S. federal government shutdown, which began on December 22, 2018 and lasted 35 days, making it the longest in U.S. history. The shutdown resulted from a political impasse between Congress and the Trump Administration over USD 5.7 billion in funding for a U.S.-Mexico border wall. Importantly, the dispute was unrelated to innovation policy, and it occurred mid-term, thereby avoiding confounding political-cycle

effects.

Federal workers were guaranteed retroactive back pay, so the episode is not purely a liquidity shock (Gelman et al., 2020). It also operates through a morale channel. (Herpfer et al., 2025), using the shorter (16-day) 2013 shutdown, show that exposure to furloughs functions as an intrinsic-motivation shock with two key mechanisms: (i) operational disruption that prevents employees from carrying out their tasks and (ii) a weakened sense that work is meaningful and contributes to the public good—factors central to public-service motivation. They find that affected employees are 31% more likely to separate within one year, with effects strongest among young, college-educated professionals, which is the core demographic in my sample.

The length and visibility of the 2018–2019 shutdown made this retention problem especially salient. The Partnership for Public Service (2019) reported that the episode raised persistent concerns about recruitment and retention across agencies ("Shutdown Letdown"). The Office of Personnel Management Federal Employee Viewpoint Survey conducted later in 2019 reported that 10% of federal employees said the shutdown played some role in their decision to look for another job (Office of Personnel Management, 2019).[8]

The group that constitutes the core of my sample, mid-career high-skill officials, was especially reported to weigh exits from public service due to the shutdown. The *Wall Street Journal* reported that, during the shutdown, many skilled federal employees considered leaving government for the private sector.[9] In parallel, LinkedIn's February 2019 *Workforce Report* shows that workers at affected agencies were about 59% more likely to enable "Open Candidates" and received nearly 60% more recruiter InMails than comparable employees at unaffected agencies, with outreach concentrated in mid-career, high-skills profiles in software engineering, IT, and

[8] According to Labor Department figures, the number of federal employees filing for unemployment rose from 10,500 in early January 2019 to 25,000 the following week, compared with 1,700 in the same period a year earlier. See *The Guardian*, January 26, 2019, available at https://www.theguardian.com/us-news/2019/[...]/shattered-trust. For evidence on the lasting effects of the shutdown on federal recruitment and retention, see *Government Executive*, September 26, 2019, available at https://www.govexec.com/pay-benefits/[...]/160185.

[9] *Wall Street Journal*, "During Shutdown, Federal Employees Considered Leaving Government Work" February 1, 2019. https://www.wsj.com/articles/during-shutdown-federal-employees-considered-leaving-government-work-11549038667.

program-management roles.[10] By interrupting pay and work, the shutdown plausibly hastened departures of mid-career, highly skilled officials with strong private alternatives, expanding the pool of VC-relevant alumni from treated agencies in a way largely orthogonal to any given startup's inherent quality or award timing.

Taken together, these facts indicate a shutdown-induced agency-specific rise in the availability of relevant public-sector expertise, which I exploit via a shift-share design. This design addresses the two endogeneity concerns discussed above. First, it mitigates selection bias: variation in the hiring of former government officials arises from an externally imposed shock to the supply of personnel, rather than from firms or investors selectively targeting high-quality startups. The fact that the shutdown stemmed from a dispute over immigration policy, rather than innovation funding, further supports its orthogonality to unobserved determinants of startup quality. Second, it reduces concerns about reverse causality: the timing of the personnel shock was determined by federal budget negotiations, not by the evolving needs of individual startups. As a result, the observed variation in the hiring of ex-officials is unlikely to reflect a VC's endogenous decision to recruit political expertise precisely when a portfolio firm faces government funding or regulatory hurdles.

The 2018-19 shutdown halted operations in nine cabinet departments, in which 800,000 federal employees were forced either to be furloughed or to work without pay for two consecutive pay periods. I identify affected entities using the list compiled by Resh et al. (2023). Several common pipelines from government into VC fall in this group: the Executive Office of the President, NASA, the National Science Foundation, Commerce, Treasury, Homeland Security, and the FCC. As the Department of Defense, which accounts for a material share of my sample, remained unaffected by this shutdown, I conduct and report robustness checks that (i) exclude DoD-affiliated officials and DoD-sourced awards and (ii) restrict the analysis to former officials from agencies directly affected by the shutdown.

[10] LinkedIn Economic Graph Blog, *LinkedIn Workforce Report - United States*, "Government Workers Begin to Think About New Roles Amid U.S. Government Shutdown" February 1, 2019. https://economicgraph.linkedin.com/blog/government-workers-begin-to-think-about-new-roles-amid-us-government-shutdown.

To construct the instrument, I use the Office of Personnel Management's Federal Workforce Database (*FedScope*) and track quarterly terminations of white-collar employees by agency, which measure the outflow of skilled government personnel. I interact the agency-level increase in terminations following the shutdown with each firm's pre-shutdown exposure to that agency. Pre-shutdown exposure is an ex ante weight that captures how much an agency typically engages with the startup's product market: for each agency, I take the distribution of its 2018 obligations across NAICS three-digit sectors, map each startup's primary PitchBook industry to a NAICS sector, and assign as the exposure weight the agency's 2018 share in that sector. Intuitively, a robotics firm is more exposed to agencies that historically buy robotics. I then interact these fixed, pre-event exposure weights with the unexpected post-shutdown spike in white-collar separations at each agency, and sum across agencies to obtain a firm-level predicted shock to the availability of relevant former officials. Because shutdown severity and separations varied across agencies, and startups differ in which agencies they are exposed to, this instrument generates cross-sectional variation in the intensity of the talent-supply shock.

Precisely, I first measure each startup's pre-shutdown exposure to federal agencies based on its primary industry. For each agency a and NAICS three-digit sector s, I compute the share of the agency's 2018 contracting activity allocated to that sector:

$$w_{as} = \frac{\text{Contracts}_{as,2018}}{\sum_{s'} \text{Contracts}_{as',2018}},$$

where $\text{Contracts}_{as,2018}$ is the total dollar value of contracts awarded by agency a in sector s in 2018, and the denominator sums across all three-digit sectors s'. These weights capture the share of an agency's contracting activity accounted for by each sector.

Because most PitchBook firms are not directly coded by NAICS, I construct a mapping between PitchBook's proprietary industry categories and NAICS three-digit sectors. To do so, I rely on the textual descriptions of PitchBook industries and map them to the closest NAICS categories based on the 2022 Census Bureau definitions.[11] I assign each startup i to a NAICS

[11]The list of PitchBook Industries available at: https://my.pitchbook.com/industryDefinitions.do?action=load, while NAICS Descriptions are from: https://www.census.gov/naics/?48967.

three-digit sector $s(i)$ according to its PitchBook primary industry classification. Startup-agency exposure is then defined as the agency weight in the startup's mapped sector:

$$\text{Exposure}_{ia} = w_{a,s(i)}.$$

Next, I combine this exposure measure with the agency-specific shock to skilled separations induced by the shutdown. Let $\Delta\text{Sep}_{a,2019Q1}$ denote the number of unexpected white-collar separations in agency a in 2019Q1, measured as the difference between actual separations and the average over the same quarter in the three preceding years:

$$\Delta\text{Sep}_{a,2019Q1} = \text{Sep}_{a,2019Q1} - \frac{1}{3}\sum_{t=2016}^{2018} \text{Sep}_{a,tQ1}.$$

The Bartik-style instrument for startup i is then:

$$Z_i = \sum_a \text{Exposure}_{ia} \times \Delta\text{Sep}_{a,2019Q1}.$$

This measure captures the shock to a startup's access to former government officials that arises from shutdown-induced separations. The intensity of the shock is proportional to the firm's exposure to agencies with higher-than-normal separation rates.

Using this instrument, I estimate a two-stage least squares (2SLS) specification. In the first stage, I relate the hiring of a former government official to the Bartik-style instrument Z_i described above. Let Hire_{id} be an indicator equal to one if startup i, in deal d, hires at least one former government official in the period following the deal. The first-stage equation is:

$$\text{Former Official}_{id} = \alpha + \beta Z_i + \gamma\,\text{DealSize}_{id} + \delta_{\text{VC Round}} + \delta_{\text{Primary Industry Sector}} + \varepsilon_{id}, \qquad (2)$$

where DealSize_{id} is the size of deal d, δ_{Round} are VC round fixed effects, and δ_{Industry} are primary industry fixed effects.

I include deal size to proxy for a startup's capacity to contract for outside expertise. Round fixed effects account for systematic differences across financing stages (e.g., seed vs. later), and industry fixed effects absorb persistent cross-sector demand for government expertise. I do not use year fixed effects because all deals fall within a twelve-month window around the shutdown. The first-stage coefficient of interest, β, captures the change in the probability a startup hires a former government official induced by the exogenous, agency-specific shock to the supply of such personnel.

In the second stage, I estimate the causal effect of hiring a former government official on two outcomes measured over the five years following the deal: (i) the total dollar amount of government awards received and (ii) the ratio of awards to deal size. I focus on a five-year horizon because it aligns with the typical influence window for VC directors (Ewens and Malenko, 2025) and, given the timing of my shock, it is the longest window available in the data. Robustness checks consider alternative horizons (see Appendix B). The second-stage equation is:

$$Y_{id} = \alpha + \rho\, \widehat{\text{Former Official}}_{id} + \gamma\, \text{DealSize}_{id} + \delta_{\text{VC Round}} + \delta_{\text{Primary Industry Sector}} + u_{id}, \qquad (3)$$

where Y_{id} denotes either outcome, and $\widehat{\text{Former Official}}_{id}$ is the predicted value from the first stage. The parameter of interest, ρ, measures the causal effect of hiring a former government official on the outcome.

My identification strategy is attractive because the shutdown was driven by political conflict over immigration policy rather than by factors related to startup performance, venture capital demand, or innovation policy. The instrument therefore provides plausibly exogenous variation in the likelihood of hiring former government officials, orthogonal to unobserved startup quality or the timing of funding needs. The main limitation concerns external validity. To avoid weak-instrument concerns, I restrict the analysis to deals that occur within 12 months after the shutdown began, when separations were concentrated and the increase in the supply of former officials was most pronounced.

Table 2 reports 2SLS estimates of the effect of appointing a former U.S. government official to the lead investor team or as the VC-appointed director at the focal round on federal obligations over the subsequent five years. The endogenous regressor is *Former Official as Lead/Board*. All specifications include the focal deal size as a control. Columns (2) and (5) add VC-round fixed effects; Columns (3) and (6) add both VC-round and primary-industry fixed effects. Standard errors are clustered at the sector-year level.

In Columns (1) to (3), the dependent variable is the total dollar amount of federal obligations awarded within five years after the focal round. The presence of a former official is associated with increases between USD 0.802 million and USD 1.090 million, with all estimates significant at the one-percent level. Relative to the sample mean of USD 0.26 million, the fully saturated coefficient in Column (3) (0.965) is large, nearly four times the mean, implying that adding a former official raises expected awards from roughly USD 0.26 million to USD 1.06–USD 1.35 million. First-stage F-statistics range from 13.76 to 28.74, alleviating weak-instrument concerns.

In Columns (4) to (6), I scale obligations by the focal deal size to absorb heterogeneity in round magnitudes and to interpret magnitudes relative to initial private-market financing. Because additional private rounds may occur within the five-year window, this ratio captures the intensity of public support relative to the initial private commitment rather than to the evolving capital base. The coefficients range from 0.34 to 0.49 of the focal deal size, with Columns (5) and (6) marginally significant at the ten-percent level. Although estimated with lower precision, the magnitudes remain economically meaningful, corresponding to an increase on the order of 0.48 of the initial round.

Taken together, these results indicate that startups backed by investors or boards with former officials obtain substantially larger post-deal federal awards, both in levels and in intensity relative to their initial private financing.

B. Reward for Past Favors

A central concern in the revolving-door literature is that firms hire former government officials to reward favorable treatment received while those officials were in office. Such arrangements

may distort resource allocation and impose costs on taxpayers. As detailed in Section I., post-employment rules prohibit former officials from communicating with, or representing private interests to, their former agencies for a specified period, but they do not prohibit firms from hiring them. Accordingly, the hiring event is fully lawful. To test whether such lawful hires nonetheless reflect a "reward-for-past-favors" channel, I examine within-firm changes in agency-specific contracting around the arrival of a former official.

The event of interest is the year in which the official joins the startup, and I track how the firm's contracting activity with the official's former agency evolves before and after this date. By focusing on changes within the same firm-agency relationship, I abstract from cross-sectional heterogeneity and use the timing of contracts to distinguish whether benefits accrued prior to the hire, consistent with ex post rewards, or only afterward, consistent with knowledge transfer or influence.

Following Emery and Faccio (2025), I implement the following event-study specification:

$$Y_{it} = \sum_{k=-2}^{+3} \beta_k \cdot \mathbb{1}(t = t_0 + k) + \text{Firm} \times \text{Agency FEs} + \varepsilon_{it},$$

where t_0 = represents the year in which a former government official joins startup i.

Table 3 reports regressions of government contracting outcomes around the appointment of a former official. All coefficients are measured relative to the omitted reference year $k = -3$ (three years before the hire). The coefficients on the two pre-hire years ($k = -2$ and $k = -1$) are small and statistically insignificant across all specifications, indicating no unusual contracting activity prior to the hire. Beginning in the hire year ($k = 0$), awards increase sharply and remain elevated through $k = 3$. In the full sample (Columns 1 and 2), the probability that a firm receives at least one award rises by roughly 17 to 29 percentage points, while the PPML estimates imply large proportional increases in total award value. Specifically, the coefficient on $k = 1$, $\hat{\beta}_1 \approx 1.84$, corresponds to an increase of about $\exp(\hat{\beta}_1) - 1 \approx 500\%$ in total award value relative to the baseline year $k = -3$.

Restricting outcomes to the official's former parent agency captures nearly the entire post-hire

increase in award value (Columns 3 and 4), and narrowing further to the subagency explains about four-fifths of the total effect (Columns 5 and 6). The absence of pre-hire increases within the official's former organization is inconsistent with a "reward-for-past-favors" mechanism. Instead, the localization of post-hire gains to the same subagency is consistent with productivity-enhancing channels, expertise and/or access, that improve the match between the startup's offerings and the subagency's procurement priorities. Disentangling access from expertise requires additional analysis, which I address in the next section.

V. Mechanisms of Value Creation

Former officials may add value by improving pre-investment screening, mentoring ex post, opening networks, and facilitating procurement. I test these mechanisms in two steps. First, I exploit agency-specific cooling-off rules to separate network access from bureaucratic expertise. Second, I use hire–investment timing within portfolios to distinguish improvement in screening from mentoring.

A. Assessing the Role of Access

Former officials may influence their portfolio firms along two margins. One view holds that intermediaries add value by supplying issue-specific information that helps principals process complex choices; the alternative view is that the scarce asset is "access", the relational capital to secure attention from decision-makers. In the lobbying context, Bertrand et al. (2014) show that both channels operate, but returns are larger for connections: when politicians move, lobbyists follow, and revenue premia are more closely tied to connections than to issue specialization. This distinction matters in federal procurement, a high-friction environment where awards are difficult to obtain and the Federal Acquisition Regulation makes navigation skill-intensive. In this setting only access is curtailed by post-employment restrictions, which creates a testable wedge between the two channels.

In the previous section, I showed that firms hiring former officials secure larger government

awards, a pattern consistent with procedural fluency and program insight (knowledge). To test whether access also contributes, I exploit the cooling-off rule described in Section I. Specifically, under 18 U.S.C. § 207(c) and the Office of Government Ethics' designated-component framework, a former senior employee is barred for one year from representational contacts with the agency or designated component where they served. For alumni of a designated component (e.g., Army, DARPA, FDA), the bar binds only on that component; communication with other designated components within the same parent department (e.g., DoD) is permitted. For alumni who served at the parent level, the bar binds on the parent and any non-designated parts, but not on other designated components. The statute therefore switches off access to a precisely defined "home" unit for a fixed horizon while leaving access to (i) other components within the parent and (ii) other parents open. Know-how, by contrast, travels everywhere. I leverage this differential restriction to isolate the role of access.

I study the time until firm i receives its first federal award after hiring former official p, an absorbing outcome. Let e_p denote the official's government exit date and define the *ban-expiry* date $b_p \equiv e_p + 365$ days (the one–year cooling-off restriction in 18 U.S.C. §207(c)). Event time is

$$\tau \equiv t - b_p,$$

so that $\tau = 0$ marks ban expiry. I partition event time into disjoint monthly bins $\{\mathcal{I}_k\}_k$.

For the firm's first post-hire award, I classify the awarding unit using the statutory component map as $g \in \{\text{Own}, \text{Non-own}\}$, where Non-own pools Same-parent and Cross-parent units. The statute bars representational contact only with the official's Own unit during the cooling-off year; access to Non-own units is not restricted. Knowledge and technical expertise are unaffected, so lifting the ban should selectively raise the relative arrival rate of Own awards at $\tau \geq 0$.

Following Deaner and Ku (2024), I implement the DiD in *hazard* space (rather than cumulative shares) and estimate it with a Poisson log link and an exposure equal to the risk set. I divide event time into monthly bins $\{\mathcal{I}_k\}$. For $g \in \{\text{Own}, \text{Non-own}\}$, let D_{gk} be the number of first awards that occur in bin k and let R_{gk} denote the number at risk at the start of k, that is, firms for which

the hire has occurred and are yet to receive a first award. I estimate

$$\mathbb{E}[D_{gk}] = \exp\Big\{\alpha_g + \beta\,\mathbf{1}\{g = \text{Own}\}\mathbf{1}\{\tau_k \geq 0\} + \text{Year FEs}\Big\} \cdot R_{gk}.$$

Figure 6 shows cumulative distribution functions for the time to a firm's first award by component. During the cooling-off year, the Own series is flat: no mass accumulates and the implied hazard is effectively zero, which is consistent with the prohibition on representational contact with the official's home unit. By contrast, Same-parent and Cross-parent series accumulate throughout the ban window, indicating that awards arrive in those units even while the ban is active. After ban expiry ($\tau \geq 0$), the Own series begins to step up, revealing a delayed onset relative to the other components. This pattern is consistent with an access channel: the year-long inability to contact former colleagues delays Own awards until access is legally restored.

Table 4 formalizes this contrast using the hazard DiD.

B. Screening versus Mentoring

The benefits of ex-government hires may reach beyond the startups where they take direct roles, extending to other portfolio companies backed by the same VC. Venture capital theory points to two channels through which these hires may add value at the portfolio level: improved screening, by helping VCs identify higher quality startups, and mentoring, by improving portfolio performance after investment (Kaplan and Strömberg, 2001; Hellmann and Puri, 2002).

To separate these effects, I classify investments into three groups based on the relative timing of the deal and the hire. The placebo measure (Post-Deal, Pre-Hire) captures outcomes for startups funded before the hire but observed between the deal date and the hiring date; by construction, these outcomes reflect neither selection nor mentoring and provide a benchmark. The Mentoring-Only measure covers startups funded before the hire but observed after the official joins, isolating mentoring effects since selection could not have been influenced. The Selection + Mentoring measure includes startups funded and observed entirely after the hire, capturing both channels. Comparing outcomes across these groups allows me to assess whether ex-government

hires contribute mainly through selection, mentoring, or both.

Formally, I estimate:

$$\begin{aligned}\text{Total Obligated Amount}_{i,t} = \alpha &+ \beta_0 \cdot \textit{Post-Deal, Pre-Hire (Placebo)}_{i,t} \\ &+ \beta_1 \cdot \textit{Pre-Hire: Mentoring Only}_{i,t} \\ &+ \beta_2 \cdot \textit{Post-Hire: Selection + Mentoring}_{i,t} \\ &+ \text{Sector x Year FEs} + \varepsilon_{i,t}\end{aligned}$$

The results in Table 5 indicate that the primary source of value creation from ex-government hires arises from selection rather than post-investment mentoring. Startups funded after the hire (*Selection + Mentoring*) secure substantially larger government awards. Across specifications, the estimated effect ranges from about USD 0.82 million to USD 2.47 million in additional awards, with the strongest effect observed when including both sector and year fixed effects ($t = 6.32$). By contrast, startups already in the portfolio when the hire joins (*Mentoring Only*) display no systematic gains: the coefficients are small in magnitude (0.74 to 0.86 million) and statistically indistinguishable from zero. The placebo group (*Post-Deal, Pre-Hire*) yields negative or null coefficients, with point estimates as low as -USD 1.79 million, reinforcing that the post-hire selection gains are not mechanical.

An F-test rejects equality of the mentoring and selection coefficients, underscoring that the selection channel dominates mentoring ($t = 1.77$, one-sided p-value = 0.04). Taken together, these findings suggest that ex-government hires improve VC outcomes mainly by helping investors identify higher-quality startups ex ante, rather than by improving the post-investment performance of existing portfolio companies.

Overall, I find that these hires not only bring government-specific expertise, but also technical capabilities that are particularly valuable in the resource-constrained startup environment. By shaping which ventures are backed rather than how they are subsequently mentored, ex-government hires also emerge as a mechanism through which government expertise may facilitate

capital allocation to innovative firms.

VI. Startup Private Financing Outcomes

A. Government Awards and the Financing Path of Startups

Government awards can influence a startup's financing path through two distinct channels. The first is revenue insurance: government awards relax short-run liquidity constraints, allowing founders to postpone returning to the market and to rely less on external equity when they do. The second is certification: an award, together with the due diligence required to obtain it, signals quality, execution capacity, and compliance to outside investors. This reduces investor uncertainty and can shorten the time to the next round while increasing the size of that round. These mechanisms are not mutually exclusive. The same award can both provide a financial buffer and signal quality. However, their empirical predictions differ. Revenue insurance should lengthen the time to the next round and reduce its size, while certification should shorten the interval and increase the amount raised.

Table 6 presents evidence, which is mainly consistent with certification being the predominant mechanism. In the full sample, larger government awards are associated with shorter intervals to the next funding round and with larger follow-on rounds. The point estimates imply that a one standard deviation increase in award value accelerates the next round by roughly 0.5-1% of the mean waiting time (approximately 21 months), and increases the size of follow-on rounds by about 1-1.5% relative to the sample mean (approximately USD 65 million). While these results are consistent with certification, they do not fully rule out alternative explanations: startups may delay their next round simply because they lack immediate growth prospects, rather than because awards substitute for external financing.

The revenue insurance channel becomes more salient in settings where the government is effectively the sole or main buyer. In these cases, the timing effect reverses: conditional on receiving a contract, firms take longer to raise their next round, extending runway by about 1% per standard deviation of award value, consistent with procurement income substituting for external

finance. At the same time, certification effects remain present: when such firms eventually raise follow-on funding, the rounds are about 1-2% larger than those of otherwise comparable startups. Taken together, these findings suggest that government awards operate through a mix of certification and revenue insurance, with the relative importance of each channel depending on the nature of the buyer relationship.

Overall, these results suggest that for most startups government awards complement private capital by accelerating the next round and increasing its size, which is consistent with certification. For firms serving exclusively government markets, awards partly substitute for the timing of private capital, consistent with revenue insurance, while still enhancing the credibility and eventual scale of subsequent raises.

B. Startup Financing Outcomes

Using the fully saturated 2SLS specification (Table 7, Column (3)), I find that appointing a former U.S. government official as either the deal's lead investor or a new board member raises the probability of obtaining a follow-on round by about 26 percentage points. Given that only half of the startups in the sample secure follow-on funding (Table 1), this represents roughly a 50 percent relative increase in the likelihood of continued financing. In contrast, the estimated effects on major success, defined as an IPO or acquisition exceeding total VC investment, are small and statistically indistinguishable from zero.

These effects remain even after controlling for government contracting outcomes. The regressions include the cumulative total amount awarded, whose coefficient is positive and statistically significant, indicating that access to government funding is an important channel through which startups raise follow-on capital. A one-million-dollar increase in cumulative government awards predicts a 0.3 percentage point rise in the probability of a follow-on round. However, the presence of a former official remains associated with a much larger 25 percentage point increase, even after conditioning on total awards. This suggests that while government funding contributes meaningfully to startups' financing trajectories, former officials create additional value beyond access itself, through mechanisms such as improved certification with investors, stronger governance,

and enhanced strategic connections.[12]

Overall, the results indicate that former officials create value for startups through mechanisms that extend beyond a privileged access to government. Their impact appears to operate through a broader value-creation channel, in which multi-skilled individuals combining policy experience, technical knowledge, and deal-making capability improve certification with private investors, strengthen governance, and expand strategic networks. The appointment of former officials thus helps sustain early-stage firms' financing trajectories not by merely facilitating government access, but by bridging the organizational and informational gaps that often constrain early-stage ventures.

VII. Conclusion

Startups in which former public officials serve as lead investors or VC-appointed directors obtain more federal resources and show stronger financing outcomes. Using variation from the 2019 shutdown, I estimate roughly USD 1 million in additional 5-year federal awards and about a 26 percentage point increase in the probability of a follow-on round. The award gains arrive after the hire and are concentrated in the official's former parent and even sub-agency, which is inconsistent with quid pro quo. Importantly, the financing improvement is not merely mechanical: the follow-on effect remains large after conditioning on award volumes, consistent with certification and better screening by multi-skilled ex-officials.

The government's role in innovation has expanded, with more startup-facing tools such as SBIR/STTR set-asides and flexible OTAs, and with mission-oriented institutions deepening the public sector's technical and commercial expertise. I show that this shift enlarges the pool of government talent available to young firms and makes possible a productive "revolving door" channel: targeted mobility from public service into venture investing that broadens startups' access to public resources and sustains early financing trajectories.

[12] In future work, I will implement a mediated-IV design to decompose the total effect into the component operating through government awards and the residual direct effect.

References

Amornsiripanitch, N., Gompers, P. A., and Xuan, Y. (2019). More than Money: Venture Capitalists on Boards. *The Journal of Law, Economics, and Organization*.

Bertrand, M., Bombardini, M., and Trebbi, F. (2014). Is It Whom You Know or What You Know? An Empirical Assessment of the Lobbying Process. *American Economic Review*.

Bertrand, M., Kramarz, F., Schoar, A., and Thesmar, D. (2018). The Cost of Political Connections. *Review of Finance*.

Card, D. (2009). Immigration and Inequality. *American Economic Review*.

Carril, R. and Duggan, M. (2020). The Impact of Industry Consolidation on Government Procurement: Evidence from Department of Defense Contracting. *Journal of Public Economics*.

Cen, L., Cohen, L., Wu, J., and Zhang, F. (2024). Who Benefits from Trade Wars? *NBER Working Paper*.

Cioaca, L. C. (2024). Experimenting With High Tech: The Role of Government R&D Contracts. *Working Paper*.

Cohen, L. and Malloy, C. J. (2016). Mini West Virginias: Corporations as Government Dependents. *Working Paper*.

Deaner, B. and Ku, H. (2024). Causal Duration Analysis with Diff-in-Diff. *Working Paper*.

Duchin, R. and Sosyura, D. (2012). The Politics of Government Investment. *Journal of Financial Economics*.

Duchin, R., Wang, J. Y., and Kalmenovitz, J. (2024). Between Boardrooms and the Beltway: The Career Paths of Senior Regulators. *Working Paper*.

Emery, L. P. and Faccio, M. (2025). Exposing the Revolving Door in Executive Branch Agencies. *Journal of Financial and Quantitative Analysis*.

Ewens, M. and Malenko, N. (2025). Board Dynamics over the Startup Life Cycle. *Journal of Finance*.

Fisman, R., Leder-Luis, J., O'Donnell, C. M., and Vannutelli, S. (2025). Revolving Door Laws and Political Selection. *NBER Working Paper*.

Fleming, L., Greene, H., Li, G., Marx, M., and Yao, D. (2019). Government-funded Research Increasingly Fuels Innovation. *Science*.

GAO (2020). Defense Acquisitions: DOD's Use of Other Transactions for Prototype Projects

Has Increased.

GAO (2021). Small Business Contracting: Actions Needed to Implement and Monitor DOD's Small Business Strategy.

Gelman, M., Kariv, S., Shapiro, M. D., Silverman, D., and Tadelis, S. (2020). How Individuals Respond to a Liquidity Shock: Evidence from the 2013 Government Shutdown. *Journal of Public Economics*.

Gompers, P. and Lerner, J. (2001). The Venture Capital Revolution. *Journal of Economic Perspectives*.

Gompers, P. A., Gornall, W., Kaplan, S. N., and Strebulaev, I. A. (2020). How Do Venture Capitalists Make Decisions? *Journal of Financial Economics*.

Gornall, W. and Strebulaev, I. A. (2021). The Economic Impact of Venture Capital: Evidence from Public Companies. *Working Paper*.

Gross, D. P. and Sampat, B. N. (2023). America, Jump-Started: World War II R&D and the Takeoff of the US Innovation System. *American Economic Review*.

Hellmann, T. and Puri, M. (2002). Venture Capital and the Professionalization of Start-up Firms: Empirical Evidence. *Journal of Finance*.

Herpfer, C., Maturana, G., and Teodorescu, A. (2025). Intrinsic Motivation, Human Capital, and Productivity: Evidence from Government Shutdowns. *Working Paper*.

Hoberg, G. and Phillips, G. (2010). Product Market Synergies and Competition in Mergers and Acquisitions: A Text-Based Analysis. *Review of Financial Studies*.

Howell, S. T. (2017). Financing Innovation: Evidence from R&D Grants. *American Economic Review*.

Howell, S. T., Rathje, J., Van Reenen, J., and Wong, J. (2024). Opening up Military Innovation: Causal Effects of 'Bottom-Up' Reforms to U.S. Defense Research. *NBER Working Paper*.

Kaplan, S. N. and Strömberg, P. (2001). Venture Capitalists as Principals: Contracting, Screening, and Monitoring. *American Economic Review*.

Karas, L. (2023). FDA's Revolving Door: Reckoning and Reform. *Stanford Law & Policy Review*.

Katic, I. V. and Kim, J. W. (2024). Caught in the Revolving Door: Firm-Government Employee Mobility as a Fleeting Regulatory Advantage. *Organization Science*.

Kempf, E. (2020). The Job Rating Game: Revolving Doors and Analyst Incentives. *Journal of Financial Economics*.

Kerr, W. R., Nanda, R., and Rhodes-Kropf, M. (2014). Entrepreneurship as Experimentation. *Journal of Economic Perspectives*.

Korteweg, A. and Sorensen, M. (2017). Skill and Luck in Private Equity Performance. *Journal of Financial Economics*.

Lazear, E. P. (2009). Firm-Specific Human Capital: A Skill-Weights Approach. *Journal of Political Economy*.

Lerner, J. (1995). Venture Capitalists and the Oversight of Private Firms. *The Journal of Finance*.

Lucca, D., Seru, A., and Trebbi, F. (2014). The Revolving Door and Worker Flows in Banking Regulation. *Journal of Monetary Economics*.

Nanda, R. (2020). Financing "Tough Tech" Innovation. *Global Innovation Index 2020: Who Will Finance Innovation?*

National Science Foundation (2025). Long-Term Trends Show Decline in Federally Funded R&D as a Share of GDP while Business-Funded R&D Share Increases.

Office of Personnel Management (2019). Governmentwide Management Report: Results from the 2019 Federal Employee Viewpoint Survey.

Partnership for Public Service (2019). Shutdown Letdown: How the Longest Shutdown in U.S. History Did Lasting Damage to Our Government and the People It Serves.

Resh, W. G., Ahn, Y., Wang, W., and Lee, K. E. (2023). The Effect of the 2018-2019 United States Government Shutdown on Federal Workforce Turnover. *Working Paper*.

Retterath, A. and Braun, R. (2020). Benchmarking Venture Capital Databases. *Working Paper*.

Tabakovic, H. and Wollmann, T. (2018). From Revolving Doors to Regulatory Capture? Evidence from Patent Examiners. *NBER Working Paper*.

Tenekedjieva, A.-M. (2021). The Revolving Door and Insurance Solvency Regulation. *Working Paper*.

Table 1. Summary Statistics

This table reports summary statistics for the key variables used in the paper. Panel A presents overall statistics for the full sample, as well as individual-level statistics for former U.S. government employees at the time of their first transition into senior roles at VC firms. Panel B presents firm-level statistics for treated firms, defined as companies whose VC investors appoint former government employees to senior positions. Deal size refers to the deal associated with the first appointment of a former government employee, while amounts awarded are calculated over the five-year period preceding that deal.

Panel A: Former Government Employees Flows to Senior Direct Roles at VCs

A.1: Counts

Number of people	416
Number of VCs	340
Number of startups	1057

A.2: Characteristics

	Number of Obs.	Mean	Sd	5%	25%	Median	75%	95%
Cumulative Time in Gov. (in years)	416	4.26	5.74	0.08	0.92	2.17	5.00	17.18
Time Since Last Gov. Job (in years)	416	3.47	4.23	0.00	0.00	1.83	6.31	11.69
Length in Gov. Most Recent (in years)	416	3.95	5.58	0.08	0.83	2.00	4.34	15.61

Panel B: Characteristics of Startups with VC-Appointed Former Government Officials

	Number of Obs.	Mean	Sd	5%	25%	Median	75%	95%
Company Age (in years)	1047	9.10	5.71	3.00	6.00	8.00	11.00	16.00
Early Stage	1057	0.33	0.47	0.00	0.00	0.00	1.00	1.00
Amount Awarded (in USD million)	1057	0.26	3.26	0.00	0.00	0.00	0.00	1.02
Amount Awarded to Raised Amount	998	0.06	0.84	0.00	0.00	0.00	0.00	0.05
Deal Size (in USD million)	998	25.81	71.09	0.25	3.00	8.64	22.65	100.00
Number of Awards	1057	0.32	1.37	0.00	0.00	0.00	0.00	2.00
First-round	1057	0.37	0.48	0.00	0.00	0.00	1.00	1.00
Follow-On	1057	0.50	0.50	0.00	0.00	0.00	1.00	1.00
Major Success	1057	0.04	0.19	0.00	0.00	0.00	0.00	0.00
Government is Sole or Lead Customer	1057	0.18	0.37	0.00	0.00	0.00	0.00	1.00
Heavily Regulated	1057	0.41	0.49	0.00	0.00	0.00	0.00	1.00
Capital Intensive	1057	0.37	0.48	0.00	0.00	0.00	0.00	1.00

Table 2. Impact of Former Officials on Government Contracting Outcomes

This table presents instrumental variables (2SLS) estimates of how the presence of former government officials on a startup's lead investor team or board relates to subsequent government award outcomes. The dependent variable in Columns (1) to (3) is *Total Amount Awarded*, defined as the cumulative value of U.S. government obligations received (in USD million) within five years after the venture capital deal. The dependent variable in Columns (4) to (6) is *Total Amount to Deal Size*, defined as the ratio of obligations received within five years after the deal to the deal size. *Former Official as Lead or Board* equals one if at least one lead investor or board member is a former U.S. government official and zero otherwise, and is treated as endogenous. Estimates are obtained using the 2019 Government Shutdown Exposure as the instrument; to mitigate weak-instrument concerns, the estimation sample is restricted to funding rounds within the twelve-month period following the shutdown's onset. All specifications control for deal size. Columns (2) and (5) add VC Round fixed effects, while Columns (3) and (6) add both VC Round and Primary Industry Sector fixed effects. Standard errors are clustered at the sector-year level, and t-statistics are reported in parentheses. Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and *, respectively.

	Total Amount Awarded			Total Amount to Deal Size		
	(1)	(2)	(3)	(4)	(5)	(6)
Former Official as Lead/Board (0/1)	1.090***	0.802***	0.965***	0.337	0.488*	0.482*
	(2.80)	(6.14)	(3.63)	(1.18)	(1.65)	(1.71)
Observations	601	601	601	601	601	601
Adj. R-squared	0.01	0.10	0.12	0.02	0.05	0.07
VC Round FE		Y	Y		Y	Y
Sector FE			Y			Y
First-stage F	13.76	14.86	28.74	13.76	14.86	28.74

Table 3. Government Awards Incidence and Value Around Ex-Government Hires

This table reports event-study regressions of government contracting outcomes on the appointment of former government employees. Columns (1) to (2) use the firm × year as the unit of observation, aggregating awards across all federal agencies. Columns (3) and (4) use the firm × parent-agency × year, summing awards across subagencies within the parent department from which the hire originated. Columns (5) to (6) use the firm × subagency × year, restricting awards to the subagency from which the hire originated. Hires with prior service in the intelligence community are mapped to the Department of Defense, since contracts funded by intelligence appropriations are not disclosed on *USASpending.gov*. The dependent variable in odd-numbered columns is an indicator equal to one if the firm receives at least one award in a given year. The dependent variable in even-numbered columns is the total value of awards received (in millions), excluding Paycheck Protection Program (PPP) loans. Even-numbered columns are estimated using Poisson pseudo-maximum likelihood (PPML). Event Year = t denotes the number of calendar years relative to the hire. Standard errors clustered at the firm level and t-statistics are reported in parentheses. Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and *, respectively.

	Overall		Within Same Parent Org.		Within Same Subagency	
	(1) Any Award	(2) Total Amount Awarded	(3) Any Award	(4) Total Amount Awarded	(5) Any Award	(6) Total Amount Awarded
Event Year = -2	0.098**	0.720*	0.042	0.637	0.009	0.462
	(2.17)	(1.83)	(1.28)	(1.61)	(0.30)	(1.10)
Event Year = -1	0.074	0.345	0.054	0.134	0.027	0.013
	(1.61)	(0.79)	(1.60)	(0.28)	(0.98)	(0.03)
Event Year = 0	0.168***	0.909*	0.106**	0.798	0.051	0.729
	(2.74)	(1.87)	(2.28)	(1.56)	(1.30)	(1.38)
Event Year = 1	0.286***	1.836***	0.168***	1.725***	0.137***	1.654***
	(4.60)	(3.74)	(3.50)	(3.59)	(3.29)	(3.33)
Event Year = 2	0.189***	1.599***	0.121**	1.438***	0.097**	1.292**
	(2.90)	(3.16)	(2.52)	(2.78)	(2.26)	(2.48)
Event Year = 3	0.174**	1.594***	0.111**	1.700***	0.084*	1.652***
	(2.50)	(3.08)	(2.11)	(3.11)	(1.86)	(2.80)
Observations	973	898	1620	1220	2222	1392
Adj. R-squared	0.099		0.119		0.114	
Pseudo R-squared		0.041		0.048		0.048
Mean dep. var.	0.36	0.77	0.24	0.57	0.19	0.48
Year FE	Y	Y				
Agency-Year FE			Y	Y	Y	Y

Table 4. The Role of Access

This table reports Poisson pseudo–maximum likelihood (log–link) regressions that implement a difference-in-differences design in hazard space following Deaner and Ku (2024). The dependent variable is the count of first federal awards in 30-day event-time bins relative to the ban-expiry date ($\tau = 0$). Each specification includes a log exposure equal to the risk set multiplied by the bin width, $\log(R_{gk}\Delta t_k)$, where $\Delta t_k = 30$ days and R_{gk} is the number of startup–hire pairs whose hire has occurred and that have not yet received a first award at the start of the bin (pairs exit the risk set once they receive their first award). The reported coefficient on $1\{Own\} \times 1\{Post\ Ban\ Expiry\}$ measures the difference-in-differences in log hazards for Own versus Non-own awards; $\exp(\beta)$ can be interpreted as the post-/pre-ratio of hazard ratios. All specifications include calendar-year fixed effects. Column (2) adds origin-agency fixed effects, so identification comes from within-origin changes in Own versus Non-own hazards before and after the ban expires. Column (3) adds awarding-agency fixed effects and is estimated in a cause-specific form that replicates the exposure across agencies and allocates the first-event count to the agency that issued the first contract. The sample is restricted to former officials who joined a startup within 365 days of leaving government service. "Observations (cells)" in Columns (1)–(2) count all origin × {Own, Non-own} × calendar year × 30-day-bin combinations with positive exposure ($R > 0$); Column (3) counts origin × {Own, Non-own} × awarding agency × calendar year × 30-day-bin combinations with positive exposure. Standard errors are two-way clustered by origin agency and calendar year; t-statistics are reported in parentheses. Pseudo R^2 is the deviance-based measure 1 − Deviance/Null Deviance, and AIC is reported for model fit.

	Hazard to First Award		
	(1)	(2)	(3)
Own Component × Post Ban Expiry	21.084	16.788***	15.914***
	(0.33)	(25.99)	(26.01)
Observations	21,290	21,290	85,160
Pseudo R^2	0.226	0.409	0.375
AIC	240.1	255.9	292.5
Year FE	Y	Y	Y
Origin Agency FE		Y	Y
Awarding Agency FE			Y

Table 5. Mentoring versus Screening

This table reports Poisson pseudo-maximum likelihood (PPML) regressions of the dependent variable Total Amount Awarded (in USD million) on event-time indicators interacted with the timing of an ex-government hire. The baseline category is startups funded before the hire and observed before both the hire and the deal. Reported coefficients correspond to (i) *Post-Deal, Pre-Hire (Placebo)* — funded before the hire and observed after the deal but before the hire; (ii) *Mentoring Only (Deal Pre-Hire)* — funded before the hire and observed after the hire; and (iii) *Selection + Mentoring (Deal Post-Hire)* — funded after the hire and observed after the hire. Specifications include fixed effects as indicated (Year; Sector; or Sector × Year). *t*-statistics, based on standard errors clustered at the startup level, are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	Total Amount Awarded		
	(1)	(2)	(3)
Mentoring Only (Pre-Hire Deal)	-1.339*	0.858	0.736
	(-1.85)	(1.01)	(1.04)
Selection + Mentoring (Post-Hire Deal)	0.820*	2.467***	1.533**
	(1.89)	(6.32)	(2.54)
Post-Deal, Pre-Hire (Placebo)	-1.786***	-0.741	0.063
	(-3.96)	(-1.36)	(0.10)
Observations	61777	10278	2986
Pseudo R^2	0.031	0.174	0.032
Mean dep. var.	9.06	54.44	113.68
Year FE	Y		
Sector FE		Y	
Sector × Year FE			Y

Table 6. Government Awards and Subsequent Venture Funding Outcomes

This table reports how U.S. government award funding relates to the timing and size of startups' subsequent venture capital rounds. The unit of observation is a VC deal. The dependent variable in Columns (1) and (2) is the time from the focal deal to the next follow-on round (in months), and in Columns (3) and (4) is the size of that follow-on round (in USD million). Total Amount Awarded is the cumulative value of U.S. government awards received within five years after the startup's first VC deal. All regressions include Sector × Deal Year fixed effects and VC Round fixed effects. Standard errors are clustered at the startup level, with *t*-statistics in parentheses. Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and *, respectively.

	Time to Follow-on Round		Size of Follow-on Round	
	(1)	(2)	(3)	(4)
Total Amount Awarded (in USD million)	-0.050	-0.090***	1.082***	0.883***
	(-1.03)	(-4.62)	(4.39)	(6.61)
Deal Size (in USD million)	-0.004*	-0.004*	1.122***	1.122***
	(-1.82)	(-1.82)	(7.79)	(7.79)
Government is Sole or Lead Customer (0/1)		1.236		30.808***
		(0.65)		(2.66)
Government is Sole or Lead Customer (0/1) × Total Amount Awarded (in USD mln)		0.159***		0.563***
		(5.28)		(3.39)
Observations	9999	9999	9648	9648
Adj. R-squared	0.11	0.11	0.60	0.60
Mean dep. var.	20.91	–	64.85	–
Sector × Deal Year FE	Y	Y	Y	Y
VC Round FE	Y	Y	Y	Y

Table 7. Government Officials and Startup Performance

This table presents instrumental variables (2SLS) estimates of how the presence of former U.S. government officials as lead investors or board members at the time of a venture round relates to subsequent startup performance. The dependent variable in Columns (1) to (3) is Follow-on Round, an indicator equal to one if the startup receives a subsequent VC round by 2025; in Columns (4) to (6) it is Major Success, an indicator equal to one if the startup achieves a major success such as an IPO or Acquisition. *Former Official as Lead/Board* equals one if a former U.S. government official serves as the round's lead investor or joins the startup's board and is treated as endogenous. Estimates are obtained using the 2019 Government Shutdown Exposure as the instrument; to mitigate weak-instrument concerns, the estimation sample is restricted to funding rounds within twelve months of the shutdown's onset. All specifications control for *Deal Size* (USD million) and *Total Amount Awarded*, and include fund fixed effects, sector × deal-year fixed effects, and VC-round fixed effects. Standard errors are clustered at the startup level, with t-statistics in parentheses. Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and *, respectively.

	Follow-On Round			Major Success		
	(1)	(2)	(3)	(4)	(5)	(6)
Former Official as Lead/Board (0/1)	0.576**	0.649**	0.256**	0.258	0.230	0.028
	(2.13)	(2.21)	(2.32)	(0.78)	(0.70)	(0.16)
Deal Size (in USD million)	0.001***	0.001***	0.001***	0.001**	0.000**	0.000**
	(7.13)	(5.83)	(7.15)	(2.52)	(2.20)	(2.15)
Total Amount Awarded (in USD million)	0.004***	0.004***	0.003***	0.001**	0.001***	0.001*
	(3.50)	(2.77)	(3.68)	(2.41)	(2.78)	(1.95)
Observations	601	601	601	601	601	601
Adj. R-squared	0.20	0.26	0.02	0.13	0.01	0.15
VC Round FE		Y	Y		Y	Y
Sector FE			Y			Y
First-stage F	13.80	14.88	28.76	13.80	14.88	28.76

Figure 1. Prior Government Agency Affiliation

This figure reports the distribution of prior government agency affiliations of individuals in my sample who transition from U.S. government service into senior roles at venture capital firms. Counts are at the individual level and are assigned using each person's last government employer prior to entering a VC firm, so that each individual appears once. Agencies are reported at the agency (sub-unit) rather than parent-agency level, so service branches and similar sub-agencies are shown separately. For example, the Departments of the Army, Navy, and Air Force are listed as distinct entries even though all are components of the Department of Defense.

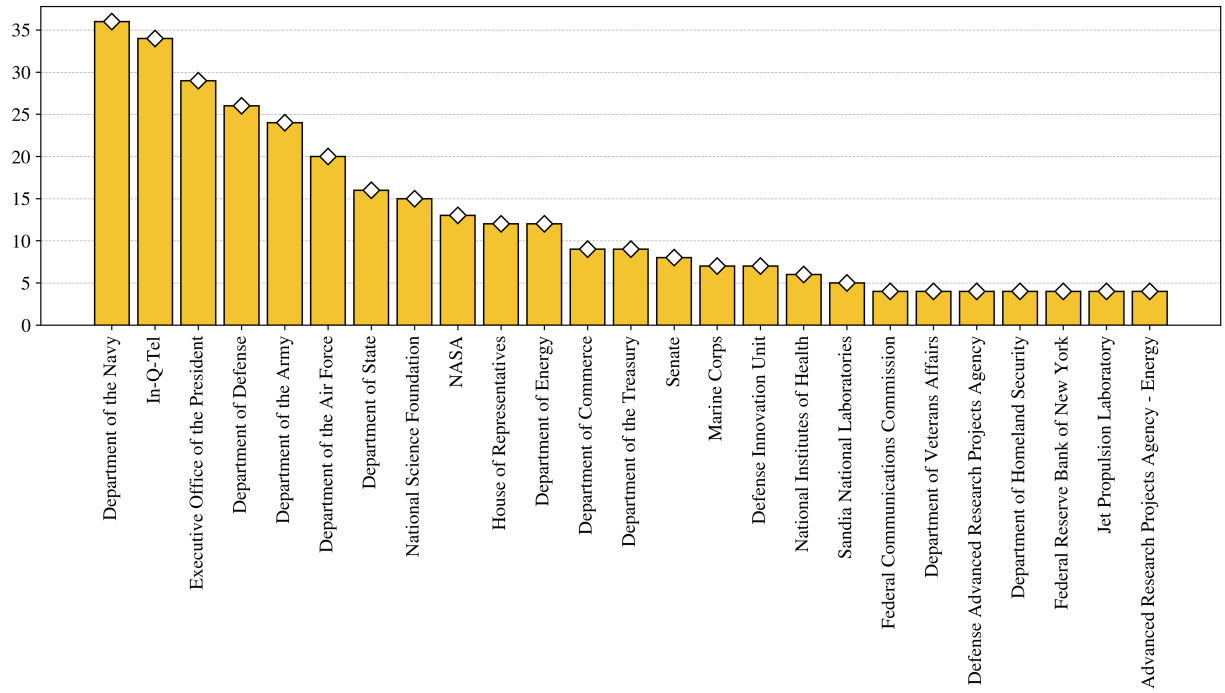


Figure 2. Government Expertise versus Subject and Deal-making Expertise

This figure plots individual-level measures of government expertise against either subject expertise (left-hand panel) or deal-making expertise (right-hand panel). Each dot represents one deal in which an ex-government official joins a startup. Government expertise and deal-making expertise are measured in years; subject expertise is a normalized score between zero and one. Dot size is proportional to deal size. Dot color represents the share of government expertise in an individual's total expertise portfolio, computed after scaling each component to the $[0, 1]$ range to ensure comparability across dimensions. Yellow indicates a greater concentration in government expertise, darker blue indicates a greater concentration in non-government expertise, and grey corresponds to a balanced mix. The panels show that relatively few deals lie near the "pure government" axis: most involve individuals with substantial subject or deal-making expertise in addition to government experience.

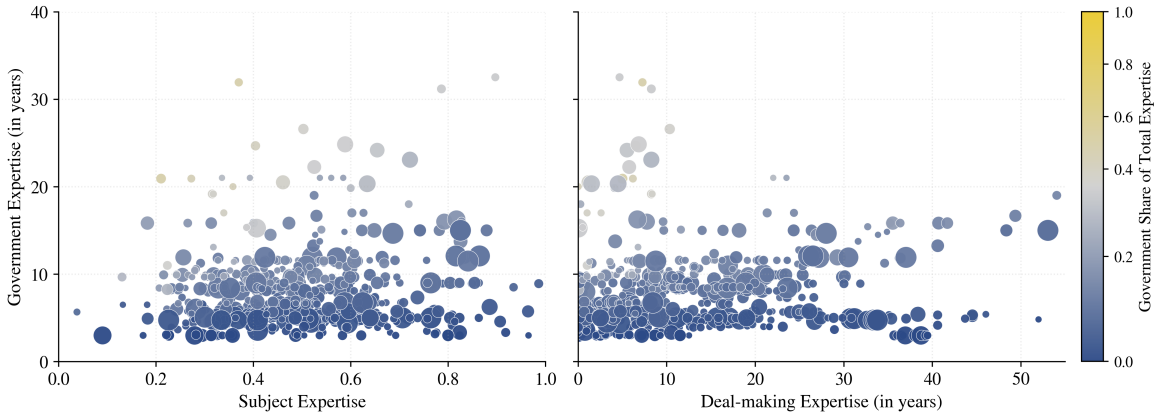


Figure 3. Government Awards: Composition and Leading Awarding Agencies

This figure summarizes the size and composition of U.S. government contract awards to firms in the sample. Panel A reports the total amount awarded over fiscal years 2014-2024, broken down by contracting agency and by contract type, ranging from grants to product contracts. This figure illustrates both the diversity of contracting activity and the scale of the federal government as a purchaser and funder of innovation.

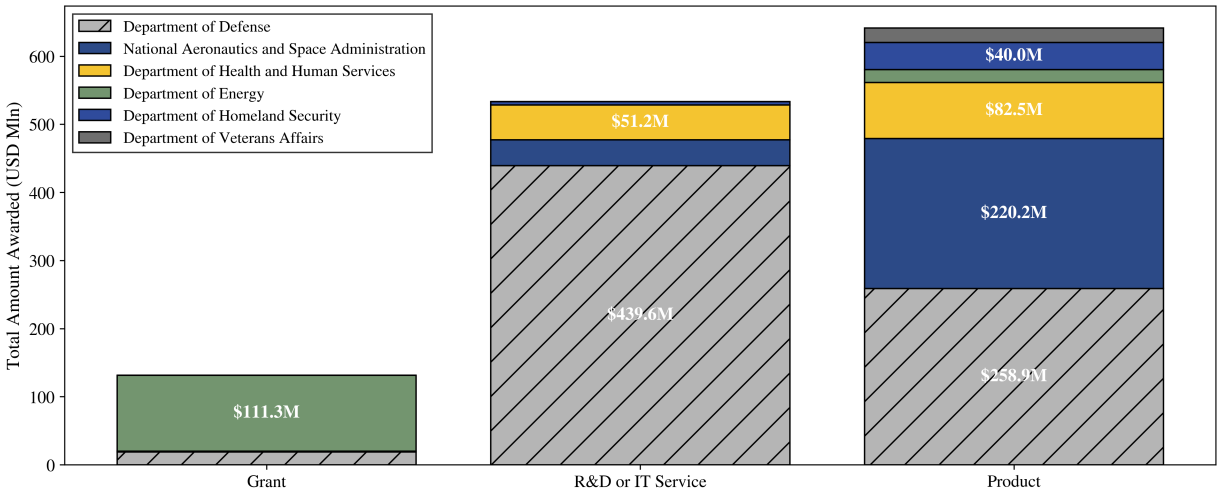


Figure 4. Amount Awarded-to-Deal Size Ratios by Presence of Ex-Government Official

This figure shows the distribution of the ratio between the total value of U.S. federal awards received by a startup and the size of its private venture financing round, separately in the five years before (blue) and after (yellow) the focal deal. The focal deal is defined as the first investment round in which a former U.S. government official joins a venture capital firm's portfolio company in an active senior role, either as the VC-appointed board member or as the lead partner on the deal. The denominator is fixed at the focal deal size, even if additional private rounds occur within the five year period, so the statistic captures the intensity of public support relative to the initial private commitment, not the scaling of private capital.
The sample is split into two groups: startups with no former government official involved, and startups where a former official assumes such a focal role. The y-axis uses a logarithmic scale to account for the skewed distribution of award amounts relative to deal size. Within each group, shaded ribbons depict the interquartile range of the award-to-deal ratio, with bold ticks and bullseye markers denoting the median. Dashed diamonds mark the mean.
Arrows trace the shift in medians from the pre- to the post-focal-deal window, and annotations above each group report the percent change in median ratios. These comparisons highlight how the entry of ex-government officials at the focal deal coincides with a marked increase in startups' subsequent access to federal awards.

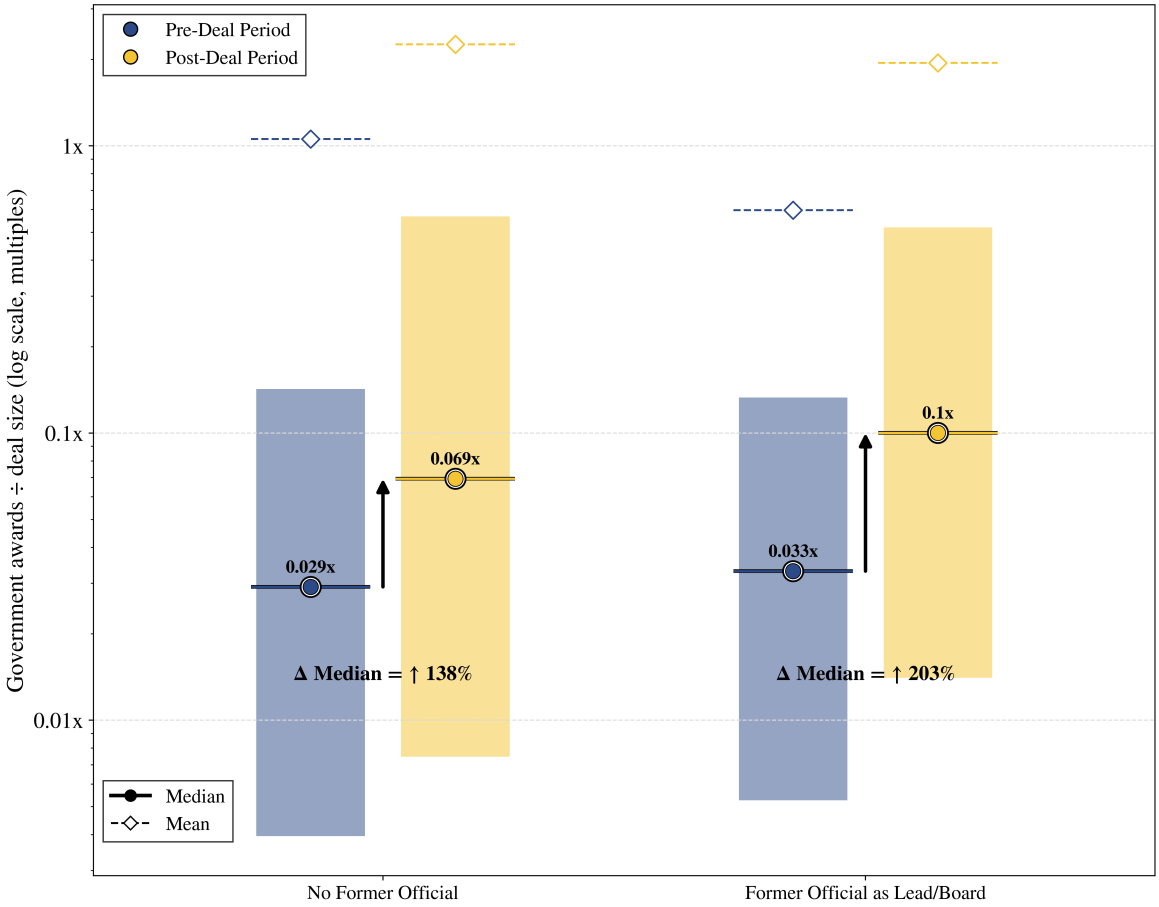


Figure 5. Total White-Collar Separations by 2019 Shutdown Status

This figure describes the total number of white-collar employee separations, summed across all federal agencies and split by whether agencies were shut down during the 2019 federal government shutdown. Numbers are from OPM *FedScope*. Lines present annual totals, and shaded ribbons indicate bootstrap 50% confidence intervals for those sums. The vertical grey band marks the 2019 shutdown period: it lasted 35 days, from December 22, 2018 to January 25, 2019. The 2019 markers also report the year-over-year percentage change relative to FY2018. The list of shutdown agencies follows Resh et al. (2023), which is based on a report by the Permanent Subcommittee on Investigations and FOIA requests.

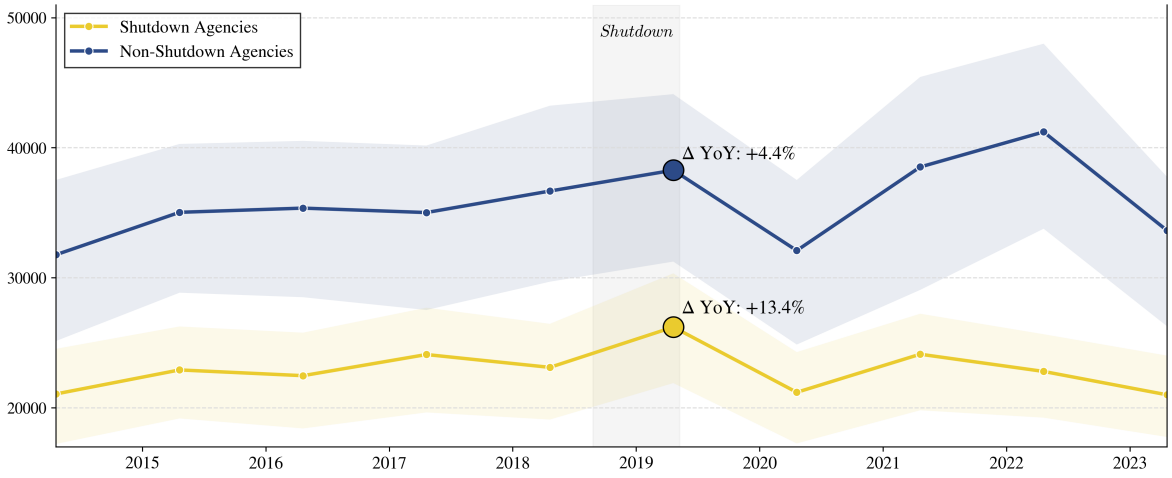
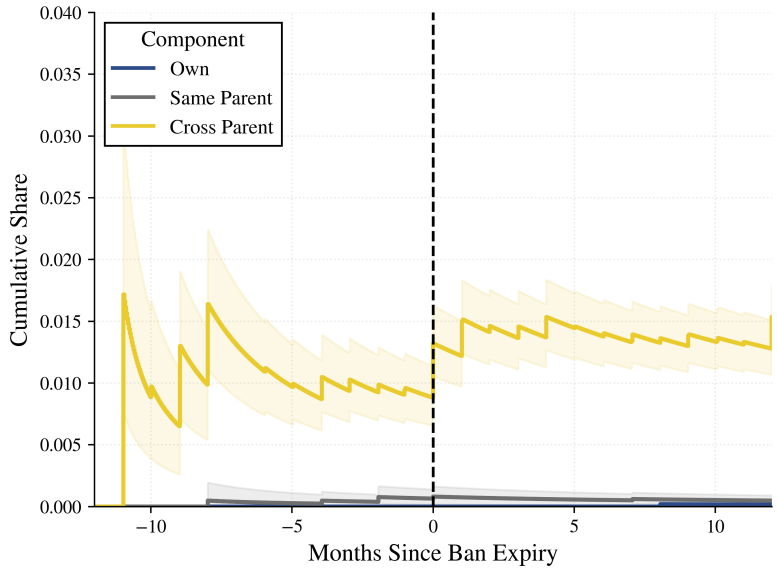


Figure 6. Network versus Bureaucratic Expertise

This figure plots cumulative distribution functions for the time to a firm's first government award following the hire of an ex-government official; only cumulative shares are shown, and the sample is restricted to firms that receive at least one award. Event time τ is measured in months relative to the expiry of the official's one-year post-employment ban under 18 U.S.C.§207(c); the vertical dashed line marks $\tau = 0$. Awards are classified into three mutually exclusive categories based on the official's prior affiliation: Own denotes awards from the official's origin component (or the parent / non-designated side for parent-level alumni); Same-parent denotes awards from other designated components within the same parent agency; Cross-parent denotes awards from agencies under different parents. During the ban ($\tau < 0$), the Own series is flat (no arrivals), consistent with the statutory prohibition on representational access to the origin component. By contrast, Same-parent and Cross-parent series register arrivals throughout the ban period, reflecting both the ability to contact personnel in those units and the portability of know-how. After expiry ($\tau > 0$), the Own series begins to step up, indicating that access also matters.



Online Appendix for "From D.C. to VC"

Alice Eliet-Doillet

November 2025

A Data Sources and Construction

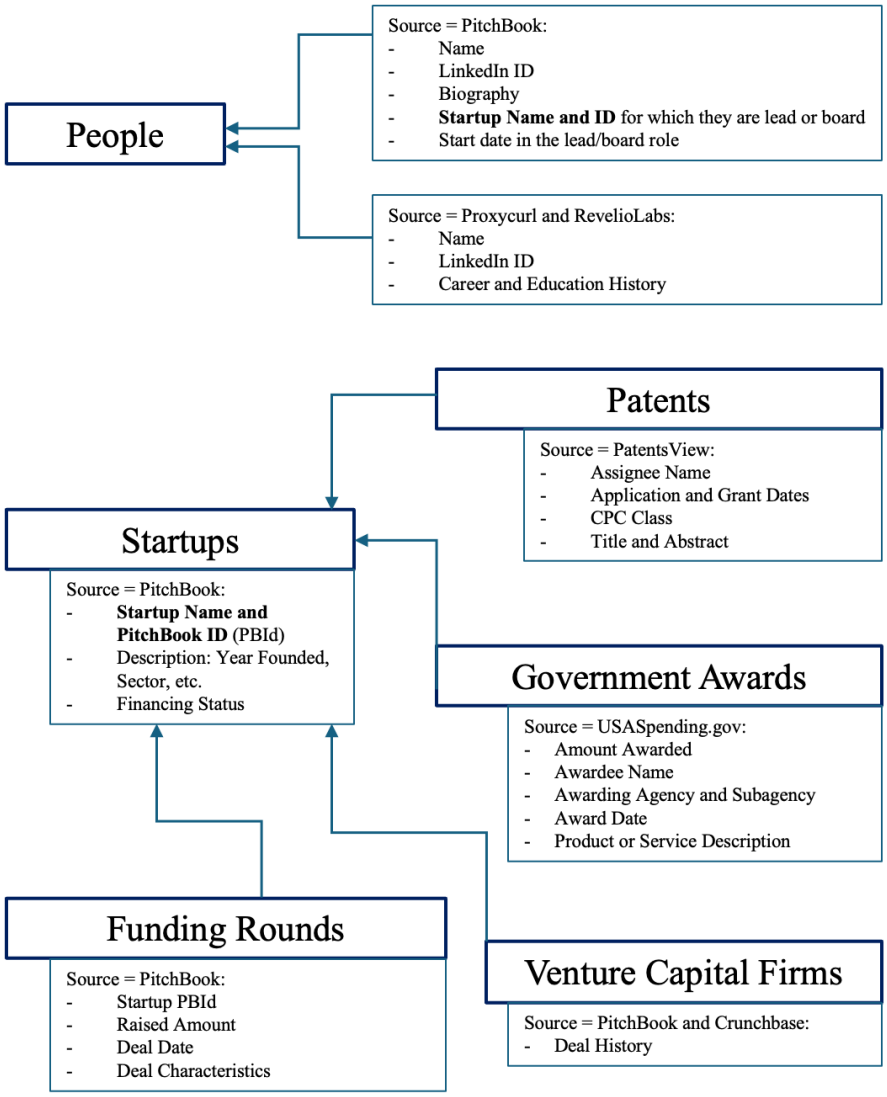


Figure A.1. Data Sources and Key Variables

Category	Agency Name	Abbreviations / Aliases
Military	Department of Defense	DoD
	Army	USA
	Navy	USN
	Air Force	USAF
	Marine Corps	USMC
	Space Force	USSF
	U.S. Cyber Command	CYBERCOM
	Defense Advanced Research Projects Agency	DARPA
	Defense Innovation Unit	DIU
	Defense Logistics Agency	DLA
	Defense Threat Reduction Agency	DTRA
	National Security Agency	NSA
	Central Intelligence Agency	CIA
	National Geospatial-Intelligence Agency	NGA
	Office of the Secretary of Defense	OSD
Congress	U.S. Senate	Senate
	U.S. House of Representatives	House
	Congress	—
Executive Office	White House	Executive Office of the President (EOP)
	Office of Management and Budget	OMB
	Council of Economic Advisers	CEA
	National Economic Council	NEC
	Office of Science and Technology Policy	OSTP
Finance	Department of the Treasury	Treasury
	Federal Reserve	Fed
	Securities and Exchange Commission	SEC
	Federal Deposit Insurance Corporation	FDIC
	Office of the Comptroller of the Currency	OCC
	Office of Financial Research	OFR
	Fannie Mae	FNMA
	Freddie Mac	FHLMC
Development & Aid	International Development Finance Corporation	DFC
	U.S. Agency for International Development	USAID
	Export-Import Bank of the United States	EXIM
	Small Business Administration	SBA
Health & Science	Department of Health and Human Services	HHS
	National Institutes of Health	NIH
	Centers for Disease Control and Prevention	CDC
	Food and Drug Administration	FDA
	Biomedical Advanced Research and Development Authority	BARDA
	National Science Foundation	NSF
	National Institute of Standards and Technology	NIST
	Department of Energy	DoE
	Sandia National Laboratories	SNL
	Los Alamos National Laboratory	LANL
	Argonne National Laboratory	ANL
	Oak Ridge National Laboratory	ORNL
	Jet Propulsion Laboratory	JPL
	National Aeronautics and Space Administration	NASA
Other Agencies	Department of State	DoS
	Department of Homeland Security	DHS
	Transportation Security Administration	TSA
	Department of Justice	DOJ
	Federal Bureau of Investigation	FBI
	Department of Commerce	DOC
	Department of the Interior	DOI
	Environmental Protection Agency	EPA
	Federal Communications Commission	FCC
	General Services Administration	GSA
	Government Accountability Office	GAO
	Office of the Inspector General	OIG
	In-Q-Tel	IQT

Table A.1. Agency Names and Abbreviations Used to Identify Former Officials

Variable Name	Variable Definition
`Government is Sole or Lead Customer`	Indicator equal to 1 if the startup operates in sectors or technologies where the U.S. government is a dominant or early customer. Specifically, the variable equals 1 if any of the following conditions hold: (i) the `All Industries` field contains any of {Government, Defense, Aerospace, Infrastructure}; or (ii) the `Verticals` field mentions any of {Space Tech, Infrastructure, EdTech, Cybersecurity}; or (iii) the company `Description` includes the terms "dual-use" or "government".
`Heavily Regulated`	Indicator that equals 1 if either (i) `Primary Industry Sector` contains {Healthcare, Energy}, or (ii) `Verticals` contains any of {Healthtech, Digital Health, Climate Tech, CleanTech, FoodTech, FinTech, InsurTech, AgTech}.
`Capital Intensive`	Indicator that equals 1 if either (i) `All Industries` contains any of the deep-tech keywords {Biotechnology, Drug Discovery, Aerospace, Defense, Space, Semiconductors, Nanotechnology, Alternative Energy, Energy Storage, Diagnostic Equipment, Monitoring Equipment, Surgical Devices, Therapeutic Devices, Discovery Tools, Electronic Equipment, General Purpose Semiconductors, Quantum, Robotics, Infrastructure, Industrials, Hardware}; or (ii) `Primary Industry Sector` is in {Healthcare, Energy}.

Table A.2. Definitions of Key Variables

B Robustness Checks and Additional Tables and Figures

Table A.3. First-Stage Equations

This table reports the first-stage regressions corresponding to the IV (2SLS) specifications in the main text. The dependent variable is *Former Official as Lead/Board*, an indicator equal to one if a former U.S. government official serves as the round's lead investor or joins the startup's board. The key explanatory variable is the excluded instrument, *Shutdown Exposure Instrument*, measured prior to each financing round. All columns include *Deal Size (in USD million)* as a control. Column (1) includes VC-round fixed effects; Column (2) additionally includes industry-sector fixed effects. Standard errors are clustered at the sector–year level; t-statistics are in parentheses. The bottom panel reports the Angrist-Pischke (clustered) first-stage F-statistic for the excluded instrument, the partial R-squared of the excluded instrument, the number of excluded instruments, the number of observations and clusters, and the fixed effects used. The sample is restricted to financing rounds within twelve months of the onset of the 2019 U.S. government shutdown. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
Deal Size (in USD million)	-0.3032***	-0.3106***
	(-3.785)	(-5.636)
Shutdown Exposure Instrument	0.0003***	0.0004***
	(3.830)	(5.226)
First-stage F (AP, clustered)	14.67	27.31
Partial R-squared (excluded IVs)	0.036	0.050
# Excluded IVs	1	1
Observations	601	601
Clusters	7	7
Fixed Effects	VC Round FE	VC Round FE, Sector FE

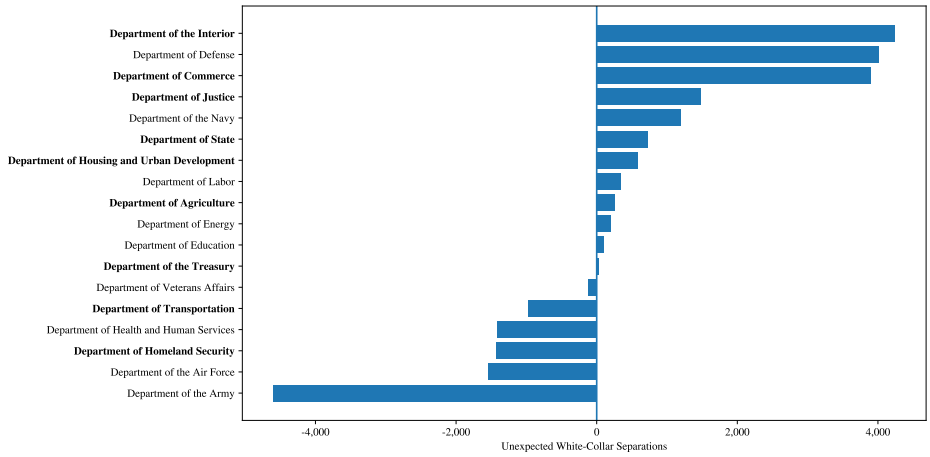
Table A.4. Competition in Federal Awards

This table reports instrumental-variables (2SLS) estimates of how the presence of former U.S. government officials as lead investors or board members at the time of a venture round relates to subsequent government award outcomes. Columns (1) to (3) focus on *Non-Competitive* awards and Columns (4) to (6) on *Competitive but Restricted* awards, where *Non-Competitive* denotes awards made without full and open competition (e.g., sole-source or other FAR exceptions) and *Competitive but Restricted* denotes competitions limited to an eligible or pre-qualified subset of firms (e.g., small-business set-asides). The dependent variable is the cumulative dollar value of U.S. government obligations (USD millions) received within five years after the deal for the indicated award type. *Former Official as Lead/Board* equals one if a former U.S. government official serves as the round's lead investor or joins the startup's board and is treated as endogenous. Estimates use exposure to the 2019 Government Shutdown as the instrument; the sample is restricted to funding rounds within twelve months of the shutdown's onset. Columns (2) and (5) add VC-round fixed effects; Columns (3) and (6) additionally include industry-sector fixed effects. Standard errors are clustered at the sector-year level, with t-statistics in parentheses. The first-stage F-statistic for the excluded instrument is reported at the bottom. Statistical significance at the 1%, 5%, and 10% levels is denoted by ***, **, and *, respectively.

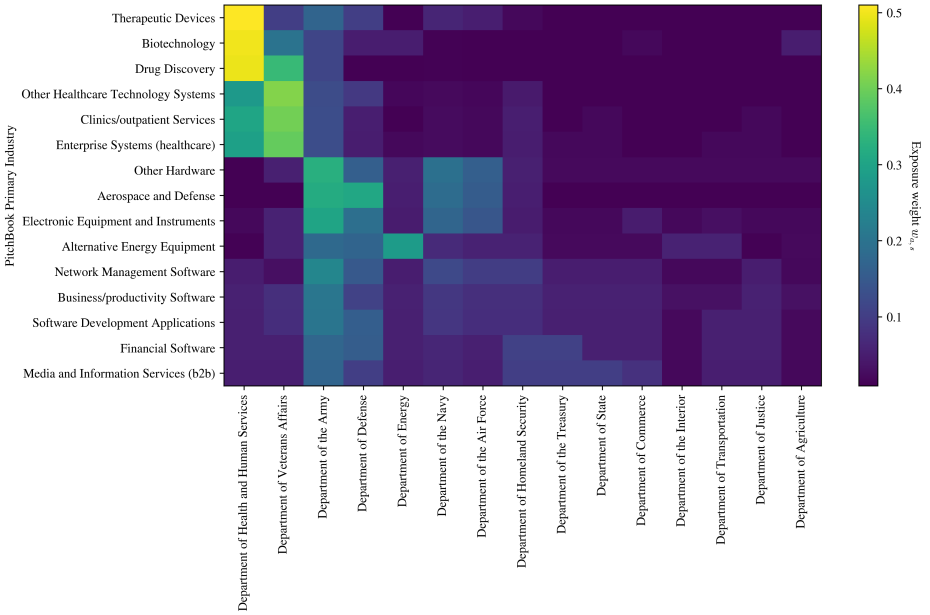
	Non-Competitive Awards			Competitive but Restricted		
	(1)	(2)	(3)	(4)	(5)	(6)
Former Official as Lead/Board (0/1)	0.673**	0.708***	0.651**	0.212	0.198	0.245
	(2.23)	(2.95)	(2.40)	(1.21)	(1.36)	(1.52)
Observations	601	601	601	601	601	601
VC Round FE		Y	Y		Y	Y
Sector FE			Y			Y
First-stage F	13.76	14.86	28.74	13.76	14.86	28.74

Figure A.2. Instrumental Variable Construction

Panel A.2a plots agency-level unexpected white-collar separations, defined as the 2019 value minus the mean for the same fiscal quarter over 2016-2018 using OPM FedScope. Bold labels denote agencies affected by the 2018–2019 shutdown. Panel A.2b shows exposure weights $w_{a,s}$ by PitchBook primary industry s and parent agency a, computed as the share of agency a's FY2018 obligations allocated to the NAICS three-digit sector mapped to s; the display uses the top 15 primary industries in my sample. In the underlying matrix, $\sum_s w_{a,s} = 1$ for each agency a. A brighter cell indicates that a larger share of agency a's FY2018 contracting falls in industry s.



(a) Unexpected White Collar Separations



(b) Exposure Weights

Figure A.3. Dynamic Linear IV Effects on Post Focal Deal Government Awards

This figure plots instrumental-variables (2SLS) estimates from a linear model of the effect of having at least one former U.S. government official among the lead investors or on the board (*Former Official as Lead or Board*) on the cumulative value of U.S. government obligations received within t years after the focal venture-capital deal (USD millions), for horizons $t = 0, \ldots, 5$. Shaded areas denote 95% confidence intervals and capped error bars denote 90% confidence intervals. The treatment is instrumented with 2019 Government Shutdown Exposure; to mitigate weak-instrument concerns, the sample is restricted to funding rounds within twelve months of the shutdown's onset. All specifications control for deal size and include VC Round and Primary Industry Sector fixed effects; standard errors are clustered at the sector–year level. Because the specification is linear, coefficients are interpreted as additive dollar-changes rather than proportional effects. The horizon is limited to five years post-deal to align with the 2019 shock window.

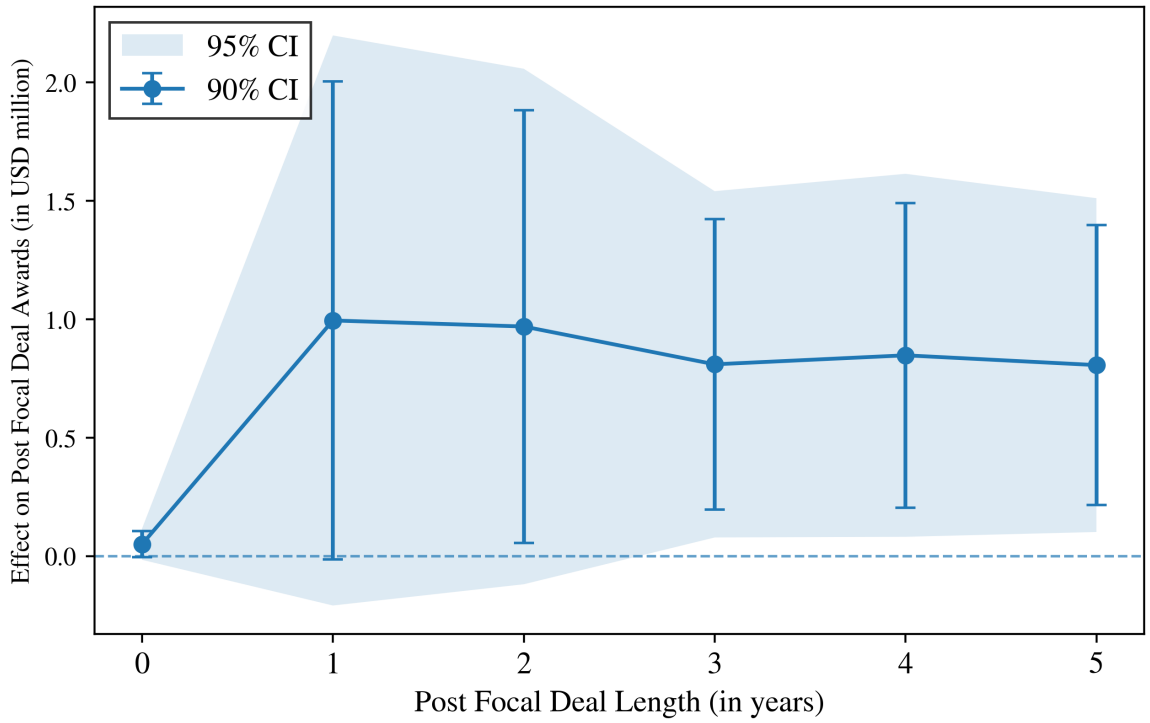


Figure A.4. Entries from U.S. Government into Venture Capital, by Year

This figure plots the annual number of individuals who joined venture-capital firms after serving in U.S. government positions. Bars report calendar-year counts. Vertical dashed lines mark U.S. presidential election years; solid lines indicate election years in which the presidency changed party.

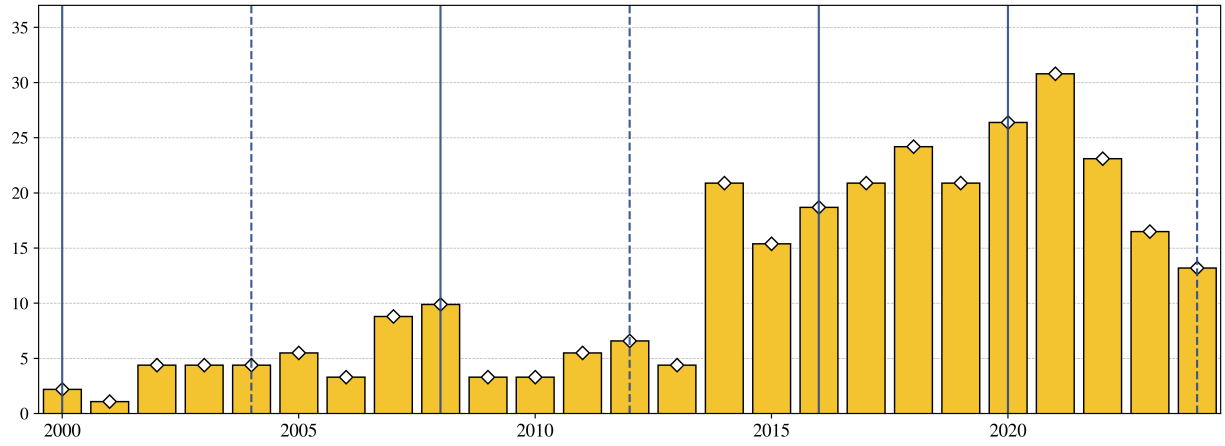


Figure A.5. Top Primary Industries of Startups with Ex-Government VC Appointees

This figure displays the 15 primary industries with the highest number of firms backed by venture capital (VC) firms that appointed a former government official to a senior role. Each dot represents a primary industry, with dot size indicating the average amount of capital raised by firms in that industry. Industries shown in blue include at least one firm classified as DeepTech, based on the broader "All Industries" classification rather than the primary industry label.

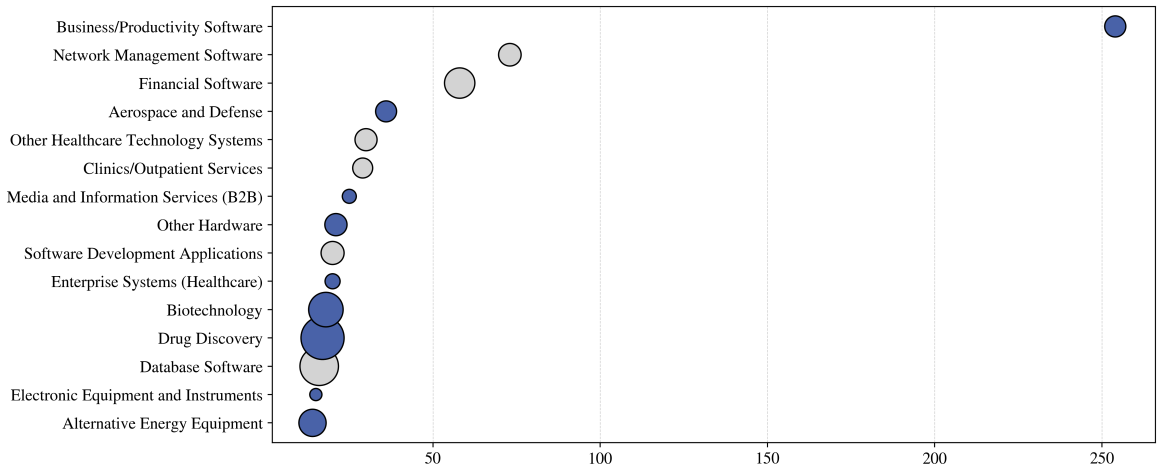


Figure A.6. Competition in Federal Awards Around the Focal Deal

This figure shows how the composition of federal awards (obligated dollars) changes before and after the focal deal, separately for portfolio companies with and without a former U.S. government official among the lead investors or on the board (*Former Official as Lead/Board*). For each *Deal* × *Window* (Pre-Deal if the action date precedes the deal date; Post-Deal otherwise), I sum total obligations and compute three shares: (i) *Competitive* = competed dollars divided by total dollars; (ii) *Restricted but Competitive* = dollars awarded under restricted/limited competition procedures divided by total dollars (this is a strict subset of (i)); and (iii) *Non-Competitive* = 1− Competitive. Because "Restricted but Competitive" is a subset of "Competitive," bars in each group need not sum to 100%.

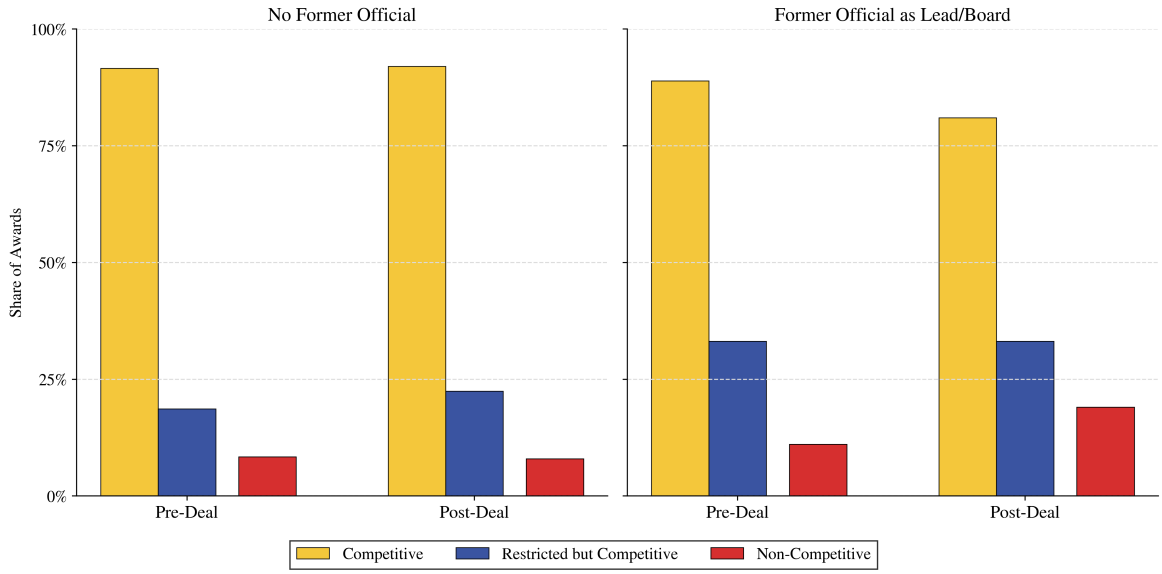


Figure A.7. Radiant: Timeline of Private Financing and Government Awards

This figure accompanies the case study and plots all identified funding events for Radiant (2019–2025). Amounts are nominal USD millions at the event date. Private financing rounds, namely Accelerator/Incubator (USD 0.65 million), Series A (USD 12.62 million), Series B (USD 40.71 million), and Series C (USD 165.00 million), rounds are shown as bars. Government awards, Department of Defense/Air Force (R&D Services) (USD 0.05 million and USD 1.30 million) and Department of Energy grant (USD 1.30 million), are shown as diamonds at award dates.