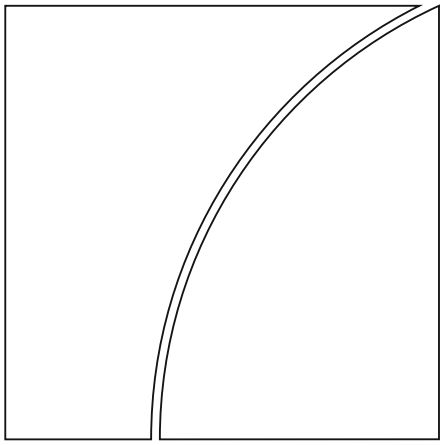

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JEL classification: D72, G38, H57, H61, P16.

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The Lion's Share: Evidence from Federal Contracts on the Value of Political Connections [*]

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Abstract

We examine the role of political connections in receiving federal funds during an unexpected surge in government defense spending. While the data do not allow identification of a causal link, the analysis uncovers that politically connected firms were awarded larger amounts in federal contracts when available funds increased. Specifically, firms that lobbied received around one third more in the amount of defense contracts compared to those that did not lobby. Similar evidence holds for campaign contributions and board connections. The increase in the amount of contracts obtained is observed primarily for firms that had limited ability to efficiently support Pentagon efforts, and when contracts received less scrutiny. Between political connections and merit-based channels in government contracting, the results mainly, but not exclusively, support the first channel.

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Keywords: Lobbying, Campaign contributions, Board connections, Political connections, Corporate revenue, Government spending, Procurement, Federal contracts

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I. INTRODUCTION

The interaction between corporations and governments is a core issue that affects economic systems. This is particularly relevant in areas where there is a high degree of interdependence between the government and the private sector, such as federal procurement contracts. The federal government is the largest single purchaser of goods and services in the United States, with discretionary outlays amounting to about 7.5% of GDP since 2000. Firms participating in procurement bids often engage in politically targeted activities and hire former public officials and government employees with knowledge of the procedures.

In this paper, we examine the value of political connections by asking whether connections matter for how much a corporation receives in procurement contracts. Here we focus on an event that increased funding particularly for one government agency and was not driven by corporations' political activities. Specifically, the September 2001 terrorist attack and the war in Afghanistan immediately following the attack was an unexpected shock that increased defense spending. We examine how defense contracts received by corporations following the shock relate to their existing political connections.[1] This framework also allows us to quantify the value of these connections (in terms of the dollar amount earned through federal contracts). We focus on lobbying, campaign contributions, and board connections as alternative means of establishing political connections. We also differentiate revolving-door lobbying in our analysis to examine how connections through past employment and experience relate to the allocation of federal contracts.

Looking at defense contracts helps us in understanding the dynamics between the government and corporations since defense spending constitutes about half of federal discretionary outlays. The defense sector is also one of the most politically active: lobbying expenditures of defense contractors rose from an annual average of about $60 million before 2001 to more than $120 million since 2001 while their campaign contributions reached $360 million since 1990.[2] Moreover, the revolving door has been quite pervasive: there were at least 97 former members of Congress who lobbied for the

[1] For robustness, we also look at political connections in relation to spending of other government agencies (nondefense spending) as there is no similar event that affected nondefense spending during this time period.

[2] See Center for Responsive Politics, https://www.opensecrets.org, for these and other statistics on the political activities of corporations and individuals.

largest defense companies from 2003 through 2014,[3] and 65% of defense lobbyists had employment histories spanning public service.[4]

We find that firms that lobby get larger amounts in defense contracts (defined as those awarded by the U.S. Department of Defense, aka DoD or Pentagon) following the unexpected shock in 2001 that increased defense spending. Additionally, firms that contribute to political election campaigns and that have board connections to the Pentagon get larger contracts after the shock. Firms that lobby obtained around 35% more defense contracts than those that do not lobby following the unexpected increase in available funding. These statistics are roughly similar when one considers campaign contributions or board connections to the Pentagon instead. Undoubtedly, this point estimate should be interpreted with caution and not generalized to other sectors in other settings. That said, overall, the findings indicate that political connections could be of considerable value for corporations through the direct channel of higher revenue.

A potential concern is that, during a rapid expansion of defense spending, firms obtaining more in defense contracts would be those that can easily and quickly scale up their operations, which may also be the more politically active ones. In other words, connected contractors may be awarded more contracts because they happen to be those with better ability to meet Pentagon's needs during a war. Controlling for firm fixed effects could help in alleviating this concern, to the extent that fixed effects capture slow-moving characteristics that have a bearing on such ability (e.g., size, expertise, specialization, operating capacity and efficiency). That said, we also have a direct look at how those connected firms experiencing an increase in defense contracts differ from others.

We find that, among contractors with political connections, the increase in defense contracts is prominent mainly in firms that were awarded smaller contracts in earlier periods, firms that were underperforming, smaller firms, firms that are in closer geographic proximity to Pentagon, and firms receiving less scrutinized contracts. These findings are not consistent with the notion of better ability to support war efforts helping firms obtain contracts. The evidence points more towards contracts being awarded to those with political connections rather than by a strictly merit-based criteria.

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[3] "The defense industry's friend inside Congress and outside Congress," Center for Public Integrity, February 5, 2015, by Alexander Cohen, available at http://www.publicintegrity.org/2015/02/05/16719/defense-industrys-friend-inside-congress-and-outside-congress.

[4] https://www.opensecrets.org/revolving/index.php accessed in November 2016.

We further carry out a set of robustness tests and alternative specifications. We remove the top 10 contractors, control for time-varying characteristics correlated with both the amount of contracts received and political activitism, match politically-connected firms with those that are not connected on contract amounts obtained before the event as well as with time-varying firm characteristics. These results support the baseline findings. We then conduct several placebo tests. Using an alternative placebo sample period for the overall sample as well as for the top and bottom quartile contractors, and by conducting a placebo sample analysis of nondefense contractors, we find no increase in contracts with political connections after the surge in defense spending.

A main limitation of our analysis is that the data do not allow us to explore the question of why some firms engage in political activities and other do not. The vast majority of firms in our sample – approximately 90% – do not lobby. Hence, the evidence we present can best be interpreted in the context of an equilibrium in which firms sort into whether to establish political connections or not, and those that decided to establish political connections received more contracts in a particular circumstance. While this finding may be generalized to other circumstances where similar demand shocks happen, it should not be considered as evidence that political connections *caused* contracts to be awarded.

Our paper adds to the mostly contemporaneous studies on federal contracts (Karpoff, Lee, and Vendrzyk (1999), Goldman, Rocholl, and So (2013), Tahoun (2014), Cohen, Coval, and Malloy (2015), Borisov, Goldman and Gupta (2016), Agca, Igan, Li, and Mishra (2021), and Broogard, Denes, and Duchin (2021)) and the broader debate on political connections on several fronts. First, in a setting where government spending on federal procurement contracts increased unexpectedly, we show that firms with political connections benefit from a substantial payoff during such a spending surge. Second, due to the nature of our study, we are able to put a dollar value on these political connections. Given the importance of defense spending in the U.S. economy (45% of discretionary spending, 3.5% of GDP[5]), our results hint at a considerable role of political connections on the economy. Third, we distinguish between award channels of defense procurement based on political connections and based on merit, and find support more consistent with the former. Fourth, we consider a diverse set of private and public companies. Thus, our results help in understanding the effects of political connections for a more diverse set of players and complement other studies that

[5] See https://www.cbo.gov/publication/57172. Discretionary spending in 2020 amounted to $1.6 trillion, of which $714 billion was allocated to defense spending.

focus only on public companies. Lastly, we consider three important types of political activities—lobbying, campaign contributions, and board connection—within the same framework, and also consider revolving-door lobbying and campaign contributions considering party affiliations within this context. Thus, we can examine each connection in the same setting and assess their relative importance.

The rest of the paper is organized as follows. Section II explains the data and the methodology, Section III presents the empirical findings. Section IV concludes.

II. DATA AND METHODOLOGY

A. Data

We combine four datasets to examine the relation between political activities and connections, and procurement contracts granted by the federal government. These data are on lobbying expenditures, campaign contributions, corporate board of directors, and federal procurement contracts. Since none of these datasets share a common identifier, they are merged with an initial matching algorithm followed by manual screening and manual matching. We first go over the timeline of our analyses and then explain the data used in the study in further detail.

Analysis Period Timeline

The event we focus on is the September 11, 2001 terrorist attack and the onset of the war in Afghanistan a few weeks later on October 7, 2001.[6] We consider the procurement contract award dates between September 2001 (the time of the terror attacks) and September 2002 as the event period. The agencies had put in their requests for fiscal year 2002 (that covered from October 1, 2001 through September 30, 2002) in the fall of 2000 and these requests were included in the President's Budget by the end of December 2000.[7] Hence, during the period October 2001–September 2002, the federal budget was not reflecting the consequences of the September 11 attack and the war in Afghanistan.

[6] On September 18, 2001, President George W. Bush signed into law a joint resolution authorizing the use of force against those responsible for the 9/11 attacks. The U.S. military began a bombing campaign against Taliban forces on October 7, officially launching Operation Enduring Freedom. The first wave of conventional ground forces arrived twelve days later. This tight timeline justifies treating the September 11 attacks and the war in Afghanistan as a single event in our analysis.

[7] Most agencies submit their budget requests to the Office of Management and Budget (OMB) during the period between September and December. By the end of December, decisions involving the President and other White House officials are completed. The final document is the President's Budget, which is transmitted to Congress generally in the first Monday of February. Committees in both the House and the Senate hold hearings and review budget justification after

(continued…)

For the pre-event period, we look at October 2000–August 2001. Budget requests for this period were submitted between September 1999 and December 1999. Both during the fall of 1999 and during the pre-event period, there were no major events that would have affected the agencies' funding requests systematically. In this regard, we consider this period as the benchmark period against which we compare the contracts awarded in the post-event period.

The post-event period is determined as follows. During the period between September 2001 and December 2001, new budget requests were transmitted to the OMB and became part of the approved budget for fiscal year 2003 (that covered from October 1, 2002 through September 30, 2003). Thus, we consider the contract award period from October 2002 to August 2003 as the post-event period, where the consequences of September 11 and the Afghan war in October 2001 would be incorporated into the funding request of the DoD.[8]

For ease of reference, the timeline for the analysis period is given in the chart below.

We do not include the event period (September 2001–September 2002) in our analyses as the effect of the September 11 attack for this contract award period is not clear. Budget requests for this period are submitted by December 2000 and, hence, are not affected by the event. Yet, the fiscal period following the approval of the budget, i.e., October 2001–September 2002, is just after the event and there may be additional contracts awarded under temporary budget authority due to the attack.

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the transmission of the budget. Each chamber then produces its own budget bill. A budget resolution process aims to remove the conflicts between the two bills and send a single bill to the President for approval or veto. The process is expected to be completed by mid-April, leaving appropriations committees enough time to complete the appropriations bills by the beginning of the fiscal year—October 1st. If the needed funds are not appropriated, continuing resolutions need to be approved to avoid a partial government shutdown.

[8] We consider the one-year period after the unexpected shock on September 11, 2001 to examine the value of political connections in obtaining contracts. We do not extend the post-event period further than one year as the following years correspond to the Iraq war that started in 2003, which is a different event and, arguably, an anticipated event.

Federal Procurement Contracts

Federal contracts data are obtained from the compilations of the Federal Procurement Data System (FPDS, www.fpds.gov) entries by the Center for Effective Government (www.fedspending.org), an OMB watchdog. The Appendix provides detailed information on the procurement process with a particular focus on the DoD procedures.

Given the nature of the shock we are considering, we focus on the contracts given by the DoD, which we refer as defense contracts.[9] Furthermore, in our dataset, we include only corporations, for which we collect contract data including the subsidaries and then compile at the parent company level.[10] We remove all other institutions and agencies such as foundations, associations, universities, and state governments. Contracts involving foreign governments are also dropped.[11] We also exclude the contracts specifically set aside for small businesses or for businesses owned by veterans or minorities—based on the identification in the FPDS—and the observations where the contract amount is below $100,000. The reason for applying a dollar amount threshold is that small contracts are processed according to simplified acquisition (also called micro-purchase) procedures such that contracts may be awarded without soliciting competitive quotes and generally involve small businesses. Simplified acquisition threshold was $100,000 until October 1, 2010 (which covers our sample period, including the placebo exercise we conduct), and has been $150,000 since then.[12] At the end, federal contracts included in the dataset are relatively large contracts that are awarded under standard procedures and full and open competition. For each corporation that is awarded defense contracts, we calculate the total amount of defense contracts obtained over the pre-event period (October 2000–August 2001) and the post-event period (October 2002–August 2003).[13]

[9] Other federal agencies that may have been affected from the increase in defense spending are Homeland Security, Veteran Affairs, and State Departments. We confirm that our baseline results are robust to including contracts obtained from these departments in addition to the DoD. These robustness checks are available from the authors upon request.

[10] We make the choice to aggregate and analyze the contracts at the parent company level because of two reasons, one conceptual and one practical. Conceptually, this allows us capture company-wide activities. Practically, data on lobbying expenditures and campaign contributions at the subsidiary level are often unavailable.

[11] For instance, the funds appropriated for humanitarian and reconstruction assistance to Afghanistan—over $38 billion from 2001 to 2009—are not part of the analysis as the political economy dynamics may be markedly different.

[12] See Federal Register, Vol. 17, No 167, August 30, 2010.

[13] Consistent with this categorization, Secretary of Defense Donald Rumsfeld declared an end to major combat in Afghanistan on May 1, 2003.

Lobbying

We retrieve data from the Lobbying Disclosure Act database provided by the U.S. Senate Office of Public Records (www.senate.gov/legislative/opr.htm). Lobbying activities are reported semiannually from 1999 to 2009 and quarterly since 2009. For our analysis period, lobbying data are available at semiannual frequency. We match lobbying data to federal contracts data using a matching algorithm (based on purging of common words in a string variable—in our case, the client name in the lobbying database and the parent company name in the federal contracts database—and assigning similarity scores to the remaining words to detect the possible matches) followed by manual screening and manual matching.

For a given fiscal year, budget requests are submitted by the fall of the previous year. It is then straightforward to assume that lobbying activity targets the budget and appropriations for the upcoming fiscal year and affects federal contracts mainly with lags, if at all. Hence, for the matched corporations in our sample, we calculate the lagged value of total lobbying amounts for each period of interest. We are interested in the link between lobbying and federal contracts following an unexpected shock that increased the amount of defense contracts awarded. In our setting, the amount available under defense contracts increases due to this shock, not due to political activism. In this regard, we look at lobbying relations before the shock and observe the implications of an increase in the pie on those that had lobbying relations before the event compared to those that did not (we do not, however, tackle the question of why some firms had established lobbying relations while others had not; rather we take this as an equilibrium outcome and focus on the examination of the differences between the two groups of firms). Accordingly, we consider total lobbying in 1999 for pre-event period October 2000-August 2001 since the budget for this period was requested during the period September 1999–December 1999. For the post-event period, we use lobbying expenditures in 2000, which are not driven by September 11 attacks and the onset of the war in Afghanistan in October 2001.

Campaign Contributions

Campaign contribution data are collected from the Federal Election Commission Disclosure Database (www.fec.gov/disclosure.shtml), which provides detailed information on campaign contributions for each election cycle since 1996. For our purposes, we consider political action committee (PAC) contributions given by corporations to winning candidates. We mainly focus on PAC contributions because individual contributions are more likely to be driven by ideology rather than the purpose of establishing connections (Bonica, 2015). We look at winning candidates since they are the ones in

power when federal contracts are awarded. Indeed, Goldman, Rocholl, and So (2013) find that federal procurement contracts increase for those companies that have connections with the winning party.

For each corporation that has been awarded federal contracts, we match firm names with those in the campaign contribution dataset, following the same procedures as those we use for matching the lobbying data. We assign campaign contributions to each period of interest according to the event window. Specifically, we look at the exact dates of campaign contributions and use these dates in determining lagged campaign contributions. For example, for the pre-event contract period October 2000–September 2001, we compute the total campaign contributions from January 1999 to December 1999, which corresponds to the time frame during which the agencies submit their budget requests for the 2001 fiscal year. For the post-event contract period October 2002–September 2003, we compute the total campaign contributions from January 2000 to December 2000, when the campaign contributions were not driven by the event.[14]

Board of Directors

For corporations that receive defense contracts, we gather information on board connections by looking at the employment history of a company's board members and their service in other boards. We use the BoardEx database to determine these connections. After matching the company names in the BoardEx dataset to those in the federal contracts data as we have done for lobbying and campaign contributions, we identify the companies whose board directors have been employed in the Pentagon or in the U.S. Armed Forces (Army, Navy, Marine Corps, Air Force, and Coast Guard). We also consider the "indirect" connection cases where board members of a company have overlapped on the board of another company with directors that have worked in the Pentagon or the Armed Forces. We summarize this information in an indicator variable that takes a value of one if the company has a board member that had employment history in the Pentagon or the Armed Forces or has overlapped in a board with a director who had worked in these organizations.[15]

[14] As an alternative approach, we also consider determining lagged campaign contributions in the same manner as we do for lobbying. In particular, for the pre-event period (October 2000–September 2001), budget requests are submitted by December 1999, so, we take the total PAC contributions to winning candidates for the 1998 election cycle. For the contracts awarded in the post-event period (October 2002–September 2003), we use the campaign contributions in the 2000 elections as well because the budget for the contracts awarded over the post-event period are requested between September 2001 and December 2001, which falls after the 2000 elections but before the 2002 elections. The results are comparable under both approaches.

[15] We consider direct and indirect connections together due to limited data to examine each separately.

Descriptive Statistics

Table 1, Panel A reports the descriptive statistics for our sample period, which runs from October 1, 2000 to August 31, 2003, excluding the confounding event period September 2001–September 2002.[16] In our sample, there are 2,746 observations (1,373 firms) where the firm was awarded defense contracts.[17] The average amount obtained in contracts is almost $40 million.

A vast majority of firms in our sample do not have political connections – a consideration we discuss further in the empirical analysis. Starting with lobbying activities, 11% of firms getting defense contracts are involved in lobbying activities.[18] For campaign contributions, this figure is somewhat lower at 9%. A similar picture emerges in dollar amounts: lobbying expenses are considerably larger than campaign contributions. When it comes to board connections, around 7% of the firms has a board member that has an employment history with the Pentagon or the U.S. Armed Forces or that has served with other directors that worked in these institutions. The majority of these cases involve a connection to the U.S. Armed Forces rather than the Pentagon, with connections to the latter indicated for 1% of the firms.

B. Methodology

We use a panel difference-in-difference (DiD) model. Specifically, we compare the contracts obtained by politically connected firms with those obtained by unconnected firms after the September 11 attacks, which increased the availability of defense contracts.[19] In this setup, we expect to observe a significant relation between political connections and the amount obtained in contracts after the event. Formally, the DiD specification is:

$$Contract_{it} = \alpha + \beta_1 Connection_{it} + \beta_2 Connection_{it} * Postevent_t + n_i + y_t + \varepsilon_{it} \qquad (1)$$

[16] We end the sample period in August rather than in September (the end of the fiscal year) so as to have pre-event and post-event periods of the same length, given that the event happens in September 2001.

[17] As the estimation is based on firm fixed effects over two event windows, firms that obtain contracts in only one of the periods drop out due to the specification. We do not re-introduce the firms that drop out back to the specification by setting these contract amounts to zero since our sample design excludes all contracts that are less than $100,000. That said, we confirm the robustness of our baseline findings to including firms that receive zero dollars in contracts in any one of the periods. The results are available from the authors upon request.

[18] These are in line with statistics reported elsewhere. See, for instance, Igan, Mishra, and Tressel (2012), who report that around 11% of the observations in their area-lender-year level dataset are associated with lenders that lobby.

[19] Although there may be some spillover effects of this shock to other federal agencies, our placebo exercise based on nondefense contractors indicate the findings are particular to the defense contractors.

where *Contract* is the natural logarithm of total federal defense procurement contract amounts during time *t*; *Connection* is a political connection variable—lobbying, campaign contributions, or board connections, depending on the specification—; *Postevent* is an indicator variable that takes the value of one for the contracts awarded following September 11 attacks and is zero otherwise; n is firm fixed effects and y is time fixed effects. The sample period consists of October 2000–August 2001 as the pre-event period and October 2002–August 2003 as the post-event period. In this specification, the time fixed effect essentially is the *Postevent* indicator. Robust standard errors are clustered at the firm level.

In the next section, we start presenting the empirical findings from our analysis first based on visual inspection of the data. These inspections also confirm that the condition for the validity of DiD analysis is met: namely, there are parallel trends between connected and not-connected defense contractors in the earlier periods, whereas the unexpected defense spending shock has a more prominent effect on the connected defense contractors after the event. We then move on to the regression results.

III. Federal Contracts and Political Connections

Figure 1 shows defense procurement contracts along our event timeline. Total dollar amount of these contracts increased from $170 billion in fiscal year 2002 to $212 billion in fiscal year 2003. This corresponds to a change of 25% in total defense procurement funding within a year and is also reflected in a 16-percent increase in defense discretionary spending authorization—the sharpest jump observed since the Reagan-era military buildup. Also the portion of total procurement funding allocated to defense contracts increased from 65% in fiscal years 2001 and 2002 to 67% in fiscal year 2003. A noteworthy observation is that the defense share was stable between 2000 and 2002, implying that defense and nondefense spending grew at similar rates. Indeed, looking at the growth in defense and nondefense discretionary spending before the event, we can confirm that they evolved similarly until 2003. After the event, nondefense spending continued to grow, but at a smaller rate than defense spending. So, there was no obvious reallocation of resources from nondefense to defense. Overall, Figure 1 shows that federal funding allocated to defense contracts increased sharply, consistent with the unexpected shock, and such an effect is not observed for nondefense spending.

We then look at mean difference tests for the natural logarithm of the amount of defense contracts obtained by corporations between post-event and pre-event periods (Panel B of Table 1). Recall that the post-event period corresponds to fiscal year 2003 and the pre-event period corresponds to fiscal year 2001. Panel B shows that the average amount of defense contracts obtained by a firm is significantly larger after the event. Notably, political connections do not change much between the pre-event and post-event periods. These results again indicate that defense contracts experienced a shock but not political connections—a crucial assumption in our empirical strategy.

A. Lobbying, Campaign Contributions, and Board Connections

We examine the relation between political connections and federal contracts, by separately examining lobbying activities, campaign contributions, and board connections, as well as by considering all political connections together. The results are in Table 2.

A1. Lobbying

Figure 2 provides a visual depiction of the relation between lobbying and federal contracts. Average lobbying spending has similar patterns pre-event and post-event for firms obtaining defense contracts. Also, the trends on contract amounts of defense firms that lobby and those that do not lobby are similar before the event, but there is a clear increase in the average contract amount for defense firms that lobby.[20] We observe only a muted version of such a relation for firms that do not lobby.

Next, we carry out DiD estimations in a panel data setting, as represented by equation (1). Table 2, Panel A shows the results when the variable of interest is lobbying, and the empirical model is with and without the interaction term as well as with and without fixed effects. The results are consistent with the takeways from the mean tests and visual inspections. Firms that lobby receive significantly larger amounts in defense contracts following the unexpected shock that increased defense funding. We observe this finding both with and without fixed effects.[21]

The relationship between lobbying and defense contracts received after the event is economically significant. Based on the coefficients in Table 2, Panel A, Column 4, lobbying brings

[20] Lobbying data are available starting only in 1999. We assume that firms that were lobbying in 1999 are the ones that were also lobbying in 1997 and 1998. We maintain this assumption for campaign contributions and board connections as well.

[21] The political connection indicator itself is not statistically significant when fixed effects are included. This is consistent with the notion that fixed effects capture time-invariant firm characteristics which could at least in part determine political connections.

in 47% more in defense contracts after the event compared to the 11% increase observed for defense firms that do not lobby. For the typical defense firm that gets the median value of $1.9 million in contracts before the event, this translates into $215,000 more if the firm did not lobby and into almost $880,000 more in revenues if the firm had lobbying activities. The difference of around $660,000 is a sizeable return: even at the maximum level of lobbying expenditure observed in our sample ($13.5 million), it implies a return of 5%.[22] As defense contracts constitute around 45% of federal discretionary spending, corresponding to around 3.5% of GDP, these results are useful in putting a dollar amount on the value of lobbying for a sizeable segment of the economy.

A2. Campaign Contributions

Contributions to election campaigns constitute an alternative channel for establishing political connections. PAC contributions to winning candidates, in particular, can help companies get favorable treatment following elections.

As in lobbying, we first look at whether campaign contributions differ in the post-event period compared to the pre-event period. In Figure 2, we see that there is a slight increase following the event in the amount of campaign contributions, which is not statistically significant as presented in Table 1, Panel B mean difference tests. Figure 2 also shows that contract amounts of defense firms that contribute to election campaigns have trends similar to those that do not contribute to campaigns before the event, whereas an increase in the contract amounts is observed primarily for defense firms that contribute to campaigns following the unexpected increase in defense spending.

When we turn to the DiD estimations, the results in Table 2, Panel B indicate that defense firms that contribute to campaigns get relatively larger amounts in defense contracts after the event. The economic value in terms of additional contracts obtained by a firm that contributes to election campaigns is comparable in magnitude to that secured by a firm that lobbies. The results in Table 2, Panel B, Column 4 suggest that, contributing to campaigns brings in 40% more in defense contracts after the event compared to the 12% increase observed for other defense firms. This difference

[22] This seemingly high rate of return is actually well below those reported in the literature under other contexts (Meyer-Alexander, Mazza, and Scholz, 2009). High estimated rates of return open the question of why firms do not spend even more in political activities – raised early on by, for example, Tullock (1997). Our setup does not lend itself to examining this question but rather describes an equilibrium in which firms sorted into establishing political connections or not.

corresponds to roughly half a million dollars between a firm that contributes to campaigns and a firm that does not.[23]

A3. Board Connections

We next explore the board connections of defense contractors to the Pentagon or to the Armed Forces by way of previous employment or by way of having served in other boards with directors that worked in these institutions in the past.

As before, we start with the visual inspection and then move on to the regression results. Figure 3 shows that there is a slight increase in board connections to the Armed Forces but those to the Pentagon are relatively stable. Amounts obtained in defense contracts are mostly comparable before the event period between connected and not connected firms. There is a substantial increase in defense contracts following the unexpected shock for the firms with board connections to the Pentagon, while there is not a similar increase for those connected to Armed Forces or for those without any board connections to defense institutions.

The results of the DiD estimations are in Table 2, Panel C. Firms with board connections to the Pentagon benefit from increased defense funding after the unexpected shock. Board members in our sample include several undersecretaries of Defense for Acquisition, Technology and Logistics and assistant secretaries of Defense for Research and Engineering as well as positions on the Defense Science Board where they work together with the undersecretaries and other high-ranking officials in the Pentagon. These connections are potentially helpful in providing the connected firms with access to major decision-makers in defense procurement contracts.[24]

Based on the coefficients in Table 2, Panel C, Column 8, connected firms receive 55% more in contracts after the event while firms without board connections to the Pentagon see a 14-percent

[23] These findings suggest that, given the much smaller amounts spent on campaign contributions relative to lobbying expenditures, the return on campaign contributions in terms of securing a share of the increased pie is even greater than that on lobbying activities. A firm that contributes the maximum amount of $1.6 million will benefit from a return of 32% on this investment. This should be taken with a grain of salt, however, because there are caps on how much donors can contribute to PACs. Note that our sample period ends before the landmark Supreme Court decision dated January 21, 2010 on Citizens United v. Federal Election Commission. The decision removed restrictions on independent expenditures for political campaigns by corporations, leading to creation of super PACs and expansion of contributions coming from undisclosed donors.

[24] We also consider seperately the effects for connections to U.S. Armed Forces and do not find any significant effect, possibly because this type of connection is more common and does not provide a direct connection to the decision-makers. These statistically insignificant results are not included in the table for the sake of brevity, and are available upon request.

increase. For the pre-event median contract amount, this means that the typical connected firm gets $767,000 more than the typical firm without such connections.

A4. Overall Political Connections

Finally, we consider all political connections together. In this specification, we construct an indicator variable that takes a value of one if a firm has any political connection—lobbying activities, campaign contributions, or board connections.

The results are in Table 2, Panel D. The evidence is in line with that obtained by considering these relations separately. Politically connected defense firms experience an increase in the amount of contracts after the event, considerably more so than unconnected firms do.

A5. Amount of Political Spending

Our analysis primarily focuses on political connections as reflected in indicator variables that distinguish between firms that are politically connected and those that are not. A natural follow-up question is whether the *amount* spent on political activities such as lobbying and campaign contributions matters.

Table 2, Panel E presents the results when (the natural logarithm of) dollar amount spent on lobbying or campaign contributions is used as the variable of interest rather than an indicator. In estimations with all firms including those with zero spending on political activities, we find a positive and statistically significant coefficient on the interaction term with the post-event indicator (Column 2 for lobbying and Column 6 for campaign contributions). When we examine the results conditional on a firm's spending on political activities being positive, we continue to observe positive coefficients on political connections (Column 4 for lobbying and Column 8 for campaign contributions). But, given that a vast majority of firms in our sample do not lobby or contribute to campaigns, these conditional estimations have a much smaller sample size than the unconditional ones. The reduced power from the smaller sample makes the crucial coefficients indistinguishable from zero. Furthermore, they cannot be distinguished statistically from their counterparts in Columns 2 and 6.[25] On the overall, these analyses establish a relation between political connections and federal contracts, but they do not allow a precise estimation or interpretation of the marginal effect of lobbying or campaign contribution amount on the size of federal contracts obtained.

[25] Wald Chi-square tests fail to reject the equality of the coefficients in Columns 2 and 4, and those in Columns 6 and 8.

B. Connections or Merits? Evidence Using Firm and Contract Characteristics

Certain firm characteristics that shape the decision to build political connections may also relate to the ability to meet Pentagon's war-related needs. For instance, larger firms, firms that are able to execute larger contracts, or firms with more flexible operating capacity may find it easier to expand production quickly in response to an increase in defense efforts. The same firms may be better connected as they have the resources to hire better or more lobbyists or attract influential former Pentagon employees as board members. In other words, during a rapid expansion of defense spending, firms obtaining larger defense contracts may be those that can scale up their operations. If these firms are also the ones that are politically connected, it is possible that they receive larger contracts not necessarily due to political connections but due to their ability to expand faster. Thus, the relation we document may be driven by a latent variable that is in some way not captured by firm fixed effects.

To address this issue, we explore firm and contract characteristics in relation to political connections. Specifically, we divide our sample at the median across several firm and contract characteristics, and compare the results obtained in below- and above-median subsamples. The results are presented in Table 3.

We carry out the following exercises: (i) differentiate based on contract size by utilizing contracts obtained at the beginning of our sample period, so as to take into account the ability to execute large contracts to support defense efforts (Column 1);[26] (ii) consider potential scrutiny over contracts based on the number of bids received for a given contract (Column 2);[27] and (iii) look at geographic proximity to Pentagon using geodesic distance to Washington, DC (Column 3).[28] We further match our dataset with COMPUSTAT to differentiate on: (i) firm size to consider larger firms' ability to respond to Pentagon's war-related needs (Column 4); and on (ii) firm operating performance to examine the ability to more effectively respond to Pentagon's war efforts (Columns 5–6). For operating performance, we use return on assets (ROA) and industry-adjusted ROA (Ind Adj ROA).

[26] Karpoff, Lee, and Vendrzyk (1999) provide evidence that contract size affects how firms are treated in relation to fraud and penalties.

[27] The intuition is that competitive contracts receiving a larger number of bids would be more likely to be scrutinized.

[28] Median contract size (in natural logarithm) at the beginning of our sample period is 14.45, median number of bids received for a contract is 3, varying between 1 and 51 in the 1st and 99th percentiles, and median geodesic distance to Washington, DC is 608. Observations are split into two subsamples based on these median values.

We consider industry-adjusted operating performance variable to differentiate firm driven performance from overall sector performance.[29]

There is a considerable difference between below- and above-median subsamples of firm and contract characteristics when examining the relation of contracts to lobbying (Table 3, Panel A). Firms that obtain smaller contracts before the event (Column 1), those that are under less scrutiny based on the bids received for a given federal contract (Column 2), firms that are in closer proximity to DC (Column 3), smaller firms (Column 4), and firms with inferior operating performance (Columns 5–6) show strong relation of lobbying with federal contracts obtained after the shock. These results are not significant in the above-median subsample, except for the marginally significant case of contract amount, for which the coefficient is three times larger in the below-median subsample.[30]

These findings suggest that contracts received by firms that lobby are unlikely to be a reflection of their superior ability to support the war effort. On the contrary, firms with less capacity as captured by their smaller size or inferior operating performance obtain larger federal contracts following the surge in defense spending if they are lobbying. In a similar vein, firms that are under less scrutiny in contract awards as well as those in closer proximity to the Pentagon headquarters get more contracts in relation to their lobbying activities. The evidence does not give much support to a merit-based awarding mechanism in the sense that those firms that are less suited for the war effort benefit more from lobbying in obtaining federal contracts.

The findings with campaign contributions reported in Table 3, Panel B show a similar pattern. In the below-median subsamples, there is a strong relation between campaign contributions and contracts obtained after the shock in all firm and contract characteristics considered except distance to Washington, DC. For the above-median samples, such patterns do not exist except for initial contract amounts and the marginal case of distance to DC. While weaker than the results for lobbying, these results are broadly in line with firms with less ability to support war efforts obtaining larger federal contracts after the event with contributions to political campaigns.

[29] Firm size is measured as the natural logarithm of total assets, ROA is net income scaled by the beginning-of-period total assets. Industry-adjusted ROA is calculated by subtracting industry ROA measured at the 2-digit SIC code level from firm ROA. Median firm size is 7.8, median ROA and Ind Adj ROA are 0.04 and 0.3, respectively.

[30] We also examine the subsamples where both contract amounts and number of bids received are above/below the sample median. The results are consistent with those reported in Table 3: there is a strong relation between contracts and political connections primarily in the below-median subsample. Note also that, in Column 2, no-bid contracts are not included but doing so gives comparable results.

Table 3, Panel C reports the results with board connections. Firms with board connections that were receiving larger contracts in earlier periods were awarded larger contracts after the event. This result is statistically significant at marginal levels, however, and fails to provide robust support for firms receiving defense contracts due to their ability to assist war efforts.

Finally, we include all political connections, where, for a firm that has been involved in any political activism, the indicator variable for political connections takes the value of one, and is zero otherwise. The results reported in Table 3, Panel D support the findings for lobbying and campaign contributions. There is robust evidence that firms that are underperforming, firms that were receiving smaller contracts before the event, those that are closer to Washington, DC, and those that are receiving contracts with a smaller number of bids (less scrutiny) benefit from political activism when defense spending goes up.

On the overall, the evidence suggests that political connections play a role in obtaining larger defense contracts after the surge in defense spending, and that contract awards are not driven purely by merit considerations. This could reflect various mechanisms in a framework where the interaction between government and corporations is rather direct (procurement of federal contracts). There could be a *quid pro quo* arrangement between lobbyists or board members and legislators or government agencies that gives connected firms preferential treatment relative to their competitors that do not have connections. Alternatively, lobbyists or board members may use their knowledge of the procurement process to help their clients in preparing bids with a higher chance of being accepted or they may convey private, soft information to the procurement officer that could be relevant to her decision to accept or reject a bid. The balance of evidence in our analysis mostly but not entirely supports the prior rent-seeking mechanism.[31]

[31] As discussed in Grossman and Helpman (2001), Stratmann (2005), and Leech (2010) among others, one argument in the literature posits that politically targeted activities aim to provide access to policymakers. These connections and the associated access may be useful solely in transmitting information or may further help in influencing the outcome of the legislative and/or procurement process. A second argument postulates that politically targeted activities reflect rent seeking and aim to secure economic favors granted to companies by the government ("quid pro quo"). The empirical literature offers support for both arguments: see Bertrand, Bombardini, and Trebbi (2014), Krozsner and Stratman (2005), Blanes-Vidal, Draca, and Fons-Rosen (2012) providing evidence in line with the information or access argument, and Khwaja and Mian (2005), Claessens, Feijen, and Laeven (2008), Cooper, Gulen, and Otchinnikov (2010), Acemoğlu et al. (2014), Akey (2015), Borisov, Goldman, and Gupta (2016), Faccio, Masulis, and McConnell (2006), Mian, Sufi, and Trebbi (2010), Igan, Mishra, and Tressel (2012), Duchin and Sosyura (2012), and Adelino and Dinc (2014) providing evidence in line with the rent-seeking argument.

C. Alternative Specifications and Robustness

In this section, we provide a summary of the additional exercises and robustness checks conducted to further support our baseline findings.

C1. Alternative Specifications

We consider alternative specifications to explore whether with whom political connections are established matter. These results are in Table 4.

We first look at lobbying that is conducted by revolving-door lobbyists. In Panel A of Table 4, we observe that both revolving-door lobbying and the non-revolving-door lobbying is related to larger defense contracts after the surge in defense spending. In Panel B, we find that all revolving-door lobbying types considered are positively related to contracts after the event. When we examine the statistical and economic significance of the coefficients, we observe that the coefficient on non-revolving-door lobbying is comparable to the baseline (0.280 relative to 0.274 in Table 2, Panel A), whereas the coefficient on revolving-door lobbying is 25% larger and significant at the one-percent level. Among the types of revolving doors, the results are much more pronounced for lobbyists that have connections to the chairs of the relevant congressional committees (Budget, Appropriations, Armed Services).

We next consider party affiliations of campaign contributions. Cooper, Gulen, and Otchinnikov (2010) report higher returns in firms that contributed to the political campaigns of Democrats. By contrast, Cox (2021) finds that campaign contributions are slightly more helpful if directed at Republicans. Christensen, Jin, Sridharan, and Wellman (2021) argue that having more balanced campaign contributions to Democrats and Republicans ("political hedging") moderates firm risk. Given the differing views on the value of campaign contributions with respect to party affiliations, we differentiate campaign contributions to Republicans and Democrats in our setting. The results are in Panel C of Table 4. We find that campaign contributions to both Democrats and Republicans have comparable effects on federal contracts. This finding is consistent with the notion that firms may be politically hedging across party lines.

C2. Robustness

To establish the robustness of our findings and further address concerns about various biases, we conduct several empirical exercises. Specifically, we examine whether the results are more general or are driven by major defense contractors, conduct a matching exercise, control for firm-level factors,

perform several placebo tests, and assess whether there is a direct relation between federal contracts and firm characteristics.

First, we run our baseline specification by excluding the top 10 defense contractors during the analysis period. The results are given in Table 5, Column 1. In line with the earlier results, there is a positive and significant effect of lobbying and campaign contributions on the amount of defense contracts obtained after the event. Board connections have a positive albeit insignificant coefficient. These results suggest that our evidence is not driven solely by the companies that are the top receivers of defense contracts, for which reverse causality concerns might be more applicable.

Next, we match firms that lobby with those that do not have any lobbying activities using the natural logarithm of total contracts they obtained during the period October 1999–September 2000, the fiscal year preceeding our sample period. The idea here is to use the beginning-of-period total contracts as a sufficient statistic of firm characteristics that determine the contract amounts a firm receives through federal procurement in the near future. We match 155 contractors that lobby with 321 contractors without any lobbying activities by employing nearest-neighbour matching with replacement, where at most three matched firms are considered for each treated observation.[32] The results are in Table 5, Column 2. The findings are stronger in the matched sample, as we get larger coefficients that are significant at higher levels.

As an alternative robustness test, we match our sample with COMPUSTAT to control for time-varying firm characteristics that have been shown to drive political activism (Kerr et al., 2014). For this subset of 186 publicly-traded firms, we control for firm size (measured as the natural logarithm of sales), industry concentration (measured as the Herfindahl index based on sales in an industry determined at the 3-digit SIC code level), R&D expenditures scaled by total assets, and growth opportunities (calculated as the book value of assets plus market value of equity minus book value of equity scaled by book value of assets). Controlling for these firm-level time-varying factors alleviate the concern that lobbying is capturing omitted variables that is driving the amount of contracts obtained from the government. The results in Table 5, Column 3 show that firms that lobby obtain larger contracts from the Pentagon after the event.[33] The coefficients for firms that contribute

[32] We drop one company for which the beginning-of-period amount of federal contracts are at the top of the distribution and, therefore, the firm does not have a close enough matching candidate.

[33] For the sake of brevity, we do not report the coefficients on firm-level controls in the table, which are available upon request.

to campaigns and those with a board connection to the Pentagon are positive but not statistically significant at conventional levels.

To further mitigate the possibility of a latent factor affecting our findings, for the subset of firms with firm-level time-varying controls, we match politically active firms with those that are not politically active based on firm size, industry (based on 2-digit SIC code), and the amount of contracts obtained in the pre-event period. We end up matching 62 firms that lobby with 73 firms that do not. For this subset of firms, we also control for the aforamentioned firm-level time-varying variables that are known to be correlated with lobbying. As presented in Table 5, Column 4, these results are again stronger than those in the unmatched sample and indicate that firms that lobby and those that contribute to campaigns obtain significantly larger defense contracts after the unexpected event that increased defense spending.

Another possibility is that patterns similar to those we document are regularly observed in the data. To rule this out, we run several placebo tests. First, we consider a placebo sample period running from October 2004 to September 2007. This period is conveniently sandwiched between the war in Iraq that started in March 2003 and the resurgency in Afghanistan and the Obama Administration's recommitment to the military effort in this country in February 2009 (with major escalation of the U.S. mission following in December 2009). So, there was no major, unexpected event that affected defense funding. The results reported in Table 5, Column 5 do not support a statistically significant and robust relationship between political connections and defense contracts during this period.

We then run these estimations for the top and bottom quartile of the sample based on contracts obtained in the fiscal year preceeding our sample period (October 1999–September 2000). This exercise allows us to consider potential nonlinearities between contracts and political connections within the placebo period. The results in Table 5, Columns 6 and 7 do not indicate any strong significant relation in either the top or the bottom quartile of the sample. Thus, both firms that obtained small contracts and those that had large contracts show no robust effect of political connections on federal government contracts in a placebo shock period.

Finally, we estimate the relation between contracts and political connection variables for nondefense contracts.[34] As nondefense contracts are not affected from an increase in spending, there

[34] For nondefense contracts, we use the contracts given by the departments of Agriculture, Commerce, Education, Environment, Health, Interior, Justice, and Labor as well as the Agency for International Development, General Services Administration, and the NASA. We do not have board connections for this set of firms, as board connections in our setting

(continued…)

should not be a change in contract amounts in relation to political connections. The results presented in Table 5, Column 8 support this notion as there is no significant effect of political connections on nondefense contracts after the increase in defense spending.[35]

To further alleviate concerns that the findings between political connections and defense contracts are driven by latent factors correlated with political connections, we explore the relation between the variables that proxy firms' capabilities to expand defense spending and federal contracts. Specifically, we consider the relation of defense contracts with the beginning-of-sample-period contract amounts, firm size, and operating performance measured by ROA and Industry-adjusted ROA. The results in Table 5, Panel B do not show any significant relation of these firm characteristics with defense contracts. This gives us additional confidence that the positive relation between political connections and defense contracts observed after the surge in defense spending is not driven by the potential capability of such firms to expand operations to support war efforts.

IV. CONCLUSION

There is an ongoing debate on the value of political connections. We explore this question in the context of an unexpected shock to federal procurement contracts—an important source of revenue for a diverse set of firms in the economy.

We find that, following the September 11 attacks and the subsequent war in Afghanistan that unexpectedly increased defense spending, firms that lobby, those that contribute to election campaigns, and firms with board connections to the government received substantially more in federal procurement contracts granted by the Pentagon. These findings add to the recently growing literature by showing that political connections are valueable for corporations with direct ties to the government as federal contractors in the sense that these firms are awarded more in contracts when available funds increase.

We further show that the increase in the amount of defense contracts obtained is not driven by merit-based factors that indicate an ability to expand operations quickly to support defense efforts.

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are determined for the defense sector, mainly based on board directors that have been employed in the Pentagon or in the U.S. Armed Forces.

[35] The coefficients for the non-defense sample, although not significant, are close in magnitude to those in the baseline with the opposite sign. This is unlikely to reflect a shift of budget priorities and reallocation of resources as total nondefense spending continues to increase in the post-event period (see Figure 1).

The findings are more in line with a rent-seeking argument although the role of information sharing through political connections cannot be entirely ruled out.

Overall, the evidence shows an equilibrium where firms that sorted themselves to be politically connected generate higher revenues through federal contracts during an unexpected surge of federal spending. The data, however, do not allow the analysis to establish a causal link for the marginal effect of political connections on federal contract amounts.

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Appendix. Background on the Defense Procurement Process

The federal budget process in the United States has three fundamental phases: formulation, subsequent actions by Congress and the President to provide a legally-executable budget, and actual execution. These phases take place in a continuum in the sense that all three happen concurrently but for different fiscal years. Specifically, while the last approved budget is being executed (phase 3), the next budget is undergoing review and approval in Congress (phase 2) and the budget after that one to be submitted to Congress is being formulated within the departments and agencies.

Overall, the process has a lead time of at least 9 months before formal submission to Congress and 18 months before the fiscal year begins on October 1. This means that most agencies submit budget requests to the Office of Management and Budget (OMB) in the fall, starting the formulation phase. After a review of details and resolution of issues, the President's budget is finalized by end-December and transmitted to Congress in early February. The second phase consisting of hearings, committee reports, reconciliation by conference committees, floor votes, appropriate bills, more floor votes, and signature or veto by the President generally extends into end-June. Actual execution begins in October, with room for continuing resolutions if not all appropriations bills are yet signed.

The Department of Defense (DoD) budget falls under the discretionary spending portion and is subject to annual budget authority by Congress. In other words, these expenditures are authorized under appropriations bills that need to be reenacted annually.[36] The DoD budget submitted for inclusion in the President's Budget is a product of its Planning, Programming and Budgeting System (PPBS).

Appropriations for the DoD are covered by two separate bills: The Military Construction Appropriations Bill, which addresses Military Construction and Family Housing, and the Department of Defense Appropriations Bill for all other DoD operations. These bills incorporate several individual appropriations covering procurement in addition to military personnel, operation and maintenance, RDT&E (Research, Development, Test and Evaluation). Congress relies on reports by three committees when deciding on the appropriations: Budget committees and Appropriations committees. Before funds can be obligated, OMB must apportion the funds to DoD and Treasury warrants must be issued.

Our analysis focuses on the procurement portion of federal spending. In the basic federal procurement process, acquisition personnel first determine the goods and services their agency needs and then post a solicitation on the Federal Business Opportunities (FedBizOpps) website. Interested companies prepare their offers in response to the solicitation, and, in accordance with applicable provisions of the Federal Acquisition Regulation (FAR), agency personnel evaluate the offers. To be eligible to compete for government contracts, a company must obtain a Data Universal Numbering System (DUNS) number and register with the federal government's System

[36] By contrast, expenditures under "direct" or "mandatory" spending are funded by permanent low and, hence, are not controlled through separate appropriations actions for the year. Large entitlement programs such as Social Security and Medicare and the interest on public debt fall under this portion of the budget.

for Award Management (SAM).[37] Several agencies, such as the General Services Administration (GSA), provide assistance and services to existing and potential government contractors. Research and development (R&D) procurement opportunities may involve traditional contracting methods, such as solicitations and contracts, as well as nontraditional methods, which include agency-sponsored contests and venture capital funds.

Among all procurement activities, those by DoD are by far the largest. All DoD purchases typically begin at one of three points: sole source procurement, procurement under an existing Multiple Award Contract (MAC), normal procurement. Sole source procurements are made when there is only one company that can fulfill the contract and are rare. Procurements under an existing MAC involve companies first obtaining a MAC and then compete for task orders.[38,39] Only those companies with a MAC can compete for the task orders, limiting the number of competitors and hence the value of having a MAC.

[37] Another type of procurement opportunity for a company is to serve as a subcontractor for a government contractor.

[38] MACs are increasingly popular, especially to meet IT needs. Examples of MAC include General Services Administration (GSA) schedules, Navy Seaport-e (an electronic platform for acquiring support services for the Navy Systems Commands, the Office of Naval Research, the Marine Corps, and the Defense Threat Reduction Agency (DTRA) in 22 functional areas including Engineering, Financial Management, and Program Management), Air Force NETCENTS II, and Broad Agency Announcements (BAAs). For instance, BAAs are solicitations issued by an agency when it seeks basic research work. Topics of interest are presented and companies and universities submit proposals with possible solutions needing funding.

[39] "Task order" contracts are used to acquire supplies and/or services when the exact times and/or exact quantities of future deliveries are not known at the time of contract award. Task order contracts permit government stocks of specific items to be maintained at minimum levels and allow direct shipments to the users of products or services. They also permit great flexibility in both quantities and delivery scheduling and the ability of buyers to order supplies and services only after specific requirements for them materialize. Perhaps most significantly, task order contracts limit the government's obligation to the minimum quantity specified in the contract. Task order contracts are used by buyers who cannot predetermine the precise quantities of supplies or services they will require during the contract period when it is inadvisable for them to commit to any more than a minimum quantity. Using an "indefinite delivery, indefinite quantity (IDIQ)" vehicle, buyers place orders for individual requirements, and quantity limits may be stated as number of units or as dollar values. The contract must require the buyer to order and the contractor to furnish at least a stated minimum quantity of supplies or services. A task order contract must specify the period of performance, including the number of option periods, and must specify the total minimum and maximum quantity of supplies or services the government will acquire under the contract.

Table 1. Descriptive Statistics

The table reports descriptive statistics for the sample period October 1, 2000–September 30, 2003, excluding September 2001–September 2002, and mean difference tests across main variables. Total amount of federal procurement contracts is given in million dollars as well as in natural logarithm. Lobbying expenditures and campaign contributions correspond to lagged lobbying amount and lagged campaign contribution amount, respectively. An indicator for lobbying, campaign contributions, and board connections takes the value of one for companies that are involved in the activity in question. The sample encompasses the firms that receive federal procurement contracts awarded by the Department of Defense.

Panel A. Descriptive Statistics

	Mean	Std.Dev	Min	25th Percentile	Median	75th Percentile	Max
Contracts (in million dollars)	39.5	284.0	0.1	0.5	2.0	9.6	6,800
Contracts (in log)	14.73	2.04	11.51	13.13	14.51	16.08	22.64
Lobbying (in thousand dollars)	95.0	618.2	0.0	0.0	0.0	0.0	13,500
Lobbying (in log)	1.37	3.94	0.00	0.00	0.00	0.00	16.42
Lobbying indicator	0.11	0.31	0.00	0.00	0.00	0.00	1.00
Campaign contributions (in thousand dollars)	6.36	43.84	0.00	0.00	0.00	0.00	1,663
Campaign contributions (in log)	0.85	2.83	0.00	0.00	0.00	0.00	14.32
Campaign contribution indicator	0.09	0.28	0.00	0.00	0.00	0.00	1.00
Board connection indicator	0.07	0.25	0.00	0.00	0.00	0.00	1.00
Board connection indicator: Pentagon	0.01	0.10	0.00	0.00	0.00	0.00	1.00
Board connection indicator: U.S. Armed Forces	0.07	0.25	0.00	0.00	0.00	0.00	1.00
No. of obs.	2,746						

Panel B. Mean Differences - Across Event Timeline

	Pre-Event	Post-Event	Difference (Post – Pre)
Contracts	14.66	14.79	0.14**
Lobbying	1.40	1.35	-0.05
Campaign	0.82	0.98	0.16
Board connection	0.06	0.07	0.01

Table 2. Political Connections and Federal Contracts

The table reports the relation between the amount of federal procurement contracts and lobbying activities (Panel A and Panel E), campaign contributions (Panel B and Panel E), board connections (Panel C), and overall political connections (Panel D) in response to the unexpected event of September 11 attacks and the following Afghan war that increased defense spending. Results are presented for difference-in-difference (DiD) estimations for panel data that consists of defense contracts. Pre-event and post-event periods are October 2000–August 2001 and October 2002–August 2003, respectively. Post-event is an indicator variable that is equal to one for post-event period and is zero otherwise. Post-event period corresponds to the fiscal year when contracts are awarded following the budget submitted by federal agencies between September and December 2001, right following the unexpected events of September 11 and the Afghan war. Lobbying and campaign contributions are reported as indicator variables that takes the value of one for companies that are involved in the political activity in question in Panels A and B, respectively, while the dollar amounts spent on these activities are used in Panel E. Board connections is an indicator variable for connections to Pentagon, Armed Forces, or either. All political connections is an indicator variable for any political connection including lobbying, campaign contributions, and board connections. Firm and year fixed effects are included where indicated. Standard errors are clustered at the firm level and t-statistics are reported in brackets. Significant variables are in bold. ***, ** and * denote significance at 1, 5, and 10 percent levels, respectively.

Panel A. Lobbying

	(1)	(2)	(3)	(4)
Lobbying	**0.869*** **	0.114	**0.742*** **	0.022
	[5.911]	[0.570]	**[4.580]**	[0.106]
Post-event*Lobbying			**0.285** **	**0.274** **
			[2.353]	**[2.261]**
Fixed effects	No	Yes	No	Yes
Observations	2,746	2,746	2,746	2,746
Number of firms	1,373	1,373	1,373	1,373
R-squared	0.039	0.001	0.040	0.014

Panel B. Campaign Contributions

	(1)	(3)	(2)	(4)
Campaign	**1.261*** **	0.318	**1.737*** **	0.101
	[7.044]	[1.304]	**[8.895]**	[0.408]
Post-event*Campaign			**0.423***	**0.222***
			[1.627]	**[1.872]**
Fixed effects	No	Yes	No	Yes
Observations	2,746	2,746	2,746	2,746
Number of firms	1,373	1,373	1,373	1,373
R-squared	0.071	0.001	0.072	0.013

Table 2 - *continued*

Panel C. Board Connections

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Board connection	**1.266*** **	0.115	**1.278*** **	0.085				
	[5.978]	[0.527]	**[5.450]**	[0.341]				
Post-event*Board Connection			-0.021	0.043				
			[-0.149]	[0.306]				
Board connection to Pentagon					**1.385*** **	**0.289***	**1.117** **	0.080
					[3.840]	**[1.692]**	**[2.534]**	[0.388]
Post-event*Board Connection to Pentagon							**0.480***	**0.304***
							[1.917]	**[1.648]**
Fixed effects	No	Yes	No	Yes	No	Yes	No	Yes
Observations	2,746	2,746	2,746	2,746	2,746	2,746	2,746	2,746
Number of firms	1,373	1,373	1,373	1,373	1,373	1,373	1,373	1,373
R-squared	0.061	0.010	0.061	0.011	0.024	0.011	0.025	0.011

Panel D. All Political Connections

	(1)	(2)	(3)	(4)
Political Connection	**1.084*** **	0.145	**0.922*** **	-0.038
	[8.277]	[0.845]	**[6.452]**	[-0.215]
Post-event*Political Connection			**0.296*** **	**0.314*** **
			[3.519]	**[3.781]**
Fixed effects	No	Yes	No	Yes
Observations	2,746	2,746	2,746	2,746
Number of firms	1,373	1,373	1,373	1,373
R-squared	0.081	0.001	0.082	0.009

Table 2 - *concluded*

Panel E. Amount Spent on Lobbying and Campaign Contributions

	All	All	Non-zero	Non-zero	All	All	Non-zero	Non-zero
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lobbying	0.011	0.003	0.148	0.026				
	[0.658]	[0.144]	[0.939]	[0.154]				
Post-event*Lobbying		**0.021****		0.006				
		[2.121]		[0.061]				
Campaign					0.041	0.017	-0.029	-0.091
					[1.638]	[0.685]	[-0.182]	[-0.506]
Post-event*Campaign						**0.022***		0.034
						[1.869]		[0.442]
Conditional on political spending > 0	No	No	Yes	Yes	No	No	Yes	Yes
Observations	2,746	2,746	258	258	2,746	2,746	204	204
Number of firms	1,373	1,373	129	129	1,373	1,373	102	102
R-squared	0.001	0.014	0.006	0.068	0.002	0.013	0.001	0.080

Table 3. Contracts and Political Connections in Relation to Firm and Contract Characteristics

The table reports the relation between the amount of federal procurement contracts and lobbying activities (Panel A), campaign contributions (Panel B), board connections (Panel C), and overall political connections (Panel D) in response to the unexpected event of September 11 attacks and the following Afghan war that increased defense spending by differentiating above and below median samples based on the following firm and contract characteristics: Contract size at the beginning of the sample period (Column 1), number of bids received on a contract (Column 2), geodesic distance to Washington DC (Column 3), firm size measured as natural logarithm of total assets (Column 4), return on assets (ROA) measured as net income scaled by the beginning of period firm size (Column 5), and industry-adjusted ROA (Column 6) which is calculated by subtracting industry ROA from firm ROA, where industry is measured by 2-digit SIC code. Results are presented for difference-in-difference (DiD) estimations using lobbying, campaign contributions, and board and political connection indicators. Pre-event and post-event periods are October 2000–August 2001 and October 2002–August 2003, respectively. Post-event is an indicator variable that is equal to one for post-event period and is zero otherwise. Post-event period corresponds to the fiscal year when contracts are awarded following the budget submitted by federal agencies between September and December 2001, right following the unexpected events of September 11 and the Afghan war. Firm and year fixed effects are included. Standard errors are clustered at the firm level and t-statistics are reported in brackets. Significant variables are in bold. ***, ** and * denote significance at 1, 5, and 10 percent levels, respectively.

Panel A. Lobbying

VARIABLES	(1) Contract Size	(2) No of Bids	(3) Distance to DC	(4) Firm Size	(5) ROA	(6) Ind Adj ROA
Above Median						
Lobbying	0.237	-0.001	0.098	0.058	-0.253	0.392
	[1.117]	[-0.007]	[0.426]	[0.089]	[-0.260]	[0.488]
Post-event*Lobbying	**0.242***	0.221	0.204	0.134	0.108	0.202
	[1.811]	[1.310]	[1.181]	[0.602]	[0.420]	[0.707]
Observations	1,374	1,258	1,376	186	186	186
Number of firms	687	629	688	93	93	93
R-squared	0.041	0.007	0.012	0.048	0.067	0.092
Below Median						
Lobbying	-0.695*	-0.190	-0.067	-0.106	0.174	-0.260
	[-1.867]	[-0.700]	[-0.199]	[-0.205]	[0.370]	[-1.211]
Post-event*Lobbying	**0.778*** **	**0.249***	**0.354****	**1.394*** **	**0.768*** **	**0.705****
	[3.939]	**[1.817]**	**[2.077]**	**[3.043]**	**[2.801]**	**[2.619]**
Observations	1,372	1,414	1,370	184	184	184
Number of firms	686	707	685	92	92	92
R-squared	0.160	0.011	0.017	0.202	0.144	0.114

Table 3 - *continued*

Panel B. Campaign Contributions

VARIABLES	(1) Contract Size	(2) No of Bids	(3) Distance to DC	(4) Firm Size	(5) ROA	(6) Ind Adj ROA
Above Median						
Campaign	-0.213	-0.098	-0.401	-0.400*	-0.906***	-0.202
	[-1.008]	[-0.424]	[-1.360]	[-1.663]	[-3.269]	[-0.517]
Post-event*Campaign	**0.282****	0.194	**0.298***	0.301	0.143	0.038
	[2.480]	[1.158]	**[1.840]**	[1.035]	[0.576]	[0.148]
Observations	1,374	1,258	1,376	186	186	186
Number of firms	687	629	688	93	93	93
R-squared	0.038	0.006	0.014	0.066	0.109	0.077
Below Median						
Campaign	-0.174	-0.568**	0.179	0.049	0.097	-0.485
	[-0.461]	[-2.359]	[0.794]	[0.057]	[0.254]	[-1.493]
Post-event*Campaign	**0.947*****	**0.267***	0.148	**0.806***	**0.627****	**0.748*****
	[3.478]	**[1.782]**	[0.791]	**[1.925]**	**[2.139]**	**[2.779]**
Observations	1,372	1,414	1,370	184	184	184
Number of firms	686	707	685	92	92	92
R-squared	0.158	0.014	0.013	0.118	0.112	0.120

Table 3 - *continued*

Panel C. Board Connections

VARIABLES	(1) Contract Size	(2) No of Bids	(3) Distance to DC	(4) Firm Size	(5) ROA	(6) Ind Adj ROA
Above Median						
Board connection	0.201	0.090	0.100	0.193	0.204	-0.229
	[1.228]	[0.332]	[0.196]	[0.889]	[1.039]	[-0.612]
Post-event*Board connection	**0.288***	0.043	-0.071	0.0552	-0.119	0.0176
	[1.739]	[0.245]	[-0.289]	[0.213]	[-0.393]	[0.050]
Observations	1,374	1,258	1,376	186	186	186
Number of firms	687	629	688	93	93	93
R-squared	0.041	0.005	0.009	0.048	0.067	0.079
Below Median						
Board connection	-0.499	0.094	0.065	-0.287	-0.224	0.210
	[-0.787]	[1.518]	[0.659]	[-0.627]	[-0.596]	[0.732]
Post-event*Board connection	0.249	0.086	0.180	0.002	0.104	0.016
	[0.983]	[0.362]	[1.602]	[0.006]	[0.368]	[0.062]
Observations	1,372	1,414	1,370	184	184	184
Number of firms	686	707	685	92	92	92
R-squared	0.141	0.011	0.013	0.074	0.053	0.041

Table 3 - *concluded*

Panel D. All Political Connections

VARIABLES	(1) Contract Size	(2) No of Bids	(3) Distance to DC	(4) Firm Size	(5) ROA	(6) Ind Adj ROA
	Contract Size	No of Bids	Distance to DC	Firm Size	ROA	Ind Adj ROA
Above Median						
Political Connection	0.074	-0.052	-0.117	-0.268	-0.798**	-0.178
	[0.330]	[-0.281]	[-0.545]	[-0.433]	[-2.203]	[-0.361]
Post-event*Political Connection	**0.267****	0.194	0.178	0.559	0.088	0.031
	[2.505]	[1.476]	[1.287]	[1.595]	[0.312]	[0.112]
Observations	1,374	1,258	1,376	186	186	186
Number of firms	687	629	688	93	93	93
R-squared	0.042	0.007	0.011	0.074	0.105	0.078
Below Median						
Political Connection	-0.322	-0.252	0.182	-0.393	0.333	-0.248
	[-1.192]	[-1.168]	[0.625]	[-1.440]	[0.683]	[-0.659]
Post-event*Political Connection	**0.606*****	**0.229***	**0.242***	0.429	**0.771****	**0.706****
	[3.858]	**[1.864]**	**[1.932]**	[1.237]	**[2.519]**	**[2.418]**
Observations	1,372	1,414	1,370	184	184	184
Number of firms	686	707	685	92	92	92
R-squared	0.157	0.012	0.017	0.089	0.136	0.106

Table 4. Alternative Specifications

The table reports the relation between the amount of federal procurement contracts and revolving lobbying activities (Panels A and B) and campaign contributions considering party affiliations (Panel C) in response to the unexpected event of September 11 attacks and the following Afghan war that increased defense spending. Results are presented for difference-in-difference (DiD) estimations for panel data that consists of defense contracts. Revolving-door lobbyists are those that are connected to the House and Senate Budget, Appropriations, and Armed Services committee members or committee chairs, those that have worked in the National Security Council and those that have been a Congressman in the past. Lobbying that is not revolving door is considered as non-revolving door lobbying. Lobbying is captured by an indicator variable that takes the value of one if at least one of the lobbyists involved is connected based on the definition considered. Campaign contributions are distinguished with an indicator variable that takes the value of one if the recipient of the contributions is a Republican/Democrat. Pre-event and post-event periods are October 2000–August 2001 and October 2002–August 2003, respectively. Post-event is an indicator variable that is equal to one for post-event period and is zero otherwise. Post-event period corresponds to the fiscal year when contracts are awarded following the budget submitted by federal agencies between September and December 2001, right following the unexpected events of September 11 and the Afghan war. Firm and year fixed effects are included. Standard errors are clustered at the firm level and t-statistics are reported in brackets. Significant variables are in bold. ***, ** and * denote significance at 1, 5, and 10 percent levels, respectively.

Panel A. Revolving Door Lobbying - Overall

	(1)	(2)	(3)	(4)
	Revolving		Not Revolving	
Lobbying	-0.083	-0.306	0.123	-0.001
	[-0.508]	[-1.591]	[0.841]	[-0.990]
Post-event*Lobbying		**0.350*** **		**0.280***
		[2.629]		**[1.726]**
Observations	2,746	2,746	2,746	2,746
Number of firms	1,373	1,373	1,373	1,373
R-squared	0.010	0.013	0.011	0.013

Panel B. Revolving Door Lobbying - Details

	(1)	(2)	(3)	(4)
	National Security	Congressman	Committee Member	Committee Chair
Lobbying	0.063	-0.236	-0.262	-0.368
	[0.302]	[-0.971]	[-1.499]	[-0.944]
Post-event*Lobbying	**0.427***	**0.323***	**0.275****	**0.870****
	[1.722]	**[1.850]**	**[2.054]**	**[2.205]**
Observations	2,746	2,746	2,746	2,746
Number of firms	1,373	1,373	1,373	1,373
R-squared	0.011	0.012	0.012	0.011

Panel C. Campaign Contributions by Party Affiliation

	(1)	(2)	(3)	(4)
	Republican		Democrat	
Campaign	0.255	0.101	0.002	-0.159
	[1.059]	[0.408]	[0.011]	[-0.783]
Post-event*Campaign		**0.222***		**0.228***
		[1.872]		**[1.855]**
Observations	2,746	2,746	2,746	2,746
Number of firms	1,373	1,373	1,373	1,373
R-squared	0.011	0.012	0.01	0.012

Table 5. Robustness

The table reports the relation between the amount of federal procurement contracts and lobbying, campaign contributions, and board connections (Panel A) as well as other relevant firm characteristics (Panel B). In Panel A, Columns 1–4, pre-event and post-event periods are October 2000–August 2001 and October 2002–August 2003, respectively. Post-event is an indicator variable that is equal to one for post-event period and is zero otherwise. Post-event period corresponds to the fiscal year when contracts are awarded following the budget submitted by federal agencies between September and December 2001, right following the unexpected events of September 11 and the Afghan war. In Column 1, top 10 contractors based on total amount of defense contracts received are excluded from the sample. In Column 2, 155 firms that lobby are matched with 321 firms without any lobbying activities based on the natural logarithm of total defense contracts they obtained during the period October 1999–September 2000, the fiscal year preceding our sample period. In Column 3, firm-level control variables are included for the subsample for which the data is available. In Column 4, 62 firms that lobby are matched with 73 firms without lobbying activities based on the size and industry in 1999 and total defense contracts they obtained during the period October 1999–September 2000, the fiscal year preceding our sample period. Size is measured as the natural logarithm of sales and industry is 2-digit SIC code. This column also includes firm-level control variables. In Columns 5–7, results are given for a placebo sample period that runs from October 2004 to September 2007, during which there is no unexpected shock to defense spending. The placebo post-event period is October 2006–September 2007. In Column 5, the results are given for all defense contractors, and in Columns 6 and 7, the results are given for the top and bottom quartile of the sample based on the average size of contracts obtained at the beginning of the placebo sample period. In Column 8, results are provided for a placebo sample of nondefense firms for the period October 2000–August 2003. Lobbying expenditures, campaign contributions, and board connections are captured by an indicator variable that takes the value of one if the firm is engaged in any of these political activities. In Panel B, the relation between contracts obtained and certain firm characteristics is estimated. Firm characteristics considered are, the average contract size obtained at the beginning of the sample period, firm size, return on asset (ROA) and industry-adjusted return on asset. Firm and year fixed effects are included. Standard errors are clustered at the firm level and t-statistics are reported in brackets. Significant variables are in bold. ***, ** and * denote significance at 1, 5, and 10 percent levels, respectively.

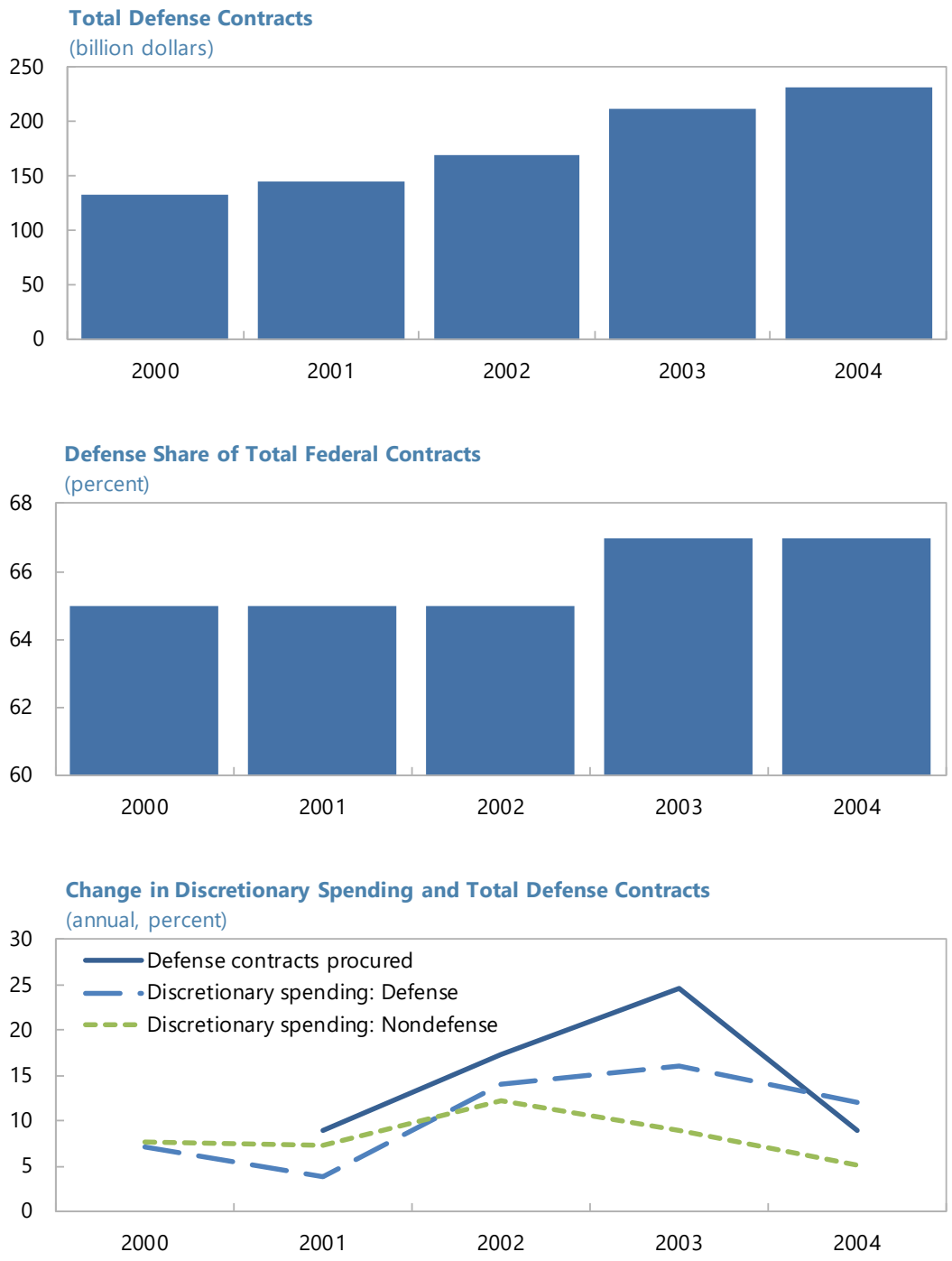
Panel A. Contracts and Political Connections

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Placebo Sample Period (Oct 2004 - Sep 2007)			Placebo - Nondefense Contractors
	Excluding Top 10 Contractors	Matched Sample	Firm Controls	Matched Sample with Firm Controls	All Sample	Top Quartile	Bottom Quartile	
Lobbying								
Lobbying	0.031	-0.138	0.104	-0.108	-0.002	0.135	0.146	1.124
	[0.145]	[-0.591]	[0.231]	[-0.222]	[-0.005]	[0.346]	[1.016]	[1.429]
Post-event*Lobbying	**0.274****	**0.407*****	**0.394****	**0.447****	0.082	-0.109	0.513	-0.357
	[2.224]	**[2.901]**	**[1.992]**	**[2.031]**	[0.440]	[-0.365]	[1.162]	[-1.066]
Observations	2,720	952	372	270	1,274	376	364	1,266
Number of firms	1,360	476	186	135	637	188	182	633
R-squared	0.014	0.022	0.090	0.105	0.052	0.001	0.008	0.009
Campaign Contributions								
Campaign	-0.172	-0.065	-0.272	-0.275	0.222	-1.109	-0.445	-0.591
	[-0.822]	[-0.191]	[-0.996]	[-0.922]	[0.558]	[-0.926]	[-0.202]	[-0.969]
Post-event*Campaign	**0.229***	**0.344****	0.332	**0.448***	0.554	0.288	**1.966***	-0.294
	[1.734]	**[2.262]**	[1.644]	**[1.878]**	[1.527]	[0.196]	**[1.770]**	[-0.767]
Observations	2,720	952	372	270	1,274	376	364	1,266
Number of firms	1,360	476	186	135	637	188	182	633
R-squared	0.012	0.014	0.080	0.103	0.048	0.006	0.025	0.003
Board Connections								
BoardConnection	0.044	-0.098	-0.065	0.185	0.002	-0.279	0.857	
	[0.180]	[-0.326]	[-0.284]	[0.663]	[0.224]	[-0.301]	[0.603]	
Post-event*BoardConnection	0.393	**0.451****	0.141	0.082	0.088	0.252	0.862	
	[1.461]	**[2.309]**	[0.523]	[0.303]	[0.065]	[0.291]	[1.044]	
Observations	2,720	952	372	270	1,274	376	364	
Number of firms	1,360	476	186	135	637	188	182	
R-squared	0.011	0.007	0.068	0.081	0.05	0.001	0.011	

Panel B. Contracts and Firm Characteristics

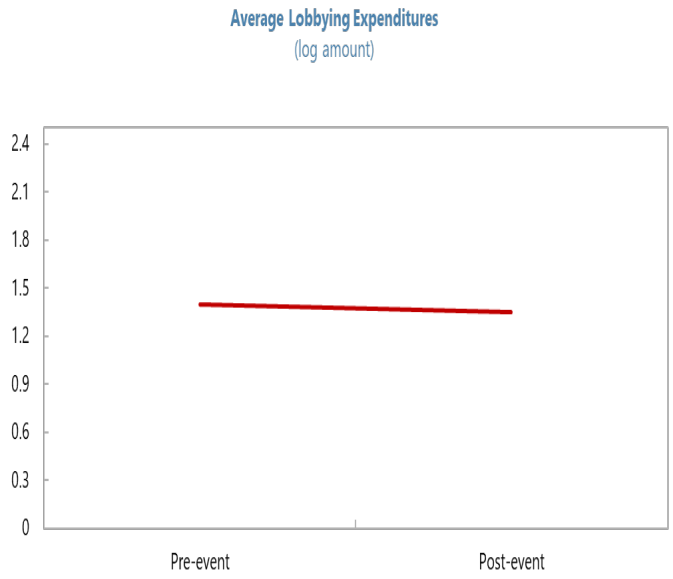
	(1)	(2)	(3)	(4)	(4)
	Contract Size	Firm Size	ROA	ROE	Ind Adj ROA
Variable		-0.152	-0.325	-0.0521	-0.001
		[-0.502]	[-0.574]	[-0.780]	[-0.810]
Variable*Post-Event	-0.007	0.0192	-0.858	-0.124	-1.094
	[-1.512]	[0.382]	[-0.755]	[-1.582]	[-1.058]
Observations	2,746	372	372	372	372
Number of firms	1,373	186	186	186	186
R-squared	0.012	0.052	0.054	0.089	0.054

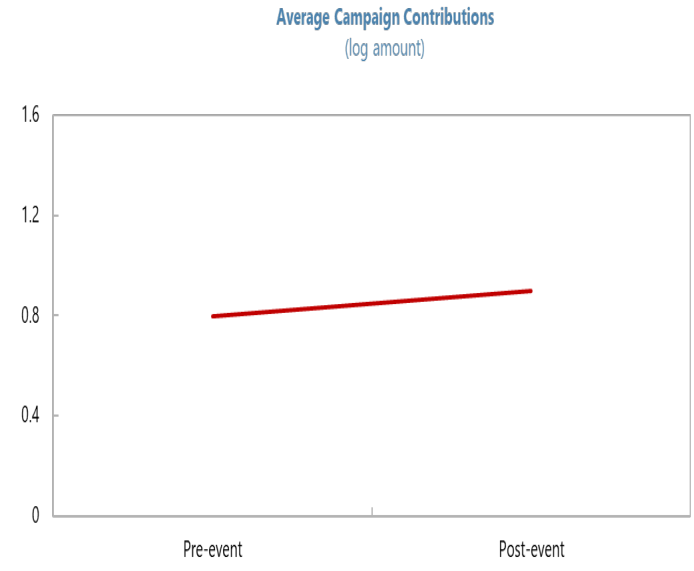
Figure 1. Defense Procurement Contracts

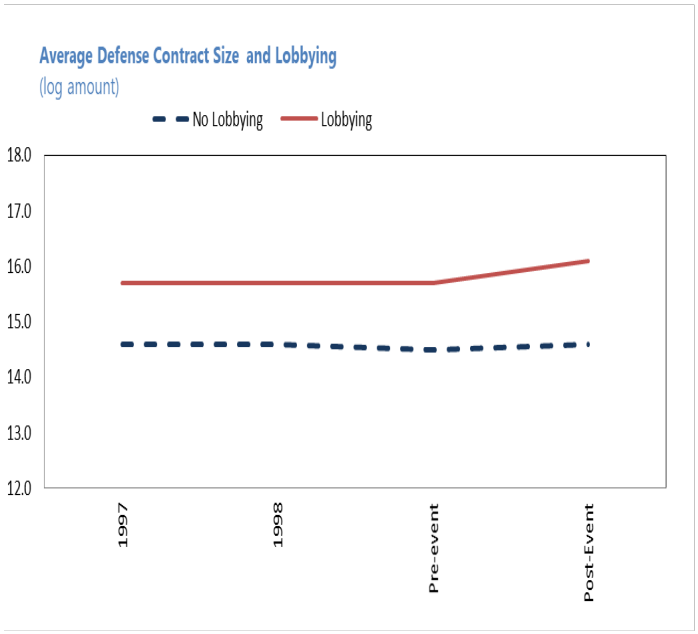


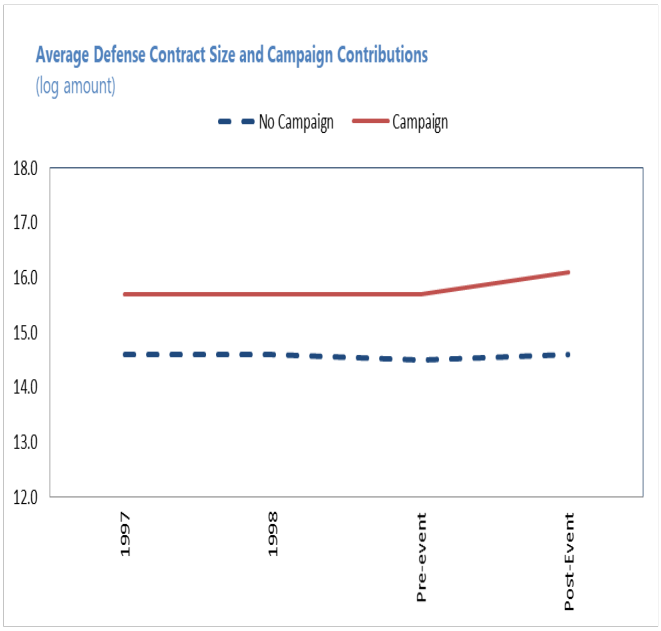
Sources: FPDS, Fedspending.gov, CBO, authors' calculations.

Figure 2. Lobbying, Campaign Contributions, and Federal Contracts



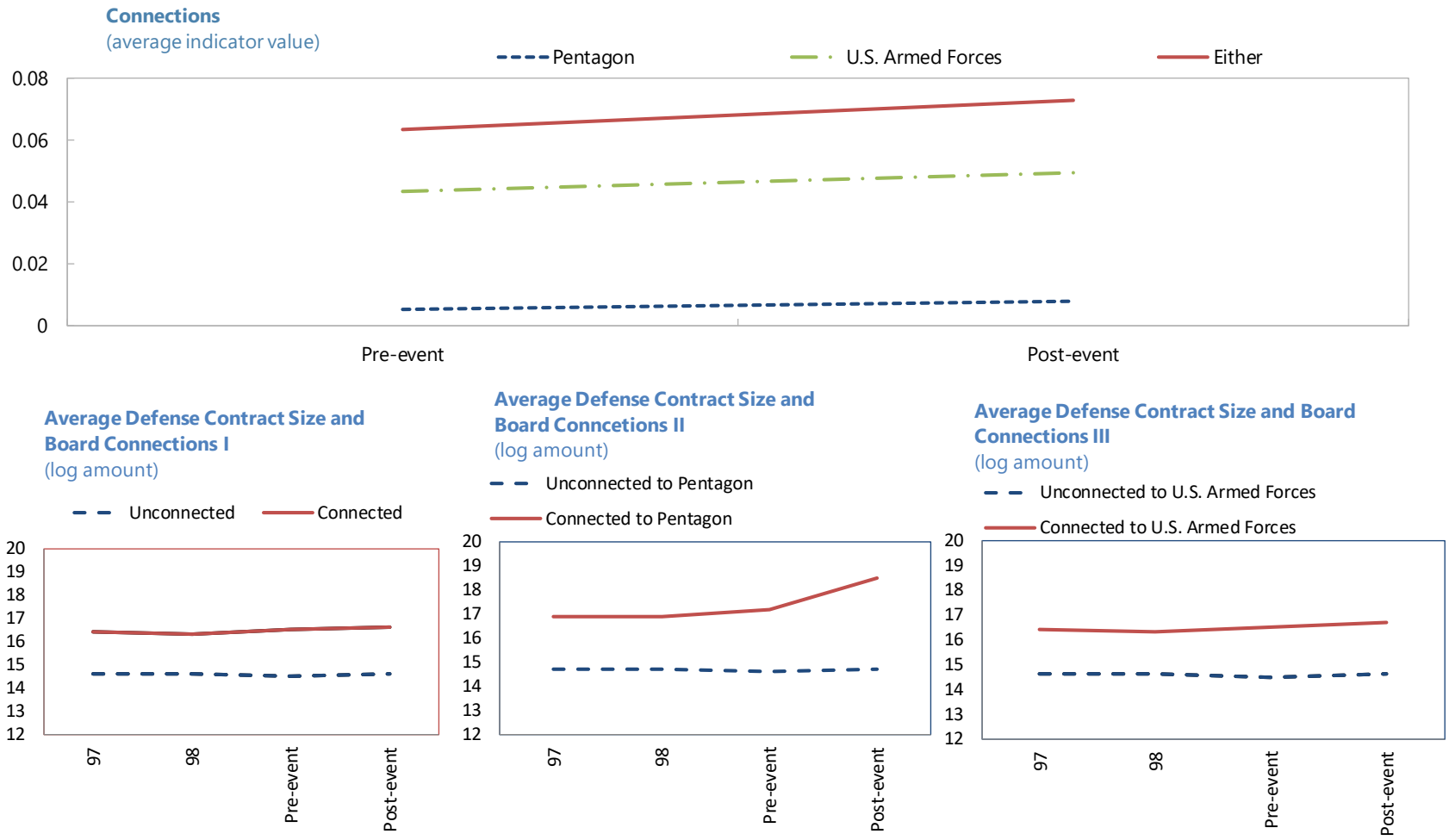






Source: Authors' calculations.

Figure 3. Board Connections and Federal Contracts



Source: Authors' calculations.

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