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## Doing More for Less? New Evidence on Lobbying and Government Contracts

Senay Agca, Deniz Igan, Fuhong Li, and Prachi Mishra

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I N T E R N A T I O N A L M O N E T A R Y F U N D

**IMF Working Paper**

Research Department

**Doing More for Less? New Evidence on Lobbying and Government Contracts**

**Prepared by Senay Agca, Deniz Igan, Fuhong Li, and Prachi Mishra<sup>†</sup>**

Authorized for distribution by Maria Soledad Martinez Peria

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**Abstract**

Why do firms lobby? This paper exploits the unanticipated sequestration of federal budget accounts in March 2013 that reduced the availability of government funds disbursed through procurement contracts to shed light on this question. Following this event, firms with little or no prior exposure to the federal accounts that experienced cuts reduced their lobbying spending. In contrast, firms with a high degree of exposure to the cuts maintained and even increased their lobbying spending. This suggests that, when the same number of contractors competed for a piece of a reduced pie, the more affected firms likely intensified their lobbying efforts to distinguish themselves from the others and improve their chances of procuring a larger share of the smaller overall. These findings are stronger in government-dependent sectors and when there is intense competition. The evidence is more consistent with a rent-seeking explanation for lobbying.

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## I. INTRODUCTION

Why do firms lobby? One common explanation is that they get “returns” on their lobbying “investment.” These returns can take the form of benefits such as particular policies being enacted as tax provisions or revenues from government procurement contracts. The alternative to this quid-pro-quo or rent-seeking view posits that firms lobby to reveal information to policymakers, where informed decision making improves outcomes both for firms that lobby and for society at large.

There are multiple empirical challenges in trying to ascertain whether firms lobby to obtain better outcomes for themselves, potentially at the expense of the general public. The challenges are especially acute when lobbying is directed towards policy decisions and implementation. Policies are rarely tailored to a specific firm and broad policy provisions benefit many firms at the same time, creating a free-rider problem. Government procurement, by contrast, offers a distinctive opportunity to study this question because granting of contracts can be measured at the firm level. Even then, endogeneity remains a serious concern in identifying the effects of lobbying because unobserved characteristics may drive both the decision to lobby and the ability to obtain contracts.

In this paper, we look at a specific episode—namely, sequestration of federal budget accounts in March 2013—that reduced the availability of government funds disbursed through procurement contracts and examine how contractors adjusted their lobbying activities in response. We exploit the fact that the sequester cuts were largely unanticipated and distributed by a predetermined formula to a range of government accounts and some were fully spared.<sup>1, 2</sup> A simple event study of government-dependent firms around the sequestration event substantiates our prior that the event was unanticipated. Figure 1 shows that the cumulative abnormal returns of government-dependent firms declined sharply by 2.3 percent during a 3-day window (from 1 day before to 1 day after) around the event.<sup>3</sup>

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<sup>1</sup> While the spared accounts were somewhat concentrated in healthcare-related spending, the firms receiving contracts spanned a fair number of industries including healthcare, chemicals, telecommunications, and manufacturing among others (see Appendix 3). So, it is unlikely that industry efforts prior to the sequestration had an influence on the formula that determined which accounts would be cut and by how much.

<sup>2</sup> The sequestration went into effect on March 1, 2013 and was largely unexpected, even by industry specialists and insiders. For example, Aerospace Industries Association, who represents defense and aircraft manufacturers, spent one and a half years waging a campaign against sequestration (see “Aerospace Takes Sequester Hit,” by Leigh Munsil, Politico, 3/14/2013). On the day of the sequestration, the Association stated in its press release that “sequestration cuts were never supposed to happen but were intended to hold the discretionary budget as a hostage to ensure a balanced solution to our nation’s fiscal challenges. Well, they’ve shot the hostage and the American people will take the hit. As March begins, sequestration budget cuts that former Defense Secretary Panetta has likened to “shooting ourselves in the head” will go forward, accelerating the real—though hopefully not fatal—damage to our economy and national security” (PR Newswire, March 1, 2013).

<sup>3</sup> Government-dependent firms are defined using a measure of exposure to government spending developed by Belo, Gala, and Li (2013), utilizing National Income and Product Accounts (NIPA). We thank Frederica Belo, Vito Gala, and Jun Li

We exploit the cross-sectional variation across firms and explore whether there was a difference in the lobbying activities of “affected” versus “unaffected” contractors after the cuts came into effect. For instance, defense accounts faced considerable cuts but certain healthcare spending was mostly protected. Did defense contractors lobby more or less aggressively than healthcare contractors following the implementation of the cuts? We use several methods to define a firm’s degree of exposure to the sequester. The simplest measure is an indicator variable that takes a value of 1 if a firm is sequestered, i.e., if it obtained contracts prior to sequestration from federal accounts that were subject to the cuts, and 0 otherwise. We also construct continuous measures of the sequester exposure calculated at the beginning of the sample period, the simplest one defined as the total dollar amount of a firm’s contracts in the sequestered accounts, scaled by the total dollar amount of a firm’s all contracts.

Our identification strategy relies on the assumption that the sequester was an exogenous event that led to a redistribution of government funds across accounts independently of the political activities and other characteristics of the firms that were previously obtaining contracts from these accounts. Hence, any difference between the lobbying activities of affected and unaffected firms we observe after the sequester is less likely to be explained by differences in the observable and unobservable characteristics of firms, and can potentially be attributable to the availability of returns to lobbying investment. Further—and arguably in a more important contribution to the literature—the sequester event provides a unique case where the treatment was predetermined and not based on new information arrival.

Lobbying activities could change following the sequester due to several opposing forces. First, less resources being available to the government for granting contracts (in other words, the shrinking size of the overall pie) would reduce expected future revenues of the contractors, make their budget constraints more binding, and may in turn induce all companies to reduce their lobbying expenditures. Second, as the same number of contractors now compete for a piece of a smaller pie, competition may get intense and encourage firms to spend more on lobbying to distinguish themselves from the others, or to start competing for contracts awarded under the unaffected accounts.<sup>4</sup> The overall effect may be ambiguous if both of these factors coexist.

An additional dynamic that may affect lobbying efforts of both affected and unaffected firms is related to uncertainty about who may be affected by sequestration. While both groups may ex ante ramp up lobbying efforts against government spending cuts, they both may decide to reduce

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for providing us their data. The figure plots government-dependent firms as those with exposure to government spending above 75<sup>th</sup> percentile of the sample. Abnormal returns are calculated using the value-weighted market model.

<sup>4</sup> These opposing forces have been recognized by the lobbyists themselves. See, for instance, a report by The Hill citing an industry insider as “some people will put in more resources in order to win the fight for a shrinking pool of funding. ... in some cases, [sequestration] will hurt K Street because it will lead to companies cut costs” (<http://thehill.com/business-a-lobbying/285813-lobbyists-fighting-sequester-move-into-a-new-phase>). Note that the first of these arguments is also consistent with the view that there are large fixed costs to lobbying and companies feel they cannot withdraw from lobbying for fear of losing out (<https://www.economist.com/news/special-report/21596674-how-companies-try-influence-governments-grey-eminences>).

the high pre-sequester levels of lobbying to “normal” levels after the cuts are implemented.<sup>5,6</sup> What happens to lobbying after the shock ultimately is an empirical question that we explore by comparing affected and unaffected firms.

A crucial assumption in this difference-in-difference setting is that of parallel trends: treated and control groups should exhibit a common trend before the shock. In other words, for the difference-in-difference approach to be valid, the comparison group must accurately represent the change in outcomes that would have been experienced by the treatment group in the absence of the treatment. This pattern is confirmed in the data (Figure 2).

Our findings indicate that after treatment, i.e., the implementation of the sequester, there is a sharp difference in the lobbying behavior of firms with different degrees of exposure to the sequester. While firms with little or no exposure to the cuts reduced their lobbying spending after sequestration came into effect, firms that had a high degree of exposure to spending cuts maintained and even increased their lobbying spending after the event. This finding is robust to alternative specifications, a matching exercise, and a placebo test.

The magnitude of the estimates in our baseline specification suggests that, while firms with low exposure to the sequester (less than 25<sup>th</sup> percentile) cut their lobbying spending by 3.1 percent, those with high exposure (more than 75<sup>th</sup> percentile) increased their lobbying spending by 3.3 percent. This finding is consistent with the notion that firms that were more affected by the sequester increased lobbying activities to improve their chances of getting better outcomes, i.e., to procure a larger share of the reduced size of the pie.

This result is consistent with a rent-seeking motive, whereby lobbying is driven in part by expectations of preferential treatment in the form of more contracts or protection of market share. As the sequester shock was unexpected and based on a predetermined, publicly available formula, and our sample period covers only the quarters before and after the sequestration event, there is little or no private information content for firms to convey.

We provide several pieces of additional evidence that support a rent-seeking interpretation. Using several measures of competition at the industry, firm, and government agency level, we find that the effect of spending cuts on lobbying spending is stronger when competition is more intense. This finding is in line with the notion that lobbying is driven by an intent to obtain a larger share of the pie and, thus, effort increases with competition. Lobbying spending is also

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<sup>5</sup> <https://www.heraldnet.com/news/defense-lobbyists-gird-to-fight-sequestration/>

<sup>6</sup> Alternatively, companies may decide that they do not need to spend as much because public pressure will build up on Congress to undo the sequester as time goes and the general public starts feeling the effects of the cuts, e.g., in the form of travel delays, worker furloughs, etc. (<http://thehill.com/business-a-lobbying/285813-lobbyists-fighting-sequester-move-into-a-new-phase>). At the same time, at least in a brief period after the initial shock, companies may increase lobbying efforts to reverse the cuts ([https://www.huffingtonpost.com/2013/12/10/lobbying-sequestration\\_n\\_4418528.html](https://www.huffingtonpost.com/2013/12/10/lobbying-sequestration_n_4418528.html)).

more pronounced for government-dependent firms. As these firms rely more on government funding, the gains from preferential treatment in government contracts are likely to be higher for them. Further, we find that sequestered firms continue to target government agencies in their lobbying efforts after sequestration whereas non-sequestered firms split their efforts more evenly between government agencies and Congress. This finding may suggest that those who were affected by the cuts focused on lobbying the entities from whom they needed preferential treatment. Additionally, in most industries, lobbying by individual firms relative to industry associations appears to pick up in the post-sequestration period. This can also be interpreted as some, albeit indirect, evidence of a rent-seeking explanation: firms in a given industry may combine forces by lobbying through an association on an issue that is common to them all, which, in our context is calling for sequester not to come into effect. They, however, redirect lobbying efforts after the sequester such that they focus more on making the case for their own individual benefit, that is to procure government contracts. Finally, sequestered firms that lobbied intensively after the sequestration do not perform better after the sequestration compared to those that have not done so. If lobbying is aimed mainly at conveying new information about the capabilities of a firm in relation to the contracts, it is reasonable to think that it adds value to the firm because it helps them obtain business that they can perform more efficiently than others (and perhaps move away from alternatives that are not as good a fit for the firm). The evidence, however, shows that, while the firms that increased lobbying obtained more contracts afterwards, these firms have similar operating performance to those that did not intensify lobbying after sequestration.

Overall, this collective evidence is consistent with a rent-seeking explanation for increased lobbying by sequestered firms during the post-sequestration period. While we cannot rule out that firms may also be conveying some information to decision makers, we can establish with some confidence that there was an element of rent seeking in the motive for lobbying spending.

We contribute to the literature in a number of ways. The exogenous nature of the sequestration event helps us establish the direction of causality, i.e., firms modify their lobbying efforts in response to a change in potential returns to lobbying. Further, we exploit the details of the implementation of sequester to take a step towards distinguishing between information-based and preferential-treatment-based theories of lobbying. The across-the-board and predetermined nature of the budget cuts make it less likely that firms modify their lobbying efforts in order to convey information to decision makers. This is because most information about the affected and unaffected firms is available publicly. In fact, there are no critical inputs required to determine the amount and allocation of the cuts across budget accounts beyond what is publicly available. Focusing closely around the sequestration event in our analysis, i.e., just the quarter before and after sequestration, also reduces the likelihood that lobbying efforts convey new information that pertains to these federal contractors. Others have used similar strategies to show that lobbying appears to be primarily about connections: Blanes-Vidal, Draca, and Fons-Rosen (2012) report that lobbyists lose significant revenue when the senator to whom they are connected leaves office while Bertrand, Bombardini, and Trebbi (2014) find that lobbyists change the issues they work



on when the congressmen to whom they are connected change committees. Connections, however, do not reveal the motivation behind lobbying: they can be used to get access to policymakers so as to reveal information or to secure preferential treatment from them. Our contribution is to examine an event where decisions that may otherwise require inputs from affected parties are instead taken in a predetermined, automatic way and the remaining rationale for the affected parties to engage in activities to exert influence is primarily securing firm-specific, pecuniary benefits.

The rest of the paper is organized as follows. Section II lays out the background, including the related literature. Section III explains how the dataset used in the analyses was constructed. Section IV describes the empirical methodology and presents the results. Section V concludes.

## **II. BACKGROUND**

### **A. Related Literature**

Lobbying is broadly defined as a legal activity aiming at changing existing rules or policies or procuring individual benefits. Private benefits could materialize in the form of preferential access to credit, bailout guarantees, privileged access to licenses, or procurement contracts (Fisman, 2001, Johnson and Mitton, 2003, Faccio and Parsley, 2009, Goldman et. al., 2013 and Acemoglu et. al., 2016). Building upon the private-interest theories of regulation (Stigler, 1971), research on lobbying has developed into two broad strands: studies that focus on the relationship between lobbying activities and specific *policies* (see, for instance, Grossman and Helpman, 1994, Goldberg and Maggi, 1999, and Ludema, Mayda, and Mishra, 2010, for the case of trade policy, Facchini, Mayda and Mishra, 2008, for the case of immigration policy, Kroszner and Stratmann, 1998, and Kroszner and Strahan, 1999, for financial services) and those that aim to explore the consequences of lobbying on firm-specific economic *outcomes* (see, for example, Bertrand et al., 2004, Claessens et al., 2008, Adelino and Dinc, 2014). Issues specific to banking and finance have been studied by, among others, Khwaja and Mian (2005), who find that in Pakistan politically-connected firms obtain exclusive loans from public banks and have much higher default rates; and Raddatz and Braun (2009), who present evidence suggesting that politicians provide for beneficial regulation in exchange for a non-executive position at a bank in the future, consistent with a capture-type private interest story. Faccio (2006) show that political connections increase firm value and Akcigit et al. (2018) find evidence suggesting that political connections reduce innovation and block competition in the industry.

Our study, focusing on granting of contracts and lobbying, fits more closely in the second strand.

### **B. Sequestration**

The Budget Control Act (BCA) was signed into law on August 2, 2011 to solve the debt ceiling crisis. BCA stipulated a joint select committee on deficit reduction (the “super committee”) be

formed and produce legislation to decrease the federal deficit by \$1.2 trillion over 10 years. If the super committee failed to act, automatic across-the-board cuts (known as “sequestration”) would go into effect to produce the equivalent amount of budgetary savings.

The super committee co-chairs (Rep. Jeb Hensarling (R-Texas) and Sen. Patty Murray (D-Wash)) released a statement on November 21, 2011 that the committee would be unable to come to a bipartisan agreement before the deadline. While it was well known that the failure of the committee to reach an agreement meant triggering sequestration (with the effective date of January 2, 2013), there were several proposals floated to stop and/or mitigate the cuts and some gained just enough traction to cast doubt on whether the cuts would become effective at all. Indeed, the American Taxpayer Relief Act (ATRA) delayed the sequestration for two months, as part of the package to mitigate the blow from the fiscal cliff. This somewhat raised hopes that Congress would find another fix to again delay or stop the sequestration. For instance, in a post dated February 25, 2013, the Sunlight Foundation reported that big contractors had a lot at stake as the sequestration deadline approached, although many seemed confident that the sequester would not go into effect.<sup>7</sup> But the cuts did come into effect on March 1, 2013. A few days later on March 6, Congress passed a continuing resolution to fund the government through the end of the fiscal year—the bill contained provisions that gave some flexibility to the Pentagon and the VA in the implementation of the sequester.

Sequestration involved (i) a 10 percent reduction in the caps on new discretionary appropriations for defense programs; (ii) a 7.8 percent reduction in the caps on new discretionary appropriations for nondefense programs; (iii) a 10 percent reduction in mandatory budgetary resources for nonexempt defense programs; (iv) a 7.8 percent reduction in mandatory budgetary resources for nonexempt nondefense programs (except Medicare); and (v) a 2 percent reduction in most Medicare spending.

This information (and a listing of the reductions required for each nonexempt budget account) became public knowledge only when the OMB published its report on March 1, 2013.

### **C. Politically Targeted Activities**

Although lobbying is commonly recognized to be an influential political economy activity in many countries (Bertok, 2008), the U.S. is somewhat unique in the disclosure requirements applicable to such activity. Specifically, lobbyists can legally influence the policy formation process through two main channels. First, lobbyists directly engage with the executive and legislative branches of the government to advocate their positions. Second, they can offer campaign finance contributions, in particular, through political action committees (PACs). In one respect, campaign contributions aim at putting or keeping the “right” candidates in office while

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<sup>7</sup> <https://sunlightfoundation.com/2013/02/25/sequester-cuts/>. Also see [https://www.washingtonpost.com/business/economy/sequestration-looms-contractors-dont-fret/2013/01/30/3bcf60ea-6b0a-11e2-af53-7b2b2a7510a8\\_story.html?utm\\_term=.7479b50308ea](https://www.washingtonpost.com/business/economy/sequestration-looms-contractors-dont-fret/2013/01/30/3bcf60ea-6b0a-11e2-af53-7b2b2a7510a8_story.html?utm_term=.7479b50308ea)

lobbying seeks to influence the opinion of those who are already holding the power to make the decisions.

Companies and other special interest groups spend billions of dollars each year to lobby the Congress and federal agencies. Some of these retain lobbying firms, many of them located along Washington's K Street; others have lobbyists working in-house. Under the Lobbying Disclosure Act of 1995 (LDA), subsequently modified by the Honest Leadership and Open Government Act of 2007, all lobbyists (acting as intermediaries between legislators/regulators and clients with the aim to voice their opinion on various issues) have to file quarterly reports to the Secretary of the Senate's Office of Public Records (SOPR), provided that they satisfy the conditions specified in the LDA.

“Lobbying activity” is defined in Section 3(7) of the LDA as “lobbying contacts or efforts in support of such contacts, including background work that is intended, at the time it was performed, for use in contacts, and coordination with the lobbying activities of others.” While the exact nature of lobbying activities is somewhat vague, the official description of a lobbyist in the Congress guide to the LDA is “any individual (1) who is either employed or retained by a client for financial or other compensation; (2) whose services include more than one lobbying contact; and (3) whose lobbying activities constitute 20 percent or more of his or her services during a three-month period.” Any person meeting these criteria must register as a lobbyist under the Lobbying Disclosure Act.

### **III. DATA AND EMPIRICAL METHODOLOGY**

#### **A. Data**

By its nature, our analysis requires non-standard data, sometimes only available from non-traditional sources. The sample is constructed by merging data on federal contracts and lobbying expenditures and other firm-level financial data with the report on sequestration from the Office of Management and Budget (OMB).

In our study, we look at lobbying activities of firms obtaining federal contracts around the budget sequestration on March 1, 2013 and relate this to sequestration exposure of these firms. Since lobbying activities are reported quarterly, we focus on the quarters before and after the sequestration event. As a result, in our sample, 4<sup>th</sup> quarter of 2012 is the pre-event period and the 2<sup>nd</sup> quarter of 2013 is the post-event period. We do not include the first quarter of 2013 in our analysis since it contains pre-event, event, and post-event dates and thus is confounded. We explain the details of the other data used in the study in the related sections and present variable definitions in Appendix 1.

## 1. Federal Contracts

Information on all federal procurement contracts is made publicly available at [www.usaspending.gov](http://www.usaspending.gov) mandated by the Federal Funding Accountability and Transparency Act of 2006. The legislation required that federal contract, grant, loan and other financial assistance awards of more than \$25,000 be displayed on the website. The dataset includes the amount of contract that is awarded, date the contract is signed, the fiscal year it corresponds to, the details of the federal agency that awarded the contract including the agency and department code, the contracting company and its parent company. The dataset also includes other details such as place where the contract will be performed and contractor characteristics (minority owned business, emerging small business, etc.)

In constructing our data, we keep only new contracts and exclude modified contracts. We also leave out the contracts below \$150,000 as these are considered as small business set-asides and do not require a formal process in awarding. We create unique numeric identifiers for the parent companies that are in the federal contract database for our sample period and use these identifiers when matching with lobbying and company financials.

We consider federal contracts in the pre-sample period to determine the exposure of each company to the sequestration event before the sequestration took effect. As a result, we focus on federal contracts of all federal agencies in the fiscal years of 2011 and 2012, which runs from October 1, 2010 to September 30, 2012 (the fiscal year for federal contracts end in October).

For each federal contract, we look at the information on the related funding federal agency. Each funding federal agency has various program source accounts which are assigned by the U.S. Department of Treasury. We use the funding federal agency and the account information to merge the data at the account level with the report released by the Office of Management and Budget (OMB) on March 1, 2013 to get the sequester ratios applied for each federal agency account.

## 2. Lobbying

Detailed information on lobbying activities is available through lobbying reports from the Senate Office of Public Records

([http://www.senate.gov/pagelayout/legislative/one\\_item\\_and\\_teasers/opr.htm](http://www.senate.gov/pagelayout/legislative/one_item_and_teasers/opr.htm)). A sample report can be found in Appendix 2. This sample report lists firm name (Xerox), total dollar amount spent on lobbying activities by this firm, and the names of the lobbyists hired by the firm. It is worth noting that the legislation requires the disclosure not only of the dollar amounts actually spent, but also of the issues for which lobbying is carried out. Thus, unlike campaign contributions, lobbying expenditures can be associated with targeted policy areas. Finally,

reports must also state the names of the lobbyists that worked on the specific issues reported on behalf of the client.

We extract the lobbying reports filed by federal contractors for our sample period around the sequestration event on March 1, 2013. Total lobbying spending by federal contractors is calculated for the quarters before and after the event, and the natural logarithm of lobbying spending is used in the analysis.

We further consider the office targeted by lobbying, classifying them under two categories: the Senate and the House of Representatives, or Federal Agencies (Department of Defense, Department of Transportation, Department of Agriculture, etc.). This helps us uncover whether the lobbying effort has shifted from the Congress to the Federal Agencies after the sequestration.

We also compile information on the lobbying expenditures of industry associations. Anecdotal evidence suggests that some industry associations ramped up lobbying to stop the sequester as a whole, while individual company lobbying efforts focused on the particulars of their contracts and why they are special/indispensable, possibly to protect their share in the shrinking pie.<sup>8</sup> There is no apparent reason for systematic switching of lobbying expenditures to or from associations. Also, we have a difference-in-difference approach and it is not obvious why sequestered and non-sequestered firms would switch spending through associations differently. Because of these reasons, in our main analysis, we can safely ignore association spending, which is contaminated by the free-rider problem, and instead focus on firms' own lobbying. That said, what happens to association lobbying spending before and after sequestration is useful in suggesting an additional piece of evidence for the rent-seeking motive. If sequestered firms switch more intensely from association to own spending than non-sequestered firms do, it would be consistent with these firms seeking preferential treatment after the government spending cuts.

### 3. Office of Management and Budget (OMB) Report

The OMB report contains information about the sequester ratios at the agency account level, where sequester ratios at times differ across accounts of the same federal agency in a Federal Department. For example, in the Department of Transportation, there are several agencies such as Federal Aviation Administration, Federal Transit Administration, Pipeline and Hazardous Materials Administration among others. Each of these agencies has one or more accounts.

For the purposes of illustration, in Federal Highway Administration, there are three main accounts: Emergency relief program, payment to the Transportation Trust Fund, and Federal-aid Highways. While the first account had a 5 percent automatic cut, the latter two accounts were cut

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<sup>8</sup> "While individual lobbying firms have focused on promoting their clients' projects, the Aerospace Industries Association has taken the lead in lobbying against sequestration as a whole," according to Washington Examiner, <http://www.washingtonexaminer.com/defense-contractors-go-on-offense/article/2577568>

by 5.1 percent. The OMB report also provides the amount that is sequestrable for each account. Again, for the same example, the sequestrable amount for these accounts were \$2.02 billion, \$6.2 billion, and \$739 million, respectively. As a result, these agencies were sequestered by \$101 million, \$316 million, and \$38 million.

In order to calculate the exposure to sequestration for the firms that obtain federal contracts, we determine the sequester ratio using several alternatives. In one measure, we create a simple average sequester ratio for each agency by averaging sequester ratios across accounts. In the above example, this corresponds to 5.07 percent (average of 5, 5.1, and 5.1 percent) for Federal Aviation Agency. In another measure, we create a weighted average sequester ratio based on the sequestrable amount and the sequester ratio. In the example above, this corresponds to 5.08 percent  $((5\text{percent} * \$2.02 \text{ billion} + 5.1\text{percent} * \$6.2 \text{ billion} + 5.1\text{percent} * \$739 \text{ million}) / (\$2.02 \text{ billion} + \$6.2 \text{ billion} + \$739 \text{ million}))$ .

We merge federal contract data to the OMB report on the federal agency level. This process requires manual matching of federal agencies between the OMB report and federal contract data as these datasets report federal agencies in different formats. We do the manual matching in the following steps. First, we create unique identifiers for each agency in the OMB report. Second, we keep unique agencies in the federal contract data based on major funding agency category, which is a variable that specifies which agency gives funding for the contract. In the next step, we manually screen two datasets and link the agency in the OMB report to agency in the federal contract data by agency names. The unique agency identifiers in the OMB report are then added into the federal contract data.

#### 4. Financial Variables

We consider a number of financial variables that are found to explain lobbying behavior in the literature (Hill, Kelly, Lockhart, and Van Ness, 2013; Kerr, Lincoln, and Mishra, 2014). We calculate firm size, R&D spending, industry concentration, and government dependence using data from COMPUSTAT (details given in Appendix 1).

Size, Tobin's Q, cash flow, and R&D are computed as quarterly series—the same frequency as the lobbying data. For industry concentration, we use the Herfindahl-Hirschman index based on Text-based Network Industry Classifications extracted from the Hoberg-Phillips Data Library and measure it at the beginning of period. Government dependence is calculated following Belo, Gala, and Li (2013) where industry exposure to government spending shocks are measured using National Income and Product Accounts (NIPA) tables. We use Belo, Gala, and Li (2013) data at the 2-digit SIC level in determining the government dependence for our sample.

## B. Empirical Methodology

We examine lobbying efforts around an unexpected shock on government spending, namely, the sequestration on March 1, 2013, which imposed automatic spending cuts across federal agencies. The treatment in our study, thus, is being sequestered or exposure to sequester. Our empirical model is as follows:

$$Lobby_{i,t} = \alpha + \beta_1 After\ sequestration_t + \beta_2 After\ sequestration_t * Sequester\ variable_i + \gamma X_{it} + n_i + \varepsilon_{it} \quad (1)$$

In Equation (1),  $Lobby_{i,t}$  is the natural logarithm of total lobbying amount of firm  $i$  at quarter  $t$ , which is either the pre-event quarter (October 1, 2012–December 31, 2012) or the post-event quarter (April 1, 2013–June 30, 2013).  $After\ sequestration_t$  is an indicator variable that takes a value of 1 in the post-event quarter and is 0 otherwise.  $Sequester\ variable_i$  is a measure of being sequestered or a measure of sequester exposure using alternative definitions described below.  $X_{it}$  is a set of firm and industry level variables that is considered to be correlated with lobbying in the literature, which includes firm size, R&D spending, industry concentration, growth opportunities, and cash flow. The model controls for firm fixed effects,  $n_i$ . Robust standard errors are clustered at the firm level.

To measure being sequestered or exposure to sequestration, we employ four alternative measures and utilize federal contracts awarded in the fiscal years right before the sequestration—namely, the fiscal period 2011–2012 (September 2010–October 2012), to calculate these measures. The first one, *Sequester Flag* takes a value of 1 if a firm is sequestered and is 0 otherwise. A firm is considered to be sequestered if it had obtained contracts before the event of sequestration from the federal agencies that are sequestered on March 1, 2013. The second sequester variable is the sequester exposure, defined as the total dollar amount of a firm’s contracts that would have been in the sequestered accounts according to the sequestration implemented on March 1, 2013, scaled by the total dollar amount of a firm’s all contracts. For all these sequester variables, federal contracts before the sequestration, i.e., the fiscal period 2011–2012 (September 2010–October 2012) are used.

The third and fourth sequester variables are the average sequester ratio and the weighted average sequester ratio measured at the firm level. These sequester ratios at the agency account level are calculated from the OMB report as described in Section III.A. We find the possible sequestered federal contract ratio at the firm level by multiplying a given federal contract amount obtained by a given firm with the simple or weighted average sequester ratio of the agency that has awarded that contract. We then scale the sum of these possible sequestered federal contract amounts by the total federal contracts obtained by that firm. Thus, these variables indicate the ratio of federal contracts in relation to total contracts that would be sequestered for a given firm if federal agencies continue to award contracts in a similar way as in the 2011–2012 fiscal years.

We run the empirical specification described in Equation (1) for the full sample of lobbying firms that are federal contractors and that have firm-level control variables. This sample consists of a balanced panel of 221 firms where 203 are sequestered and 18 are not sequestered. So, the full sample consists of 442 observations.

Although we include a set of firm and industry factors that are found to describe lobbying in addition to firm fixed effects, lobbying and federal contract amounts obtained by those that are sequestered and those that are not sequestered may be different due to other factors that drive the lobbying behavior and the amount of federal contracts obtained in these two samples. In order to mitigate this possibility, we run our estimations with a sample where firms that are sequestered are matched with those that are not sequestered based on the amount of federal contracts obtained, lobbying, size, and industry by employing propensity score matching with 3-nearest neighbor, where each matched firm is included once. In our propensity score matching, the probability of being sequestered is predicted by the natural logarithm of contracts obtained over the previous two fiscal years (September 2010–October 2012), natural logarithm of total lobbying expense over the last two quarters before the pre-event date (2<sup>nd</sup> and 3<sup>rd</sup> quarters of 2012), firm size at the beginning of the sample period (end of 3<sup>rd</sup> quarter of 2012), and industry based on 12 Fama-French sectors. This balanced matched sample consists of 122 sequestered firms and 16 non-sequestered firms with an overall sample size of 276.

### **C. Descriptive Statistics**

Table 1, Panel A reports descriptive statistics of the variables for the overall sample as well as for the quarters before and after the sequestration event on March 1, 2013, and for sequestered and non-sequestered firms. Table 1, Panel B is for the matched sample, described in Section III.B. The quarter before sequestration corresponds to the pre-event period (October 1–December 31, 2012) and the quarter after the sequestration is the post-event period (April 1–June 30, 2013).

The full sample covers firms that spend an average of \$800,000 on lobbying, with varying growth opportunities and industry concentrations. Lobbying drops after sequestration and sequestered firms have more lobbying expenses than non-sequestered firms.

In the matched sample statistics reported in Panel B of Table 1, the federal contracts and lobbying amounts between sequestered and non-sequestered firms are closer. Further, the decrease in lobbying after the event is less pronounced. A more detailed discussion of this univariate relationship between lobbying, contracts, and sequestration are provided in Section IV.A. The matched sample continues to consist of firms with varying degrees of growth opportunities as well as industry concentration.



## IV. ANALYSES AND FINDINGS

### A. Univariate Results

As shown in Table 1, Panel A, on average, firms spend \$818,000 in lobbying activities. Lobbying decreases from an average of \$842,000 before the sequestration to \$794,000 afterwards. Firms that are sequestered spend more on lobbying than those that are not sequestered: While average lobbying expense is \$838,000 for sequestered firms, it is \$596,000 for firms that are not affected from sequestration.

The majority of firms in our sample (92 percent, or 203 firms) are exposed to the sequestration event to some degree, while only 18 firms had zero exposure. The degree of exposure to the shock, however, as captured by three continuous measures—sequester exposure, average sequester ratio, and weighted average sequestered ratios—vary significantly across firms, with a coefficient of variation of 45 percent for the first measure and 49 percent for the latter two measures. Firm, industry, and competition variables also vary across firms indicating a rather diversified sample. Sequestered firms lobby more on average and obtain more federal contracts than non-sequestered firms.

One potential concern with the difference-in-difference strategy is that our treatment and control groups are not identical during the pre-event period. To address this, we use a matching procedure. Sequestered and non-sequestered firms are matched using the amount of federal contracts, lobbying, firm size, and industry in the pre-event period. Panel B of Table 1 presents the summary statistics for the matched sample. First, we continue to see that the variation across sequestration measures is similar to the full sample. Second, sequestered and non-sequestered firms seem to be similar on several observable attributes. For example, the average lobbying expense is similar between the two types of firms. The two groups are also similar in terms of other observable attributes such as size, profitability, industry concentration, and government dependence. Overall, the treatment and control groups are more comparable across several dimensions, which validates the conditions required for a difference-in-difference approach.

Did the shock affect the treatment and control groups differently? Table 1, Panel C shows the difference in means between the treatment and control groups before and after the event. We find that, on average, sequestered firms spent 12.52 (in logs) on lobbying before the shock and 12.53 after the shock. In contrast, non-sequestered firms spent 12.86 and 12.65 before and after the event, respectively. In other words, while sequestered firms kept their lobbying expenses at the same level, non-sequestered firms cut their lobbying after sequestration came into effect as evident in the significant decrease in lobbying expenses of the latter set of firms. One potential interpretation of this finding is that sequestered firms maintained their lobbying efforts in order to compete for a larger share of the reduced pie, even though they might not have been able to increase their lobbying spending possibly because of the decline in their revenues induced by the cuts. The difference between the means of the treatment and control groups is statistically

significant, and the difference-in-difference estimate indicates higher lobbying levels for sequestered firms after the event.

Figure 2 shows the mean of the total lobbying amount for sequestered and non-sequestered firms in the quarters before and after the sequestration. The event period, (0), corresponds to 2013Q1. The figure broadly confirms the existence of parallel trends before the event. Importantly, there is a clear break around the event period. On average, sequestered firms kept up their lobbying efforts after sequestration while non-sequestered firms cut their lobbying efforts dramatically. In other words, firms with more contracts in government agencies that had greater cuts in their budgets continued to lobby intensively, as they competed for a larger share of the smaller pie, but firms with no exposure to the sequester did not. In what follows, we analyze whether the pattern shown in Table 1, Panel C and in Figure 2 survives formal econometric analysis.

## B. Panel Estimations

The results from estimating our baseline specification, Equation (1), are presented in Table 2. Panel A and Panel B give results for the full sample and matched sample, respectively. Column (1) shows the results with an indicator variable for sequestration. Columns (2)–(4) use continuous measures of exposure to the sequester shock.

The baseline effect, i.e. the effect for firms with zero or low sequester exposure, is negative. Thus, the control sample, which is the sample of non-sequestered firms, or firms with low sequester exposure, cut their lobbying spending post event, as indicated by the estimated coefficient on “after sequestration” without the interaction terms in all columns. We find a statistically significant, positive association of sequester flag and sequester exposure with lobbying in the post sequestration period in Columns (1) and (2). In other words, sequestered firms or firms with greater predetermined exposure to the shock cut their lobbying efforts significantly *less* after the sequestration event.

This association is also significant in economic terms: For example, the estimates in Column (1) of Panel A suggest that while non-sequestered firms cut their lobbying spending by 21 percent after the sequestration event, sequestered firms on average *increased* their spending by 0.1 percent. The estimated coefficient in Column (2), which is based on our first continuous measure of sequester, suggests that firms with low exposure (less than 25<sup>th</sup> percentile) cut their lobbying spending by 3.1 percent while those with high exposure (more than 75<sup>th</sup> percentile) increase their lobbying spending by 3.3 percent. The magnitude of the increase in lobbying spending for high exposure firms is even higher for the measures in Columns (3) and (4), although they are statistically weaker than in Columns (1) and (2).

Panel B of Table 2 shows the results with the matched sample. The sample size reduces but the results are in line with those presented earlier. Firms with no or low sequester exposure cut their lobbying spending after the sequestration shock, while firms with a greater degree of exposure to

the shock increase their lobbying spending post sequestration. The results are statistically stronger for the matched sample, especially for the continuous measures of sequester exposure.

In Table 3, we conduct two placebo exercises. In one of them, March 1, 2014 is considered as the placebo event date. The sequestration variable in this case takes a value of 1 for the post-event period, which is the quarter after sequestration (April 1–June 30, 2014) and is zero for the pre-event period, the quarter before the sequestration (September 1–December 31, 2013). In the other one, for the sample period used in our baseline analysis (September 1, 2012–June 30, 2013), we allocate sequestered and not sequestered firms randomly mimicking the baseline sample, i.e., 18 firms not sequestered and 203 sequestered. Panel A gives results for the full sample while Panel B presents the results for the matched sample. There are no significant coefficients obtained in the placebo exercises. Thus, we *do not* find any evidence of sequestered firms or firms with a higher degree of sequester exposure maintaining or increasing their lobbying spending after arbitrarily chosen dates or for arbitrarily assigned sequester sample. The placebo tests confirm that the findings are driven by the sequestration shock and does not represent “typical” behavior of firms.

### C. Discussion of Findings

It is empirically extremely difficult to pin down the most likely motivation for firms’ lobbying during our sample period. Ultimately, we do not know the exact activities on which lobbying expenditures are spent. Information-based theories, on the one hand, assert that lobbying firms have better information than policymakers and partly reveal their information by endogenously choosing their lobbying effort (Potters and van Winden, 1992; Lohmann, 1995; Grossman and Helpman, 2001). Theories of rent seeking, on the other hand, suggest that lobbying firms compete for influence over a policy by strategically choosing their contribution to politicians (Bernheim and Whinston, 1986; Grossman and Helpman, 1994).

Our paper offers a unique setting to distinguish between the two hypotheses. We find that firms with a greater degree of exposure to the sequester shock were more likely to maintain their lobbying efforts once the shock hit. In this setting, there is, in fact, little information to be conveyed by firms to the decision makers, as the exposure to the sequester shock is predetermined and publicly available information. Therefore, it cannot be the case that firms with greater exposure to the shock lobbied intensively in order to convey any specific information which the decision makers did not know about. It is also not the case that these firms lobbied to influence the formula that would determine their exposure to the sequester. Furthermore, the findings are obtained using a matching exercise as well, and, hence, are unlikely to be driven by characteristics that convey firms’ ability to fulfill contracts.<sup>9</sup>

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<sup>9</sup> Also note that the concern that certain firm characteristics that determine their ability to fulfill contracts may jointly drive their lobbying and contract rewards is more relevant when the shock to government spending is positive. For instance, contractors that has spare capacity or the ability to quickly ramp up production activities may receive more contracts because of this capacity or ability when more contracts are made available to meet additional spending needs as a consequence of an

Our findings are consistent with the notion that firms that are more adversely affected by the sequester engage in lobbying in order to increase their chances of preferential treatment, e.g., to procure a greater share of the reduced pie. This may represent evidence in line with a rent-seeking motive, whereby lobbying is driven in part by expectations of preferential treatment in the form of more contracts or protection of market share.

We next provide some additional evidence that collaborates with the rent-seeking interpretation of our findings. If indeed lobbying is driven by an intent to obtain a larger share of the pie, we should find the effect on lobbying spending to be stronger when there is more intense competition. We examine this issue by splitting the sample by the degree of competition and repeating the main analysis in the subsamples. In Table 5, we look at industry concentration and find that our findings are driven by firms in industries with low concentration, or high level of competition. In Table 6, we use a measure of competition at the firm level, namely, the share of competitive contracts in the total contracts obtained by the firm.<sup>10</sup> Once again, we find that our findings are driven by firms facing a high level of competition. In Table 7, we define competition at the agency level, where competition is defined to be high if a firm is mainly obtaining contracts from agencies that give more competitive orders than the median. Although the results for the full sample are weak, the findings in matched sample support the findings in Tables 5 and 6: the results are driven by firms that obtain their contracts from more competitive agencies. Overall, independently of how we measure competition, we find that lobbying spending increases more in the post-event period for firms facing a higher degree of competition. This finding is consistent with the hypothesis that lobbying after the event is likely to be driven by a motive to procure a larger share of the pie, which is more prevalent with high competition.

In our next analysis, we consider government dependence of the sectors to examine if there is a more pronounced effect for government-dependent firms. The results are in Table 8. While in the full sample the evidence of more government-dependent firms reacting differently is weak, we find stronger evidence in the matched sample. As shown in Table 8, Panel B, lobbying increases after sequestration more for sequestered firms that are more government dependent. These results are not significant for firms with low dependence on government. Again, the finding that lobbying spending increases for firms that are more government dependent and, hence, likely in more need of procuring government contracts, is consistent with a rent-seeking motive.

We further analyze lobbying spending based on the entity that is being lobbied—a government agency or Congress. Agencies are directly in charge of granting the contracts, and therefore lobbying directed towards these entities is likely to be reflective of a motive to obtain more or larger contracts. Lobbying Congress, by contrast, is likely to be more general, and not directly

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exogenous shock (e.g., a hurricane). In our setting, the shock is negative, so firms' ability to adapt fast is less likely to be a driver of the procurement officers' decision making.

<sup>10</sup> Whether or not a contract is competitive is indicated in the original federal contracts dataset, reflecting the process followed in awarding the contract and the presence of competing bids.

related to any particular contract. If, for example, sequestered firms lobby more intensely towards agencies than non-sequestered firms do, it would be consistent with these firms seeking preferential treatment for the contracts after the cuts. As discussed above, lobbying reports do not provide any split of the lobbying expenses. Therefore, we collect the list of entities each firm lobbies, split the lobbying spending equally among these entities, and compute the relative lobbying spending towards an agency vis-à-vis Congress. Table 9 presents some suggestive evidence in support of the rent-seeking explanation. While the relative lobbying directed towards agencies declined for both sequestered and non-sequestered firms after the event, it declined *less* for sequestered firms. Although the result is not statistically strong (significant only at the 11 percent level), it provides some suggestive evidence on lobbying for rent seeking. In other words, sequestered firms kept up their lobbying efforts towards federal agencies after sequestration, again supporting the view that they focused their lobbying efforts on the entities from whom they needed preferential treatment.

Another finding that may be consistent with a motive to obtain favors is that contractors do not often switch across agencies they lobby and are persistent in their relationships. For the sample period from 2008–2012, on average, a typical contractor works with the *same* two agencies. Further, sequestered firms maintain their lobbying efforts with the same agency after the sequestration event, probably to increase their chances of getting a contract from the same agency.

We further present another result to support the rent-seeking explanation for lobbying. For the analyses above, we focused on lobbying by individual firms without considering any lobbying through associations. What happens to association lobbying spending before and after sequestration could be telling: while lobbying through associations is likely to be related to issues that concern all members of an association, a firm's own lobbying may instead focus on issues related to that specific firm. Thus, if, for example, sequestered firms switch from lobbying through their respective association to their own lobbying more intensely than non-sequestered firms do, it would be consistent with the notion that these firms focus more on themselves, which is in line with seeking preferential treatment after the cuts. Unfortunately, we do not have the lobbying expenditures through associations at the firm level. Therefore, we provide some evidence at the aggregate level. By looking at association lobbying listed for the top 50 lobbyists in a given industry for each quarter,<sup>11</sup> we determine relative lobbying through individual firms vis-à-vis associations for the subsample of firms for which association lobbying data is available. Figure 3 shows that firm lobbying with respect to association lobbying picks up following the sequestration. This finding may provide some evidence, albeit indirect, consistent with preferential treatment motive for lobbying to procure contracts.

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<sup>11</sup> This data is obtained from the Center for Responsive Politics. The available industries that are in this subsample are air transportation, banking, chemicals, manufacturing, oil and gas, and telecommunications.

Finally, we consider whether there is any evidence that lobbying firms were able to reach the outcome they were seeking, i.e., more contracts after sequestration, and whether they have better operating performance compared to others after sequestration. These results are in Table 10 and Table 11, respectively.

In Table 10, we divide the sample into four quantiles based on the difference in lobbying between the post-event (after sequestration) and pre-event (before sequestration) periods and examine contracts obtained in each quantile.<sup>12</sup> Firms with more intense lobbying obtain more contracts over one quarter and two quarters after sequestration, indicating that sequestered firms that lobby obtain more from the reduced pie of sequestered federal contracts.

Next, we examine the operating performance of these firms in relation to lobbying in Table 11. Operating performance, measured by industry-adjusted return on assets (ROA) and return on equity (ROE) over one quarter and two quarters after sequestration, are adjusted for the industry by subtracting mean industry ROA and ROE determined at the 2-digit SIC level from the firm ROA and ROE. The adjustment of operating performance at the industry level helps in mitigating the issue that the differences in the industry composition of firms that ramped up lobbying and those that did not may affect the inferences.

We observe that lobbying firms do not perform better after sequestration. If lobbying in the post sequester period is aimed to provide useful information to the agencies, then this lobbying would likely add value to these firms. This could be because, for instance, the contracts received by the lobbying firms fit their capabilities better and possibly involve efficiency gains. On the contrary, if lobbying motives are primarily driven by rent seeking, such benefits of lobbying would not materialize. Both in full and matched samples, there is no difference in operating performance of lobbying sequestered firms and others after the sequestration. These findings are consistent with the rent-seeking argument as one would expect better performance of firms that lobbied if lobbying was aimed at providing information for efficient allocation of resources.

Overall, the different pieces of evidence presented point to a rent-seeking explanation for increased lobbying by sequestered firms during the post-sequestration period. It is always possible that firms may be conveying some information as well to policymakers at the same time as they are lobbying for preferential treatment, given that it is virtually impossible to separate the information content in lobbying spending. What we can establish with greater confidence based on several strands of evidence is that there is an element of rent seeking in the motive for lobbying spending.

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<sup>12</sup> The cutoffs for these quantiles are -0.2, 0, and 0.18 for the full sample, and -0.19, 0, and 0.16 for the matched sample.

## V. CONCLUSION

In this paper we explore why firms lobby by looking at the effect of sequestration of federal budget accounts on lobbying activity of federal contractors. By carefully constructing a dataset at the firm level that combines information on firm characteristics and lobbying expenditures together with a predetermined construct of sequestration, we explore whether there was a difference in the lobbying activities of sequestered versus not-sequestered contractors after the government spending cuts came into effect.

We show that sequestered firms lobbied more after the sequestration event, compared to non-sequestered or firms with low exposure to sequester. We also find that these findings are more pronounced when competition is intense at the industry, firm, or agency level, and in government-dependent sectors. Furthermore, while sequestered firms that lobbied obtained more contracts after the sequestration, their operating performance was similar to that of other firms. This finding suggests that there were no additional efficiency gains that would be consistent with information dissemination through lobbying. While we cannot neglect possible information content in lobbying, our evidence points more towards a rent-seeking motive in lobbying spending.

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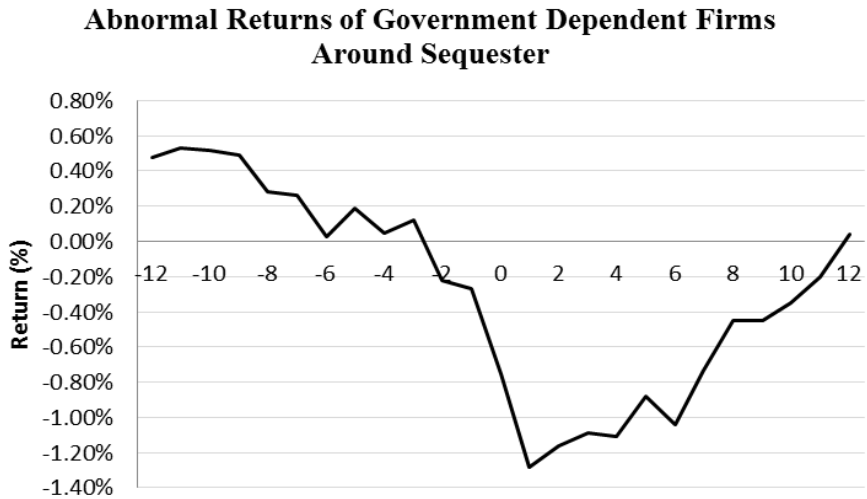
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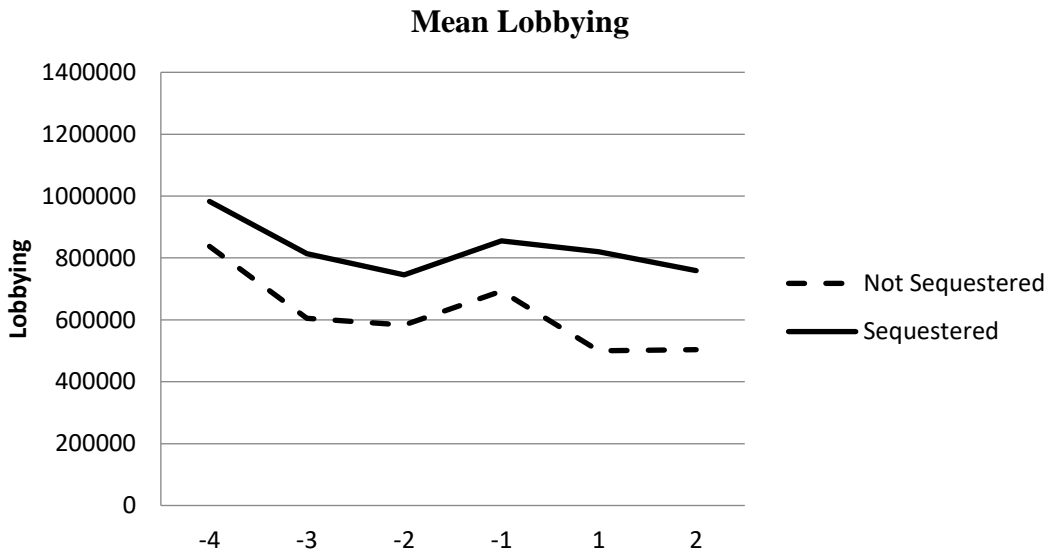
**Figure 1. Market Reaction to Sequestration**

This figure reports market reaction to the announcement of budget sequester on March 1, 2013, represented as event day 0 in the figure. Abnormal returns based on market model are represented in the figure. Government-dependent firms are determined following the measure of Belo, Gala, and Li (2013) which is industry exposure to government spending based on National Income and Product Accounts (NIPA) input-output accounts. Those above 75<sup>th</sup> percentile of government spending exposure based on 2digit SIC codes are considered to be government-dependent.



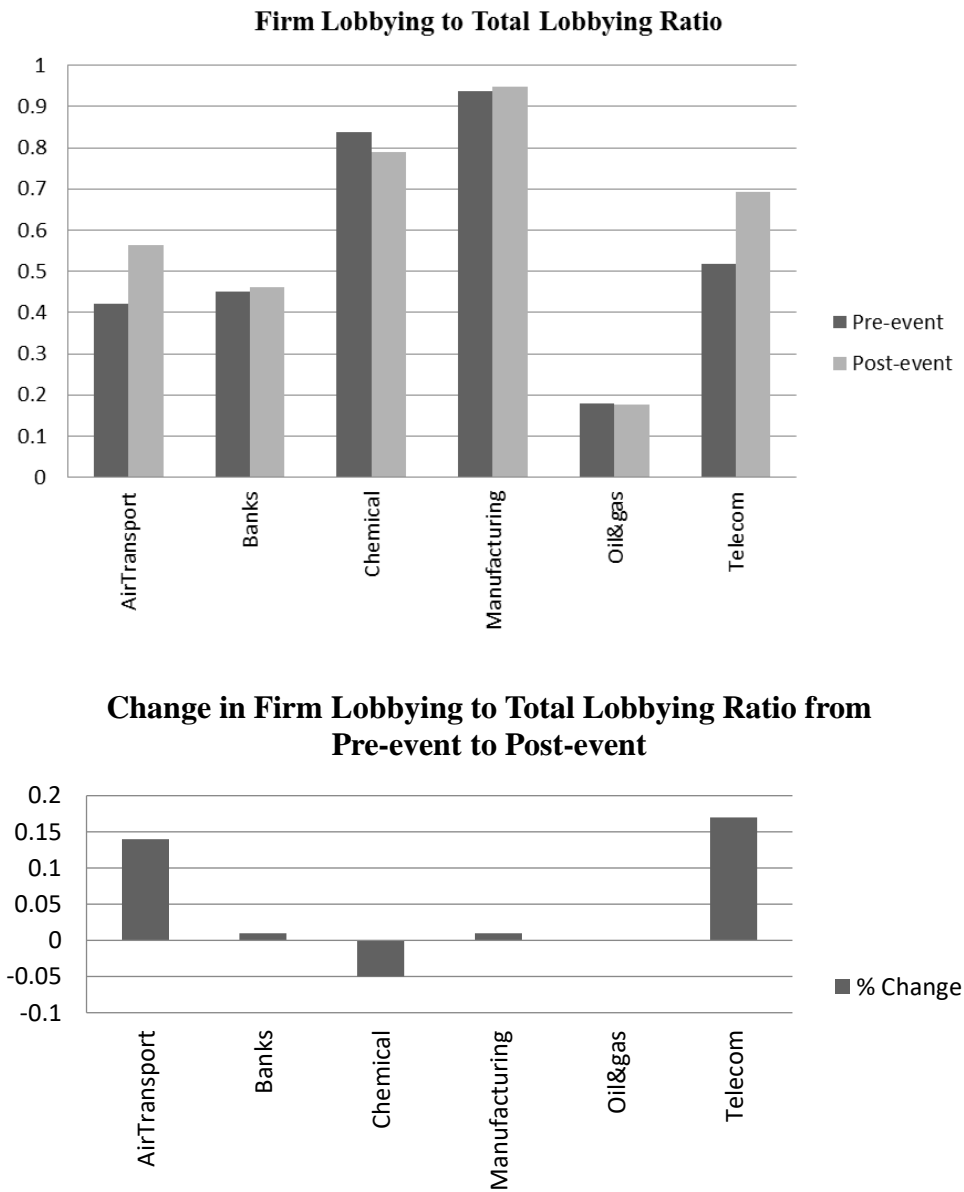
**Figure 2. Lobbying around Sequestration**

This figure shows the mean of the lobbying amount for quarters before and after the sequestration event on March 1, 2013. The event is sequestration on March 1, 2013, which is 1<sup>st</sup> quarter of 2013 (January 1–March 30, 2013). Post-event periods are quarters following this event (1 to 2), and pre-event periods are those preceding the event (-4 to -1).



**Figure 3. Firm versus Association Lobbying around Sequestration**

These figures show the ratio of firm lobbying amount to total lobbying amount for the sample firms, where total lobbying includes both firm lobbying and the lobbying of associations in their respective industries. The first figure shows the levels in the pre-event and post-event period, and the second figure shows the change from pre-event to post-event period. Pre-event period corresponds to the quarter before the sequestration on March 1, 2013, which is the 4<sup>th</sup> quarter of 2012, and post-event period corresponds to the quarter after the sequestration, which is 2<sup>nd</sup> quarter of 2013. The values are reported for the subsample of firms where there is association lobbying report for the related industries. Association lobbying in a given industry is determined according to the top 50 lobbyists listed in Center for Responsive Politics.



**Table 1. Descriptive Statistics**

This table reports descriptive statistics of the variables for the quarters before and after the sequestration on March 1, 2013. The quarter before sequestration corresponds to the pre-event period (October 1–December 31, 2012) and the quarter after the sequestration is the post-event period (April 1–June 30, 2013). Panel A corresponds to the full sample which is a balanced sample of 221 firms over two time periods – before and after the event. Panel B corresponds to the matched sample of 138 firms which is created based on nearest 3 neighbor matching. The matching is based on the natural logarithm of total federal contract amounts in 2011 and 2012 fiscal years (October 1, 2010–September 30, 2012), natural logarithm of the total lobby amounts in the second and third quarter of 2012 (April 1–September 30, 2012), firm size and Fama-French 12 industries. Lobby (\$millions) is the total lobby amount of each firm in a quarter. Lobby (log) is the natural logarithm of the lobby (\$millions). Sequestration flag takes a value of one for firms that have been exposed to sequestration. Sequester exposure is the total amount of contracts exposed to sequester as a ratio of total contracts. Average sequester ratio and weighted average sequester ratio represent the ratio of sequestered contracts to total contracts for each firm. In average sequester ratio, sequestered contracts are calculated according an equally weighted average of each Federal Agency's sequester ratio. In weighted average sequester ratio, the weighted average of sequester ratios for each Federal Agency is considered. In all these calculations regarding sequestrations, contracts exposed to sequester are determined according to the 2011 and 2012 federal contracts granted. Size is the natural logarithm of total assets. R&D is the research and development expense scaled by total assets. Tobin's Q is market value of assets to book value of assets calculated at the beginning of the period. ROA and ROE are return on asset and return on equity, respectively, and are adjusted for industry by subtracting mean industry ROA and ROE determined at the 2-digit SIC level from these values. Industry concentration is the Herfindahl-Hirschman index based on Text-based Network Industry Classifications extracted from the Hoberg Phillips Data Library, determined at the beginning of the period. Firm level competition is the ratio of competitive contracts to total contracts obtained by each firm. Government agency level competition is the ratio of competitive contracts given in a government agency to total contracts awarded by the same agency. Government dependence is industry exposure to government spending measured as Belo, Gala and Li (2013) at the 2-digit SIC code level. Calculations on competition and government dependence are determined in the 2011 and 2012 fiscal years. Federal contracts (\$millions) is the total contract amounts for each firm in 2011 and 2012 fiscal years (October 1, 2010–September 30, 2012) and the federal contracts (log) is the corresponding natural logarithm variable. Further details on variable definitions and sources are provided in Appendix 1.

Panel A: Descriptive Statistics - Full Sample									
Variables	Mean	Median	Std. Dev.	p25	p75	Mean			
						Before	After	Sequestered	Non-sequestered
Lobby (\$millions)	0.818	0.300	1.323	0.083	1.049	0.842	0.794	0.838	0.596
Lobby (log)	12.543	12.612	1.589	11.326	13.863	12.549	12.537	12.524	12.754
Sequester Flag	0.919	1.000	0.274	1.000	1.000	0.919	0.919	1.000	0.000
Sequester Exposure	0.754	0.925	0.337	0.623	1.000	0.754	0.754	0.821	0.000
Average Sequester Ratio (%)	5.087	5.264	2.491	3.760	7.422	5.087	5.087	5.538	0.000
Weighted Average Sequester Ratio (%)	5.064	5.119	2.487	3.753	7.422	5.064	5.064	5.513	0.000
Size	9.614	9.661	1.751	8.484	10.684	9.614	9.614	9.618	9.572
R&D	0.006	0.000	0.010	0.000	0.008	0.007	0.004	0.006	0.010
Tobin's Q	1.609	1.391	0.741	1.137	1.840	1.570	1.648	1.605	1.660
ROA (industry adjusted)	0.230	0.099	0.396	0.025	3.169	0.237	0.223	0.219	0.355
ROE (industry adjusted)	0.016	0.009	0.494	-0.027	0.043	-0.001	0.032	0.015	0.026
Industry Concentration	0.227	0.156	0.204	0.090	0.043	0.219	0.234	0.231	0.178
Firm Level Competition	0.539	0.611	0.401	0.006	0.999	0.539	0.539	0.533	0.613
Government Agency Level Competition	0.526	0.516	0.058	0.479	0.546	0.526	0.526	0.525	0.536
Government Dependence	0.131	0.112	0.085	0.074	0.173	0.131	0.131	0.133	0.108
Federal Contracts (\$millions) - Beginning of Period	320.706	8.960	1195.820	1.309	105.435	320.706	320.706	348.866	3.129
Federal Contracts (log) - Beginning of Period	16.322	16.008	2.738	14.085	18.474	16.322	16.322	16.546	13.797

Panel B: Descriptive Statistics - Matched Sample									
Variables	Mean	Median	Std. Dev.	p25	p75	Mean			
						Before	After	Sequestered	Non-sequestered
Lobby (\$millions)	0.564	0.210	0.900	0.070	0.627	0.583	0.544	0.567	0.538
Lobby (log)	12.269	12.255	1.479	11.156	13.349	12.281	12.257	12.223	12.622
Sequester Flag	0.884	1.000	0.321	1.000	1.000	0.884	0.884	1.000	0.000
Sequester Exposure	0.735	0.972	0.364	0.484	1.000	0.735	0.735	0.832	0.000
Average Sequester Ratio (%)	4.773	5.000	2.604	3.142	7.341	4.773	4.773	5.399	0.000
Weighted Average Sequester Ratio (%)	4.743	5.000	2.596	3.099	7.298	4.743	4.743	5.365	0.000
Size	9.521	9.508	1.840	8.334	10.684	9.521	9.520	9.524	9.492
R&D	0.005	0.000	0.010	0.000	0.008	0.006	0.005	0.005	0.011
Tobin's Q	1.630	1.333	0.835	1.119	1.837	1.596	1.664	1.621	1.699
ROA (industry adjusted)	0.197	0.294	0.057	0.020	0.442	0.210	0.184	0.177	0.346
ROE (industry adjusted)	-0.012	0.008	0.552	-0.002	0.034	-0.001	0.032	-0.016	0.020
Industry Concentration	0.202	0.132	0.200	0.068	0.269	0.200	0.205	0.204	0.189
Firm Level Competition	0.536	0.608	0.431	0.000	1.000	0.536	0.536	0.536	0.565
Government Agency Level Competition	0.534	0.535	0.061	0.479	0.548	0.534	0.534	0.534	0.540
Government Dependence	0.120	0.112	0.072	0.074	0.118	0.120	0.120	0.120	0.120
Federal Contracts (\$millions) - Beginning of Period	11.136	3.228	23.563	0.838	10.089	11.136	11.136	12.139	3.488
Federal Contracts (log) - Beginning of Period	14.869	14.984	1.692	13.639	16.127	14.869	14.869	14.988	13.960

**Table 2. Comparison of Lobbying across the Event Line**

This table is the comparison of mean natural logarithm of lobbying in the full sample of 221 firms across event line. The quarter before sequestration corresponds to the pre-event period (October 1–December 31, 2012) and the quarter after the sequestration is the post-event period (April 1–June 30, 2013). Firms are sequestered if they have been exposed to sequestration. If any contracts obtained in the 2011–2012 fiscal period are exposed to sequestration, the firm is considered to be exposed to sequestration. t-statistics are reported in brackets, where \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

	Sequestered	Non-sequestered	Difference
After Sequestration	12.526	12.652	-0.126 (-0.42)
Before Sequestration	12.522	12.856	-0.334 (-0.97)
Difference	0.004 (0.12)	-0.204* (-1.92)	
Difference in Difference			0.208* (1.90)

**Table 3. Lobbying after Sequestration**

This table reports the results on the amount of lobbying in relation to the sequestration on March 1, 2013. Panel A presents the estimation results of the full sample of 221 firms while Panel B presents the results of the matched sample of 138 firms which is created based on nearest 3 neighbor matching. The matching is based on the natural logarithm of total federal contract amounts in 2011 and 2012 fiscal years (October 1, 2010–September 30, 2012), natural logarithm of the total lobby amounts in the second and third quarter of 2012 (April 1–September 30, 2012), firm size and Fama-French 12 industries. After sequestration variable takes a value of 1 for the post-event period, which is the quarter after sequestration (April 1–June 30, 2013) and is zero for the pre-event period, the quarter before the sequestration (September 1–December 31, 2012). Lobbying is the natural logarithm of total lobby amount for each firm in the pre-event and post-event quarters. Sequestration flag takes a value of one for firms that has been exposed to sequestration. Sequester exposure is the total amount of contracts exposed to sequester as a ratio of total contracts. Average sequester ratio and weighted average sequester ratio represent the ratio of sequestered contracts to total contracts for each firm. In average sequester ratio, sequestered contracts are calculated according an equally weighted average of each Federal Agency's sequester ratio. In weighted average sequester ratio, the weighted average of sequester ratios for each Federal Agency is considered. In all these calculations regarding sequestrations, contracts exposed to sequester are determined according to the federal contracts obtained in the 2011–2012 fiscal years. Size is natural logarithm of total assets. Industry concentration is the Herfindahl-Hirschman index based on Text-based Network Industry Classifications extracted from the Hoberg Phillips Data Library, determined at the beginning of the period. R&D is research and development expense scaled by total assets. Tobin's Q is market value of assets to book value of assets calculated at the beginning of the period. Details on variable definitions are in Appendix 1. In each estimation, firm fixed effects are included and standard errors are clustered at the firm level. t-statistics are reported in brackets, where \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

Panel A: Lobbying After Sequestration - Full Sample				
	(1)	(2)	(3)	(4)
After sequestration	-0.207** (-2.032)	-0.137* (-1.760)	-0.101 (-1.322)	-0.103 (-1.342)
After sequestration*Sequester Flag	0.214** (1.993)			
After sequestration*Sequester Exposure		0.170* (1.716)		
After sequestration*Avg. Sequester			1.836 (1.283)	
After sequestration*Wgt. Avg. Sequester				1.879 (1.310)
Size	-0.412 (-0.415)	-0.439 (-0.450)	-0.427 (-0.436)	-0.428 (-0.437)
Industry Concentration	-0.123 (-0.517)	-0.115 (-0.472)	-0.122 (-0.504)	-0.122 (-0.506)
R&D	0.321 (0.076)	-0.661 (-0.148)	-0.115 (-0.0260)	-0.108 (-0.0243)
Tobin's Q	0.00908 (0.081)	-0.0339 (-0.303)	-0.0374 (-0.327)	-0.038 (-0.333)
Observations	442	442	442	442
R-squared	0.015	0.015	0.011	0.011

**Table 3** – *continued*

Panel B: Lobbying After Sequestration - Matched Sample				
	(1)	(2)	(3)	(4)
After sequestration	-0.199*	-0.232**	-0.204**	-0.207**
	(-1.813)	(-2.418)	(-2.187)	(-2.211)
After sequestration*Sequester Flag	0.182			
	(1.529)			
After sequestration*Sequester Exposure		0.262**		
		(2.188)		
After sequestration*Avg. Sequester			3.487**	
			(2.022)	
After sequestration*Wgt. Avg. Sequester				3.565**
				(2.066)
Size	0.568	0.495	0.523	0.52
	(0.943)	(0.850)	(0.894)	(0.888)
Industry Concentration	0.152	0.146	0.123	0.121
	(0.392)	(0.372)	(0.333)	(0.327)
R&D	-12.33	-16.60**	-15.49*	-15.55*
	(-1.561)	(-1.979)	(-1.925)	(-1.924)
Tobin's Q	0.0744	0.0344	0.0243	0.0236
	(0.660)	(0.321)	(0.228)	(0.222)
Observations	276	276	276	276
R-squared	0.022	0.039	0.037	0.038

**Table 4. Placebo Test**

This table presents the results on lobbying for placebo samples. Columns (1)–(4) are based on a placebo period, where March 1, 2014 is considered as the placebo sequestration event date, and Column (5) reports a placebo sample where firms are distributed as sequestered and not sequestered randomly over the sample period used in the baseline (September 2012–June 2013) similar to the baseline sample such that there are 18 sequestered and 203 non-sequestered firms. For columns (1)–(4), after sequestration variable takes a value of 1 for the post-event period, which is the quarter after sequestration (April 1–June 30, 2014) and is zero for the pre-event period, the quarter before the sequestration (September 1–December 31, 2013). Panel A gives results of the full sample while Panel B presents results of the matched sample which is created based on nearest 3 neighbor matching. The matching is based on the natural logarithm of total federal contract amounts in 2011 and 2012 fiscal years (October 1, 2010–September 30, 2012), natural logarithm of the total lobby amounts in the second and third quarter of 2012 (April 1–September 30, 2012), firm size and Fama-French 12 industries. Lobbying is the natural logarithm of total lobby amount for each firm in the pre-event and post-event quarters. Sequestration flag takes a value of one for firms that has been exposed to sequestration. Sequester exposure is the total amount of contracts exposed to sequester as a ratio of total contracts. Average sequester ratio and weighted average sequester ratio represent the ratio of sequestered contracts to total contracts for each firm. In average sequester ratio, sequestered contracts are calculated according an equally weighted average of each Federal Agency's sequester ratio. In weighted average sequester ratio, the weighted average of sequester ratios for each Federal Agency is considered. In all these calculations regarding sequestrations, contracts exposed to sequester are determined according to the federal contracts obtained in the 2011–2012 fiscal years. Industry concentration is the Herfindahl-Hirschman index based on Text-based Network Industry Classifications extracted from the Hoberg Phillips Data Library, firm size is natural logarithm of total assets and R&D is research and development expense scaled by total assets given in percentage. Tobin's Q is market value of assets to book value of assets calculated at the beginning of the period. Details on variable definitions are in Appendix 1. In each estimation, firm fixed effects are included and standard errors are clustered at the firm level. t-statistics are reported in brackets, where \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

Panel A: Full Sample Placebo Test					
	Alternative Sequester Date				Random Sequester
	(1)	(2)	(3)	(4)	Assignment
After sequestration	-0.125 (-0.759)	-0.0284 (-0.265)	-0.0223 (-0.221)	-0.0246 (-0.243)	-0.0989 (-0.928)
After sequestration*Sequester Flag	0.136 (0.795)				0.0981 (0.861)
After sequestration*Sequester Exposure		0.0392 (0.315)			
After sequestration*Avg. Sequester			0.461 (0.272)		
After sequestration*Wgt. Avg. Sequester				0.505 (0.297)	
Size	0.0893 (0.339)	0.0936 (0.355)	0.0945 (0.359)	0.0941 (0.357)	-0.407 (-0.407)
Industry Concentration	-0.143 (-0.579)	-0.127 (-0.516)	-0.130 (-0.531)	-0.131 (-0.532)	-0.0971 (-0.408)
R&D	0.832 (0.167)	0.627 (0.123)	0.725 (0.143)	0.719 (0.142)	-0.0277 (-0.006)
Tobin's Q	0.0327 (0.168)	0.0229 (0.115)	0.0218 (0.108)	0.0212 (0.105)	-0.0217 (-0.178)
Observations	410	410	410	410	442
R-squared	0.005	0.002	0.002	0.002	0.007



**Table 4**– *continued*

Panel A: Matched Sample Placebo Test					
	Alternative Sequester Date				Random Sequester Assignment
	(1)	(2)	(3)	(4)	(5)
After sequestration	-0.162 (-0.963)	-0.0904 (-0.670)	-0.0939 (-0.743)	-0.0967 (-0.762)	-0.112 (-1.081)
After sequestration*Sequester Flag	0.166 (0.917)				0.104 (0.928)
After sequestration*Sequester Exposure		0.0983 (0.642)			
After sequestration*Avg. Sequester			1.532 (0.736)		
After sequestration*Wgt. Avg. Sequester				1.595 (0.765)	
Size	0.0327 (0.183)	0.0516 (0.294)	0.0516 (0.293)	0.0510 (0.289)	-0.400 (-0.381)
Industry Concentration	0.000717 (0.00187)	0.0272 (0.0728)	0.00862 (0.0236)	0.00790 (0.0216)	-0.0741 (-0.235)
R&D	-11.00 (-1.407)	-9.789 (-1.306)	-9.880 (-1.347)	-9.930 (-1.348)	-2.774 (-0.678)
Tobin's Q	0.0867 (0.447)	0.0796 (0.402)	0.0740 (0.373)	0.0732 (0.370)	-0.0154 (-0.0938)
Observations	248	248	248	248	382
R-squared	0.010	0.006	0.007	0.008	0.008

**Table 5. Industry Concentration**

This table reports the results on the amount of lobbying in relation to the sequestration on March 1, 2013 for the subsamples of high and low industry concentration. Industry concentration is the Herfindahl-Hirschman index based on Text-based Network Industry Classifications extracted from the Hoberg Phillips Data Library, determined at the beginning of the period. Panel A presents the estimation results of the full sample of 221 firms while Panel B presents the results of the matched sample of 138 firms which is created based on nearest 3 neighbor matching. The matching is based on the natural logarithm of total federal contract amounts in 2011 and 2012 fiscal years (October 1, 2010–September 30, 2012), natural logarithm of the total lobby amounts in the second and third quarter of 2012 (April 1–September 30, 2012), firm size and Fama-French 12 industries. After sequestration variable takes a value of 1 for the post-event period, which is the quarter after sequestration (April 1–June 30, 2013) and is zero for the pre-event period, the quarter before the sequestration (September 1–December 31, 2012). Lobbying is the natural logarithm of total lobby amount for each firm in the pre-event and post-event quarters. Sequestration flag takes a value of one for firms that has been exposed to sequestration. Sequester exposure is the total amount of contracts exposed to sequester as a ratio of total contracts. Average sequester ratio and weighted average sequester ratio represent the ratio of sequestered contracts to total contracts for each firm. In average sequester ratio, sequestered contracts are calculated according an equally weighted average of each Federal Agency's sequester ratio. In weighted average sequester ratio, the weighted average of sequester ratios for each Federal Agency is considered. In all these calculations regarding sequestrations, contracts exposed to sequester are determined according to the federal contracts obtained in the 2011–2012 fiscal years. Size is natural logarithm of total assets. R&D is research and development expense scaled by total assets. Tobin's Q is market value of assets to book value of assets calculated at the beginning of the period. Details on variable definitions are in Appendix 1. In each estimation, firm fixed effects are included and standard errors are clustered at the firm level. t-statistics are reported in brackets, where \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

Panel A: Industry Concentration- Full Sample								
	High				Low			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
After sequestration	0.0843 (0.753)	0.146* (1.753)	0.139 (1.543)	0.138 (1.534)	-0.431*** (-2.732)	-0.354*** (-3.029)	-0.289*** (-2.688)	-0.291*** (-2.717)
After sequestration*Sequester Flag	-0.0108 (-0.0848)				0.400** (2.462)			
After sequestration*Sequester Exposure	-0.0904 (-0.746)				0.395*** (2.863)			
After sequestration*Avg. Sequester	-1.213 (-0.610)				4.786*** (2.814)			
After sequestration*Wgt. Avg. Sequester	-1.202 (-0.602)				4.886*** (2.902)			
Size	-0.769 (-0.623)	-0.744 (-0.596)	-0.754 (-0.606)	-0.758 (-0.606)	-0.312 (-0.211)	-0.456 (-0.309)	-0.541 (-0.369)	-0.560 (-0.383)
Industry Concentration	0.367 (0.0850)	1.003 (0.252)	0.827 (0.204)	0.821 (0.203)	0.620 (0.779)	0.462 (0.602)	0.426 (0.510)	0.423 (0.505)
R&D	0.000562 (0.00273)	0.00844 (0.0416)	0.0141 (0.0676)	0.0137 (0.0657)	10.28 (1.180)	8.291 (0.886)	9.901 (1.097)	10.02 (1.111)
Tobin's Q	-0.0891 (-0.513)	-0.0784 (-0.446)	-0.0730 (-0.401)	-0.0728 (-0.400)	0.108 (0.876)	-0.0233 (-0.217)	-0.0254 (-0.229)	-0.0240 (-0.215)
Observations	226	226	226	226	216	216	216	216
R-squared	0.028	0.031	0.031	0.031	0.081	0.099	0.082	0.084

**Table 5 – continued**

Panel B: Industry Concentration- Matched Sample								
	High				Low			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
After sequestration	0.0476 (0.585)	0.0706 (0.853)	0.0494 (0.458)	0.0494 (0.457)	-0.440*** (-2.651)	-0.473*** (-3.714)	-0.403*** (-3.462)	-0.405*** (-3.476)
After sequestration*Sequester Flag	-0.00483 (-0.0491)				0.326* (1.741)			
After sequestration*Sequester Exposure		-0.0351 (-0.271)				0.449*** (2.722)		
After sequestration*Avg. Sequester			-0.117 (-0.0505)				5.811*** (2.731)	
After sequestration*Wgt. Avg. Sequester				-0.117 (-0.0504)				5.949*** (2.858)
Size	0.379 (0.567)	0.393 (0.606)	0.379 (0.576)	0.379 (0.576)	1.203* (1.798)	1.029* (1.704)	1.053 (1.559)	1.057 (1.571)
Industry Concentration	0.0941 (0.197)	0.0952 (0.200)	0.0947 (0.197)	0.0946 (0.197)	2.307* (1.765)	2.079 (1.484)	2.040 (1.418)	1.973 (1.362)
R&D	-7.596 (-0.933)	-6.543 (-0.815)	-7.412 (-0.911)	-7.411 (-0.909)	25.34 (1.595)	16.35 (0.923)	25.87 (1.456)	25.94 (1.462)
Tobin's Q	0.129 (0.801)	0.130 (0.813)	0.130 (0.809)	0.130 (0.810)	0.0712 (0.562)	-0.0411 (-0.442)	-0.0284 (-0.284)	-0.0269 (-0.269)
Observations	138	138	138	138	138	138	138	138
R-squared	0.023	0.023	0.023	0.023	0.119	0.172	0.152	0.154

**Table 6. Firm Level Competition**

This table reports the results on the amount of lobbying in relation to the sequestration on March 1, 2013 for the subsamples of high and low firm level competition. Competition at the firm level is high if the ratio of a firm's competitive contracts to total contracts is above sample median, and is low otherwise. Panel A presents the estimation results of the full sample of 221 firms while Panel B presents the results of the matched sample of 138 firms which is created based on nearest 3 neighbor matching. The matching is based on the natural logarithm of total federal contract amounts in 2011 and 2012 fiscal years (October 1, 2010–September 30, 2012), natural logarithm of the total lobby amounts in the second and third quarter of 2012 (April 1–September 30, 2012), firm size and Fama-French 12 industries. After sequestration variable takes a value of 1 for the post-event period, which is the quarter after sequestration (April 1–June 30, 2013) and is zero for the pre-event period, the quarter before the sequestration (September 1–December 31, 2012). Lobbying is the natural logarithm of total lobby amount for each firm in the pre-event and post-event quarters. Sequestration flag takes a value of one for firms that has been exposed to sequestration. Sequester exposure is the total amount of contracts exposed to sequester as a ratio of total contracts. Average sequester ratio and weighted average sequester ratio represent the ratio of sequestered contracts to total contracts for each firm. In average sequester ratio, sequestered contracts are calculated according an equally weighted average of each Federal Agency's sequester ratio. In weighted average sequester ratio, the weighted average of sequester ratios for each Federal Agency is considered. In all these calculations regarding sequesterations, contracts exposed to sequester are determined according to the federal contracts obtained in the 2011–2012 fiscal years. Size is natural logarithm of total assets. Industry concentration is the Herfindahl-Hirschman index based on Text-based Network Industry Classifications extracted from the Hoberg Phillips Data Library, determined at the beginning of the period. R&D is research and development expense scaled by total assets. Tobin's Q is market value of assets to book value of assets calculated at the beginning of the period. Details on variable definitions are in Appendix 1. In each estimation, firm fixed effects are included and standard errors are clustered at the firm level. t-statistics are reported in brackets, where \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

Panel A: Firm Level Competition - Full Sample								
	High				Low			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
After sequestration	-0.509*** (-3.122)	-0.293** (-2.312)	-0.189 (-1.524)	-0.188 (-1.517)	0.00420 (0.0451)	-0.0488 (-0.464)	-0.0707 (-0.638)	-0.0765 (-0.686)
After sequestration*Sequester Flag	0.470*** (2.816)				0.0609 (0.518)			
After sequestration*Sequester Exposure		0.291* (1.958)				0.143 (0.957)		
After sequestration*Avg. Sequester			2.289 (1.100)				2.652 (1.142)	
After sequestration*Wgt. Avg. Sequester				2.274 (1.092)				2.793 (1.199)
Size	1.284* (1.938)	1.032 (1.523)	0.991 (1.339)	0.988 (1.332)	-1.350 (-1.145)	-1.404 (-1.228)	-1.407 (-1.274)	-1.410 (-1.284)
Industry Concentration	-0.463** (-2.214)	-0.391* (-1.740)	-0.369* (-1.672)	-0.368* (-1.668)	0.0386 (0.0834)	0.0187 (0.0398)	-0.0276 (-0.0579)	-0.0319 (-0.0668)
R&D	-6.922 (-1.146)	-11.88* (-1.678)	-9.359 (-1.292)	-9.336 (-1.289)	5.376 (1.263)	5.417 (1.268)	6.167 (1.408)	6.245 (1.425)
Tobin's Q	0.0766 (0.590)	-0.0147 (-0.112)	-0.0354 (-0.253)	-0.0355 (-0.253)	-0.00934 (-0.0614)	-0.0491 (-0.305)	-0.0744 (-0.448)	-0.0783 (-0.472)
Observations	222	222	222	222	220	220	220	220
R-squared	0.110	0.082	0.060	0.060	0.047	0.052	0.057	0.058

**Table 6 – continued**

Panel B: Firm Level Competition - Matched Sample								
	High				Low			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
After sequestration	-0.491*** (-2.825)	-0.358** (-2.055)	-0.252 (-1.525)	-0.251 (-1.516)	-0.0110 (-0.165)	-0.131 (-1.243)	-0.156 (-1.402)	-0.163 (-1.457)
After sequestration*Sequester Flag	0.468** (2.619)				0.0219 (0.212)			
After sequestration*Sequester Exposure		0.384* (1.930)				0.189 (1.280)		
After sequestration*Avg. Sequester			3.727 (1.348)				3.536 (1.568)	
After sequestration*Wgt. Avg. Sequester				3.709 (1.338)				3.729 (1.669)
Size	1.725** (2.592)	1.555** (2.532)	1.556** (2.447)	1.551** (2.427)	-0.421 (-0.587)	-0.629 (-0.842)	-0.639 (-0.870)	-0.647 (-0.880)
Industry Concentration	-0.501 (-1.043)	-0.361 (-0.698)	-0.275 (-0.567)	-0.273 (-0.562)	0.699** (2.212)	0.703** (2.150)	0.637* (1.905)	0.633* (1.882)
R&D	-12.75 (-0.967)	-21.15 (-1.291)	-18.02 (-1.151)	-17.98 (-1.147)	-4.176 (-0.342)	-7.551 (-0.551)	-7.483 (-0.528)	-7.562 (-0.528)
Tobin's Q	0.0561 (0.430)	-0.0305 (-0.222)	-0.0738 (-0.531)	-0.0742 (-0.533)	0.272 (1.461)	0.205 (1.074)	0.181 (0.988)	0.177 (0.968)
Observations	138	138	138	138	138	138	138	138
R-squared	0.131	0.124	0.097	0.097	0.043	0.056	0.068	0.070

**Table 7. Agency Level Competition**

This table reports the results on the amount of lobbying in relation to the sequestration on March 1, 2013 for the subsamples of high and low agency level competition. Competition at the agency level is high if the ratio of agency level competitive orders to agency level total orders are above sample median. Panel A presents the estimation results of the full sample of 221 firms while Panel B presents the results of the matched sample of 138 firms which is created based on nearest 3 neighbor matching. The matching is based on the natural logarithm of total federal contract amounts in 2011 and 2012 fiscal years (October 1, 2010–September 30, 2012), natural logarithm of the total lobby amounts in the second and third quarter of 2012 (April 1–September 30, 2012), firm size and Fama-French 12 industries. After sequestration variable takes a value of 1 for the post-event period, which is the quarter after sequestration (April 1–June 30, 2013) and is zero for the pre-event period, the quarter before the sequestration (September 1–December 31, 2012). Lobbying is the natural logarithm of total lobby amount for each firm in the pre-event and post-event quarters. Sequestration flag takes a value of one for firms that has been exposed to sequestration. Sequester exposure is the total amount of contracts exposed to sequester as a ratio of total contracts. Average sequester ratio and weighted average sequester ratio represent the ratio of sequestered contracts to total contracts for each firm. In average sequester ratio, sequestered contracts are calculated according an equally weighted average of each Federal Agency's sequester ratio. In weighted average sequester ratio, the weighted average of sequester ratios for each Federal Agency is considered. In all these calculations regarding sequestrations, contracts exposed to sequester are determined according to the federal contracts obtained in the 2011–2012 fiscal years. Size is natural logarithm of total assets. Industry concentration is the Herfindahl-Hirschman index based on Text-based Network Industry Classifications extracted from the Hoberg Phillips Data Library, determined at the beginning of the period. R&D is research and development expense scaled by total assets. Tobin's Q is market value of assets to book value of assets calculated at the beginning of the period. Details on variable definitions are in Appendix 1. In each estimation, firm fixed effects are included and standard errors are clustered at the firm level. t-statistics are reported in brackets, where \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

Panel A: Agency Level Competition - Full Sample								
	High				Low			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
After sequestration	0.0711 (1.434)	-0.247 (-1.069)	-0.237 (-1.127)	-0.236 (-1.120)	-0.211* (-1.912)	-0.139* (-1.662)	-0.124 (-1.531)	-0.126 (-1.551)
After sequestration*Sequester Flag	-0.0273 (-0.267)	0.348 (1.292)	6.078 (1.550)	6.076 (1.546)	0.209* (1.799)	0.163 (1.489)	1.984 (1.295)	2.035 (1.326)
After sequestration*Sequester Exposure	-1.042 (-0.813)				-0.381 (-0.325)			
After sequestration*Avg. Sequester		-1.062 (-0.814)				-0.399 (-0.345)		
After sequestration*Wgt. Avg. Sequester			-1.062 (-0.828)				-0.395 (-0.341)	
Size				-1.076 (-0.842)				-0.395 (-0.342)
Industry Concentration	-0.383 (-1.524)	-0.380 (-1.419)	-0.393 (-1.567)	-0.392 (-1.558)	-0.0722 (-0.211)	-0.0799 (-0.230)	-0.0929 (-0.268)	-0.0948 (-0.274)
R&D	-13.43*** (-2.894)	-19.35*** (-3.221)	-19.22*** (-3.374)	-19.21*** (-3.363)	2.925 (0.708)	2.463 (0.599)	2.707 (0.657)	2.730 (0.662)
Tobin's Q	0.0759 (0.343)	0.0865 (0.393)	0.0625 (0.301)	0.0594 (0.286)	-0.0103 (-0.0705)	-0.0682 (-0.479)	-0.0651 (-0.451)	-0.0656 (-0.456)
Observations	112	112	112	112	330	330	330	330
R-squared	0.048	0.069	0.074	0.073	0.023	0.021	0.019	0.019

**Table 7 - continued**

Panel B: Agency Level Competition - Matched Sample								
	High				Low			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
After sequestration	-0.181*	-0.222**	-0.215**	-0.215**	-0.169	-0.231	-0.217	-0.225
	(-1.883)	(-2.125)	(-2.120)	(-2.113)	(-0.374)	(-1.032)	(-1.042)	(-1.084)
After sequestration*Sequester Flag	0.175				0.132			
	(1.375)				(0.295)			
After sequestration*Sequester Exposure		0.274*				0.236		
		(1.703)				(0.933)		
After sequestration*Avg. Sequester			4.642**				3.060	
			(2.035)				(0.905)	
After sequestration*Wgt. Avg. Sequester				4.653**				3.228
				(2.033)				(0.958)
Size	0.519	0.438	0.502	0.500	0.823	0.775	0.730	0.729
	(0.640)	(0.586)	(0.661)	(0.657)	(0.767)	(0.738)	(0.700)	(0.701)
Industry Concentration	0.0471	0.0625	0.102	0.106	0.353	0.324	0.220	0.209
	(0.0701)	(0.0887)	(0.146)	(0.152)	(0.939)	(0.800)	(0.494)	(0.468)
R&D	-11.86	-19.83	-20.86	-20.93	-8.090	-11.77	-11.57	-11.82
	(-0.766)	(-1.153)	(-1.213)	(-1.211)	(-0.500)	(-0.823)	(-0.830)	(-0.846)
Tobin's Q	-0.0177	-0.00768	-0.0232	-0.0245	0.260	0.157	0.171	0.166
	(-0.128)	(-0.0559)	(-0.175)	(-0.185)	(1.267)	(0.722)	(0.764)	(0.746)
Observations	132	132	132	132	144	144	144	144
R-squared	0.031	0.049	0.051	0.050	0.026	0.037	0.037	0.039

**Table 8. Government Dependence**

This table reports the results on the amount of lobbying in relation to the sequestration on March 1, 2013 for the subsamples of high and low government dependence. Government dependence of a company is high if its Belo-Gala-Li industry government exposure measure at the 2-digit SIC is above sample median of 0.1, and government dependence is low otherwise. Panel A presents the estimation results of the full sample of 221 firms while Panel B presents the results of the matched sample of 138 firms which is created based on nearest 3 neighbor matching. The matching is based on the natural logarithm of total federal contract amounts in 2011 and 2012 fiscal years (October 1, 2010–September 30, 2012), natural logarithm of the total lobby amounts in the second and third quarter of 2012 (April 1–September 30, 2012), firm size and Fama-French 12 industries. After sequestration variable takes a value of 1 for the post-event period, which is the quarter after sequestration (April 1–June 30, 2013) and is zero for the pre-event period, the quarter before the sequestration (September 1–December 31, 2012). Lobbying is the natural logarithm of total lobby amount for each firm in the pre-event and post-event quarters. Sequestration flag takes a value of one for firms that has been exposed to sequestration. Sequester exposure is the total amount of contracts exposed to sequester as a ratio of total contracts. Average sequester ratio and weighted average sequester ratio represent the ratio of sequestered contracts to total contracts for each firm. In average sequester ratio, sequestered contracts are calculated according an equally weighted average of each Federal Agency's sequester ratio. In weighted average sequester ratio, the weighted average of sequester ratios for each Federal Agency is considered. In all these calculations regarding sequestrations, contracts exposed to sequester are determined according to the federal contracts obtained in the 2011–2012 fiscal years. Size is natural logarithm of total assets. Industry concentration is the Herfindahl-Hirschman index based on Text-based Network Industry Classifications extracted from the Hoberg Phillips Data Library, determined at the beginning of the period. R&D is research and development expense scaled by total assets. Tobin's Q is market value of assets to book value of assets calculated at the beginning of the period. Details on variable definitions are in Appendix 1. In each estimation, firm fixed effects are included and standard errors are clustered at the firm level. t-statistics are reported in brackets, where \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

Panel A: Government Dependence - Full Sample								
	High				Low			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
After sequestration	-0.223 (-1.498)	-0.0553 (-0.599)	-0.0468 (-0.523)	-0.0469 (-0.525)	-0.0916 (-0.706)	-0.220 (-1.566)	-0.131 (-0.959)	-0.136 (-0.992)
After sequestration*Sequester Flag	0.260* (1.688)				0.0930 (0.636)			
After sequestration*Sequester Exposure		0.0995 (0.852)				0.283 (1.568)		
After sequestration*Avg. Sequester			1.273 (0.783)				2.709 (0.934)	
After sequestration*Wgt. Avg. Sequester				1.277 (0.785)				2.846 (0.983)
Size	0.691 (1.065)	0.717 (1.162)	0.728 (1.183)	0.728 (1.183)	-1.689 (-1.128)	-1.628 (-1.133)	-1.645 (-1.146)	-1.640 (-1.145)
Industry Concentration	-0.0934 (-0.461)	-0.0675 (-0.330)	-0.0758 (-0.371)	-0.0755 (-0.370)	-0.450 (-0.353)	-0.463 (-0.359)	-0.471 (-0.365)	-0.478 (-0.370)
R&D	-0.608 (-0.144)	-1.136 (-0.261)	-0.968 (-0.223)	-0.968 (-0.223)	13.68 (0.546)	14.28 (0.588)	16.30 (0.688)	16.69 (0.706)
Tobin's Q	0.0682 (0.687)	0.0239 (0.220)	0.0209 (0.191)	0.0207 (0.189)	-0.502 (-0.658)	-0.604 (-0.792)	-0.580 (-0.750)	-0.581 (-0.754)
Observations	282	282	282	282	160	160	160	160
R-squared	0.037	0.021	0.021	0.021	0.081	0.099	0.088	0.089



**Table 8 – continued**

Panel B: Government Dependence - Matched Sample								
	High				Low			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
After sequestration	-0.265*	-0.206*	-0.228**	-0.229**	-0.165	-0.397*	-0.225	-0.227
	(-1.667)	(-1.793)	(-2.028)	(-2.036)	(-0.877)	(-1.699)	(-1.084)	(-1.089)
After sequestration*Sequester Flag	0.306*				-0.0119			
	(1.843)				(-0.0703)			
After sequestration*Sequester Exposure		0.292*				0.272		
		(1.955)				(1.157)		
After sequestration*Avg. Sequester			4.676**				1.038	
			(2.156)				(0.331)	
After sequestration*Wgt. Avg. Sequester				4.691**				1.096
				(2.163)				(0.351)
Size	0.784	0.695	0.712	0.712	0.695	1.144	0.786	0.783
	(1.124)	(1.050)	(1.089)	(1.088)	(0.317)	(0.494)	(0.347)	(0.347)
Industry Concentration	0.102	0.114	0.0742	0.0756	1.893	2.133	1.939	1.927
	(0.227)	(0.254)	(0.182)	(0.186)	(0.879)	(0.949)	(0.877)	(0.873)
R&D	-13.94	-17.26*	-18.95**	-18.99**	30.62	41.01	33.98	34.09
	(-1.382)	(-1.809)	(-2.120)	(-2.126)	(0.639)	(0.818)	(0.672)	(0.673)
Tobin's Q	0.0668	0.00925	-0.000876	-0.00177	0.844	0.921	0.842	0.843
	(0.618)	(0.0877)	(-0.00874)	(-0.0176)	(0.738)	(0.814)	(0.774)	(0.773)
Observations	164	164	164	164	112	112	112	112
R-squared	0.068	0.071	0.089	0.089	0.043	0.063	0.044	0.044

**Table 9. Agency Lobbying to Congress Lobbying Ratio**

This table reports the lobbying activity conducted in the agencies with respect to the lobbying in the House of Representatives and Senate. Total government agencies cited is divided to the total congress cited in the lobbying bills of the sample 221 firms. Comparison of this ratio across event line is reported. The quarter before sequestration corresponds to the pre-event period (October 1–December 31, 2012) and the quarter after the sequestration is the post-event period (April 1–June 30, 2013). Firms are sequestered if they have been exposed to sequestration. If any contracts obtained in the 2011–2012 fiscal period are exposed to sequestration, the firm is considered to be exposed to sequestration. t-statistics are reported in brackets, where \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

Agency Lobbying to Congress Lobbying Ratio - Full Sample			
	Sequestered	Non-sequestered	Difference
After Sequestration	0.71	0.50	0.21*
			(1.62)
Before Sequestration	0.79	0.63	0.16
			(0.98)
Difference	-0.09	-0.13	
	(0.90)	(0.69)	
Difference in Difference			0.04
			(0.21)

**Table 10. Contracts after Sequestration – Sequestered Firms**

This table reports the federal contracts obtained after the sequestration by federal contractors exposed to sequestration in relation to change in lobbying. The results are given for the full and matched samples. Total contracts obtained over one quarter after the sequestration Contracts (t, t+1) as well as those obtained over the two quarters after the sequester, Contracts (t, t+2) are reported. Contracts and lobbying are natural logarithm of the federal contract amounts and lobbying amounts respectively. Change in lobbying is the difference in the natural logarithm of lobbying between post-event (April-June 2013) and pre-event (June-December 2012) periods. The change in lobbying are divided into four quantiles and the results are reported for these quarters. The cutoffs for the change in lobbying quantiles are -0.2, 0, and 0.18 for the full sample, and -0.19, 0, and 0.16 for the matched sample. The mean difference tests are reported for the difference between the contracts that are obtained in the highest change in lobbying and lowest change in lobbying quantiles. For the mean tests t-statistics are reported in brackets, where \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

	Lobbying Difference Between Post and Pre-Event Periods				
	Q1 - Most Negative	Q2	Q3	Q4 - Most Positive	Q4-Q1
Full Sample					
Contracts (t,t+1)	8.1	8.0	9.7	10.2	2.1 (1.37)
Contracts (t, t+2)	9.8	10.9	12.3	12.9	3.1** (2.14)
Matched Sample					
Contracts (t,t+1)	5.7	5.5	5.2	7.3	1.6 (0.92)
Contracts (t, t+2)	7.9	9.0	9.8	10.2	2.3 (1.3)

**Table 11. Operating Performance – Sequestered Firms**

This table reports operating performance for sequestered firms for pre and post sequester periods. Operating performance is measured as return on assets (ROA) and return on equity (ROE). Industry adjusted ROA and ROE are determined by subtracting mean industry ROA and ROE at the 2-digit SIC level from the firm ROA and ROE, respectively. Industry adjusted ROA and ROE are reported for the quarter after sequestration as well as over 6 months after the sequestration (ROA(6mo) and ROE(6mo)). Before sequestration is the pre-event period which is the quarter before sequestration (October 1–December 31, 2012), and After sequestration is the post-event period, which is the quarter after the sequestration is the post-event period (April 1–June 30, 2013). Mean values, differences in mean values and the t-statistics of the differences are provided. \*, \*\*, and \*\*\* represent statistical significance at the 10percent, 5percent, and 1percent level, respectively.

	Full Sample				Matched Sample			
	ROA	ROA(6mo)	ROE	ROE (6mo)	ROA	ROA(6mo)	ROE	ROE (6mo)
Lobbying	0.021 (0.390)	0.028 (0.229)	-0.056 (-0.571)	-0.317 (-0.791)	0.037 (0.452)	0.029 (0.172)	0.012 (0.0828)	-0.003 (-0.00918)
After Sequestration	0.025 (0.150)	0.267 (0.633)	-0.183 (-0.724)	0.914 (0.990)	0.003 -0.023	0.716 (1.322)	0.440 (1.211)	1.557 (1.488)
Lobbying*After Sequestration	-0.003 (-0.199)	-0.019 (-0.582)	0.024 (1.148)	-0.069 (-0.945)	-0.002 (-0.267)	-0.053 (-1.320)	-0.03 (-1.018)	-0.115 (-1.481)
Size	0.05 (0.319)	0.851 (1.444)	0.001 (-0.518)	0.001 (0.775)	-0.210 (-1.120)	1.193 (1.123)	0.001 (0.124)	0.001 (0.0455)
R&D	0.611 (0.213)	-1.788 (-0.473)	-9.498 (-1.339)	-23.63 (-1.346)	-4.317 (-0.969)	5.193 (0.738)	-16.31 (-0.920)	-31.81 (-1.164)
Industry Concentration	0.003 (0.0220)	0.089 (0.417)	-0.682 (-1.464)	0.251 (0.483)	-0.254 (-1.432)	0.327 (0.587)	-1.559 (-1.508)	0.860 (0.732)
Observations	400	400	384	384	240	240	236	236
R-squared	0.002	0.015	0.046	0.023	0.035	0.036	0.082	0.031
Number of num_parent_id	200	200	192	192	120	120	118	118

### Appendix 1. Variable Descriptions and Data Sources

Variable	Description	Source(s)
Lobby (log)	Natural logarithm of the total lobby amount for each quarter	Lobbying Disclosure Act database provided by the United States Senate Office of Public Records ( <a href="http://www.senate.gov/legislative/opr.htm">www.senate.gov/legislative/opr.htm</a> ).
After Sequestration	Indicator variable that takes a value of 1 for the quarter after sequestration (post-event period: April 1–June 30, 2013) and is zero for the quarter before sequestration (pre-event period: October 1–December 31, 2012). Sequestration happened on March 1, 2013.	By authors
Sequester Flag	Indicator variable that takes a value of 1 in the post-event period, April 1–June 30, 2013 for a sequestered firm. If any contracts obtained in the 2011–2012 fiscal period is exposed to sequestration, the firm is considered to be exposed to sequestered.	usaspending.gov Office of the Management and Budget (OMB) ( <a href="https://www.whitehouse.gov/omb/budget/Historicals">https://www.whitehouse.gov/omb/budget/Historicals</a> )
Sequester Exposure	Firm's exposure to sequestration is defined as the total dollar amount of a firm's sequestered contracts, scaled by total dollar amount of a firm's all contracts. This ratio is calculated based on the federal contracts obtained in the 2011–2012 fiscal period (October 1, 2010–September 30, 2012).	usaspending.gov OMB ( <a href="https://www.whitehouse.gov/omb/budget/Historicals">https://www.whitehouse.gov/omb/budget/Historicals</a> )
Average Sequester Ratio	$\frac{\sum_{k=1}^K \sum_{l=1}^L \text{contract amount}_{ikl} \times \text{simple average seqratio}_{kl}}{\text{Sum of all contract amount}_i}$ , $i$ denotes firm, $k$ denotes federal agency and $l$ denotes federal agency account. Average sequester ratio for each firm. For each firm, the sum of the federal contract amount multiplied by the average sequestration ratio of the corresponding Federal agency's account scaled by the total dollar amount all federal contracts obtained by that firm. The calculation is based on the federal contracts obtained in the 2011–2012 fiscal period (October 1, 2010–September 30, 2012).	usaspending.gov OMB ( <a href="https://www.whitehouse.gov/omb/budget/Historicals">https://www.whitehouse.gov/omb/budget/Historicals</a> )
Weighted Average Sequester Ratio	$\frac{\sum_{k=1}^K \sum_{l=1}^L \text{contract amount}_{ikl} \times \text{weighted average seqratio}_{kl}}{\text{Sum of all contract amount}_i}$ , $i$ denotes firm, $k$ denotes federal agency and $l$ denotes agency account. Weighted average sequester ratio for each firm. In the OMB file, some accounts have different sequestration ratios for the same Federal Agency. Weighted average of these ratios based on the amount granted by each Federal Agency account in a Federal Agency is constructed. Weighted Average Sequester Ratio reports, for each firm, the sum of the federal contract amount multiplied by this weighted average sequestration ratio of the corresponding Federal agency's account scaled by the total dollar amount all federal contracts obtained by that firm. The calculation is based on the federal contracts obtained in the 2011–2012 fiscal period (October 1, 2010–September 30, 2012).	usaspending.gov OMB file ( <a href="https://www.whitehouse.gov/omb/budget/Historicals">https://www.whitehouse.gov/omb/budget/Historicals</a> )

Federal Contracts		A firm's total federal contract amounts in 2011–2012 fiscal periods (October 1, 2010–September 30, 2012)	usaspending.gov
Size		Natural logarithm of the total assets (ATQ), measured at the beginning of the period	COMPUSTAT
Tobin's Q		(Total assets (ATQ) + Quarter-end share price (PRCC_Q)*Number of shares outstanding (CSHOQ) - Book value of equity (CEQQ))/Total assets, measured at the beginning of the period	COMPUSTAT
R&D		Research and Development Expense (XRDQ), scaled by beginning-of-period total assets (ATQ)	COMPUSTAT
ROA		Return on assets. Return on assets is (Net Income (NIQ)/Beginning of period Total assets (ATQ).	COMPUSTAT
ROA (Industry adjusted)	(Industry adjusted)	ROA adjusted to industry by subtracting mean industry ROA values at the 2-digit SIC level are subtracted from firm ROA values.	COMPUSTAT
ROE		Return on equity. Return on assets is (Net Income (NIQ)/Beginning of period stockholders' equity (TEQQ).	COMPUSTAT
ROE (Industry adjusted)	(Industry adjusted)	ROE adjusted to industry by subtracting mean industry ROE values at the 2-digit SIC level are subtracted from firm ROE values.	COMPUSTAT
Industry Concentration		Annual basis Herfindahl-Hirschman Index based on Text-Based Network Industries (TNIC), measured at the beginning of the period	Hoberg-Phillips Data Library
Firm Competition	Level	Ratio of a firm's competitive contracts to total contracts in 2011-2012 fiscal periods. A contract is competitive if "Extend Competed" is either A: Full and Open Competition or CDO: Competitive Delivery Order	usaspending.gov
Agency Competition	Level	Agency level competition is as follows: $avg.competition.agency_i = \sum_{j=i}^m \frac{N_{ij}C_j}{\sum_{j=1}^m N_{ij}}$ <p>In this calculation, <math>C_j</math> is the ratio of competitive contracts to total contracts in agency <math>j</math>. <math>N_{ij}</math> is the total number of contracts firm <math>i</math> gets from agency <math>j</math>. <math>m</math> is the number of firms in the sample.</p>	usaspending.gov
Government Dependence		Government dependence is the industry exposure to government spending determined by Belo-Gala-Li (2013) at the sector level based on the Benchmark Input-Output Accounts released by Bureau of Economic Analysis. This measure is used at the 2-digit SIC level for the sample.	Belo, Gala and Li (2013)

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**Appendix 2. Lobbying Reports: A Sample**

LD-2 Disclosure Form

https://soprweb.senate.gov/index.cfm?event=getFilingDetails&filingID...

Clerk of the House of Representatives Legislative Resource Center B-106 Cannon Building Washington, DC 20515 <a href="http://lobbyingdisclosure.house.gov">http://lobbyingdisclosure.house.gov</a>	Secretary of the Senate Office of Public Records 232 Hart Building Washington, DC 20510 <a href="http://www.senate.gov/lobby">http://www.senate.gov/lobby</a>
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**LOBBYING REPORT**

Lobbying Disclosure Act of 1995 (Section 5) - All Filers Are Required to Complete This Page

1. Registrant Name <input checked="" type="checkbox"/> Organization/Lobbying Firm <input type="checkbox"/> Self Employed Individual Thorn Run Partners	
2. Address Address1 1720 Eye Street, NW Address2 Suite 400 City Washington State DC Zip Code 20006 Country USA	
3. Principal place of business (if different than line 2) City _____ State _____ Zip Code _____ Country _____	
4a. Contact Name Mr. W. Christopher Lamond	b. Telephone Number 8009442167
c. E-mail clamond@thornrun.com	
5. Senate ID# 400534596-24	
7. Client Name <input type="checkbox"/> Self <input type="checkbox"/> Check if client is a state or local government or instrumentality Xerox Business Services, LLC and its Affiliates	
6. House ID# 411610013	

**TYPE OF REPORT** 8. Year 2012 Q1 (1/1 - 3/31)  Q2 (4/1 - 6/30)  Q3 (7/1 - 9/30)  Q4 (10/1 - 12/31)

9. Check if this filing amends a previously filed version of this report

10. Check if this is a Termination Report  Termination Date \_\_\_\_\_ 11. No Lobbying Issue Activity

INCOME OR EXPENSES - YOU MUST complete either Line 12 or Line 13	
<p align="center"><b>12. Lobbying</b></p> <p>INCOME relating to lobbying activities for this reporting period was:</p> <p>Less than \$5,000 <input type="checkbox"/></p> <p>\$5,000 or more <input checked="" type="checkbox"/> \$ <u>30,000.00</u></p> <p>Provide a good faith estimate, rounded to the nearest \$10,000, of all lobbying related income from the client (including all payments to the registrant by any other entity for lobbying activities on behalf of the client).</p>	<p align="center"><b>13. Organizations</b></p> <p>EXPENSE relating to lobbying activities for this reporting period were:</p> <p>Less than \$5,000 <input type="checkbox"/></p> <p>\$5,000 or more <input type="checkbox"/> \$ _____</p> <p><b>14. REPORTING</b> Check box to indicate expense accounting method. See instructions for description of options.</p> <p><input type="checkbox"/> Method A. Reporting amounts using LDA definitions only</p> <p><input type="checkbox"/> Method B. Reporting amounts under section 6033(b)(8) of the Internal Revenue Code</p> <p><input type="checkbox"/> Method C. Reporting amounts under section 162(e) of the Internal Revenue Code</p>

Signature Digitally Signed By: W. Christopher Lamond, Partner

Date 01/19/2013

**LOBBYING ACTIVITY.** Select as many codes as necessary to reflect the general issue areas in which the registrant engaged in lobbying on behalf of the client during the reporting period. Using a separate page for each code, provide information as requested. Add additional page(s) as needed.

15. General issue area code FIN

16. Specific lobbying issues

Issues related to the implementation of the Dodd-Frank Wall Street Reform and Consumer Protection Act and financial services.

17. House(s) of Congress and Federal agencies  Check if None

U.S. HOUSE OF REPRESENTATIVES, U.S. SENATE

18. Name of each individual who acted as a lobbyist in this issue area

First Name	Last Name	Suffix	Covered Official Position (if applicable)	New
W. Christopher	Lamond			<input type="checkbox"/>
Andrew	Rosenberg			<input type="checkbox"/>

19. Interest of each foreign entity in the specific issues listed on line 16 above  Check if None

### Appendix 3. Industry Composition

Fama-French Code	Industry	Full Sample			Matched Sample		
		Observations	Sequestered	Not Sequestered	Observations	Sequestered	Not Sequestered
1	Nondurable consumer	26	26		2	2	
2	Durable consumer	8	8				
3	Manufacturing	56	54	2	22	20	2
4	Energy	10	10				
5	Chemicals	22	20	2	16	14	2
6	Business equipment	74	72	2	38	36	2
7	Telecommunication	14	12	2	12	10	2
8	Utilities	64	62	2	62	60	2
9	Wholesale	14	14		6	6	
10	Healthcare	54	34	20	48	30	18
11	Finance	40	34	6	30	26	4
12	Other	60	60		40	40	
	<i>Total</i>	<i>442</i>	<i>406</i>	<i>36</i>	<i>276</i>	<i>244</i>	<i>32</i>