Why Don't Firms Lobby?*

Information failure on the market for lobbying services

Benjamin CK Egerod† Lasse Aaskoven‡

September 13, 2022

Abstract

Why do some firms lobby consistently while others never lobby at all? We argue that there are information failures on the lobbying market, and most firms don't know the returns to lobbying. This implies that even when there are large returns associated with a political presence, most firms will not lobby. Three findings support this theory. First, using a text-based measure of firm-level political risk and a quasi-experiment we show that firms rely on default behavior when reacting to changes in their political environment. Only firms that already have a political presence use lobbying to deal with political risk. Second, firms start lobbying when they receive an influx of information about political strategy in other firms. Finally, there are large financial returns associated with lobbying, but they only accrue after several years. Our results suggest that information failures keep firms from lobbying that would benefit from it. This has large consequences for the input available to decision-makers.

*We thank Bernie Black for sharing his team's data on the SEC's short-selling experiment with us. We also thank (alphabetically) Peter Bils, Jonas Eriksen, Zoltan Fazekas, Sandy Gordon, Anne Jamison, Mogens Justesen, Sigrid Koob, Michael Mueller, Maria Silfa, Jan Stuckatz, Sebastian Thieme, and Elisa Wirsching for insightful comments. Previous versions of the paper were presented at the 2021 APSA pre-conference on Frontiers of Money in Politics, and the CBS Money in Politics Conference. We are still working towards incorporating all of the excellent comments in the manuscript.

†Assistant Professor, Department of International Economics, Government and Business, Copenhagen Business School. Stigler Fellow, Chicago Booth School of Business.

‡Associate Professor, Department of Political Science and Management, University of Southern Denmark. E-mail: aaskoven@sam.sdu.dk

1 Introduction

Why do some firms lobby consistently while others never lobby at all? A rich theoretical (Olson 1989; Stigler 1971) and empirical (De Figueiredo and Richter 2014; Oliver and Holzinger 2008) literature examines what pushes firms to engage in politics on their own. However, in its strive to explain why some firms lobby the literature seldom recognizes how rare lobbying actually is among corporations. While corporate expenditures account for the lion's share of lobbying (Drutman 2015), the overwhelming majority of publicly held firms never lobby. Thus, in 2017 only approximately 10% of publicly traded corporations lobbied either in-house or through a contract lobbying firm (Huneeus and Kim 2018). However, existing research suggests that there are important financial gains to be made from lobbying (Huneeus and Kim 2018; Richter et al. 2009). This raises the question: Why do so few firms lobby despite the large financial returns?

We argue that there are strong information failures on the market for lobbying services. The returns to lobbying are shrouded with uncertainty, and eliminating them by gathering information is costly. Thus, the typical firm simply does not know that it would benefit from lobbying. Combined with the relatively high fixed cost of entry, this market imperfection keeps out many corporations that could benefit from lobbying. However, after information about the returns is gathered and entry costs are paid, lobbying becomes the default solution for firms to deal with their political environments. Our argument implies that even when lobbying would produce large financial returns by decreasing politically induced costs, most firms would not have a political strategy.

We present three sets of findings that support this theory. First, we show that firms indeed rely heavily on default behavior when dealing with their political environment. Using text-based measures of the firm's political environment matched to lobbying disclosure reports, we show that firms react to changes in their political environment by increasing their lobbying activity—but only if they have a history of lobbying. We uncover extremely precise null correlations among firms that have never lobbied before. To verify that these findings are causal, we use a fully randomized natural experiment. We leverage a pilot program by the Securities and Exchange Commission (SEC), which randomly removed

the short selling restriction on one-third of the Russell 3000 companies. This represents a change in the political environment of a random subset of firms. Once again, we uncover a very precise null effect of the pilot program among firms with no history of lobbying—the remaining firms increase their lobbying activity to varying degrees. These findings are striking, because generalized political risk has been found to reduce the economic performance of firms (Iqbal et al. 2020). Firms that stay out of lobbying, thus, carry a financial cost, which politically active firms avoid. Importantly, this also shows that the returns to lobbying, and the costs to political risk, are concentrated at the firm-level. Therefore, firm membership of business associations alone does not solve the puzzle of why firms do not lobby.

Second, we provide support for the idea that firms do not lobby, because they lack information. We do so by showing that when they receive information about the returns to lobbying in other corporations, they start lobbying, too. To get at this, we use a set of difference-in-differences and triple difference designs showing that when the firm appoints a director, who has previously served on boards of firms that lobby, the firm becomes more likely to establish a lobbying presence. In our preferred specification, the lowest plausible effect suggests that the arrival of such a director doubles the likelihood of filing the first lobbying report in the firm's history, relative to the unconditional probability. Two results suggest that this is not driven by firms appointing directors with experience from lobbying, because they know they will start lobbying soon. First, when the new director is appointed to replace someone who died while serving on the board, this still increases the probability of firms filing their first lobbying report. Second, if a firm has appointed a director with lobbying experience within the past three years, a shock to the firm's political risk exposure *is* associated with increased lobbying activity – even among firms that have never filed a report. This finding is striking, when compared to the very precise null correlation between risk and lobbying in this subset of firms. It suggests that the new director brings with them a preference for using lobbyism to deal with political risk, and that this shapes the firm's strategy.

Finally, we provide new evidence on the returns to lobbying through two findings.

First, we show that financial returns in part accrue, because lobbying is an effective means of dealing with political risk factors. In particular, we find that among firms that do not lobby, an increase in political risk is associated with a decrease in revenue. This association disappears as firms lobby more intensively. Additionally, we show that the returns only materialize after a period of four years. This is consistent with the notion that it takes time to establish a political presence. At that point the average firm will have spent $1.8 million on its lobbying endeavor. These findings help us understand one of the mechanisms driving financial returns to lobbying. Additionally, they hint at the cost a firm should be willing to carry to start a successful lobbying campaign.

Business groups spend more on lobbying than any other type of organized interest (Baumgartner and Leech 1998, 2001). There is reason to believe that their lobbying efforts shape policy agendas and outcomes (e.g Butler and Miller 2021; Garlick 2021). Importantly, individual firms far outspend classical forms of business interests (Drutman 2015). Therefore, if we are to understand the composition of the 'heavenly chorus' of influence-seeking organizations (Schattschneider 1960), we need to understand why firms mobilize. The fact that so few firms actually spend money on political activities has been taken as evidence that firms either are irrational (Munger 1988) or that their political activities only matter little for policy outcomes (see Ansolabehere et al. 2003; Gordon et al. 2007; Tullock 1989 on campaign donations). This is in striking contrast to research showing that there are large financial returns to corporate lobbying (Huneeus and Kim 2018; Richter et al. 2009). We console this discrepancy in the literature by showing that information failures on the market for lobbying, combined with high fixed costs, restricts entry by corporations who would benefit from a political presence. Even when faced with costly firm-specific political risk—where lobbying presents a significant private benefit—few corporations engage in politics. Firms only start lobbying when they receive information about its returns. Obtaining such information is costly, so few firms actively gather it. This has consequences for the individual firm, because lobbying provides competitive advantages (see Huneeus and Kim 2018). Perhaps more importantly, the frictions on the market for lobbying services constrain the set of actors that provides input for the

political system, biasing the information available to decision-makers.

2 Why Firms Lobby

Lobbyism is one of the most salient channels through which the interests of groups in society are transmitted into the political system (Grossman and Helpman 2001). However, for the interest group system to be representative, free entry into the lobbying market is necessary. While the biases of the overall system of interest groups are well documented (Baumgartner and Leech 1998, 2001; Yackee and Yackee 2006), we know little about why corporations that choose to lobby are not representative of firms as such. The large literature on corporate lobbying in political science and strategic management has focused overwhelmingly on why firms choose to lobby on their own (for a review see Oliver and Holzinger 2008), but does not provide an explanation for why most firms never lobby.

The existing research has shown that the diversity of the firm's economic context (Brasher and Lowery 2006) and managerial incentives push firms into lobbying (Kim 2008). We also know that, because lobbying is costly, a firm needs to reach a certain level of resources for lobbying to make sense (Drope and Hansen 2006). Importantly, consistent with seminal theoretical contributions (Grossman and Helpman 1994; Olson 1989; Stigler 1971), a firm's need for protection against competition (Egerod and Justesen 2021; Kim 2008) and its exposure to government contracts and regulation (Hansen and Mitchell 2000) predict its engagement in politics. Additionally, the long-held theoretical prediction (Olson 1989) that concentrated industries should see more political activity has not received strong support (Hansen et al. 2005; Munger 1988).

However, all firms are exposed to the political realm in some way. Even if they do not depend on government contracts, they have to abide by government regulations, and have to interact routinely with regulators (Gordon and Hafer 2005). Additionally, all firms are exposed to varying levels of political uncertainty, as the future states of their regulatory environment are unknown (Hassan et al. 2019). Furthermore, a broad literature suggests that the average firm stands to gain millions of not billions from lobbying (Huneeus and Kim 2018; Richter et al. 2009). This raises the question of why so few firms lobby. If

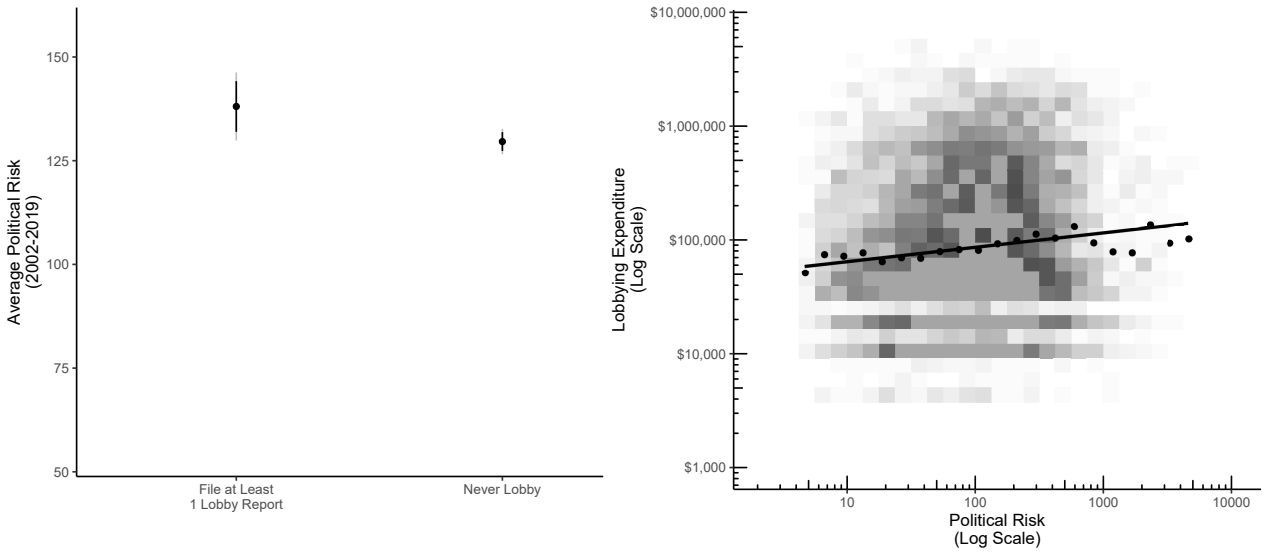
exposure to the political world, indeed, does push firms into lobbying activity, and there are large returns to lobbying, we would expect a much larger share of politically active firms. Figure 1 puts a finer point on this by showing that while exposure to political uncertainty *is* correlated with lobbying in a statistically significant way, the association is very weak. Firms that are exposed to higher levels of political risk do lobby more—but not much: A tenfold increase in political risk is only associated with an increase in lobbying expenditures amounting to a few thousand. We delve further into this later, where we show that the weak correlation is driven by the fact that the effect of political risk is almost exactly zero among the very large majority of firms. In other words, 90% of firms never choose to engage with politics no matter their political environment—even if a return to political activity is to be expected.

This presents us with an important and overlooked puzzle in the literature on corporate lobbying, which we address in this paper: Why do most corporations never lobby despite changes in their political environment that affect their bottom line? We argue that this is because of information failures on the market for lobbying services.

In the following, we first synthesize the existing literature arguing that political risk should push firms into lobbying. Second, we address the elephant in the room by presenting our argument for why some firms react to changes in their political environment by engaging in lobbyism, while the majority never engage politically no matter their political risk exposure.

2.1 Corporate Lobbying and Political Risk

While corporations may be exposed to the political world in a variety of ways, one of the most studied forms of exposure is political uncertainty or risk. All types of firms have to concern themselves with political risks to some degree. Political risk can take the form of uncertainty over future business regulation, tax rates and other types of government intervention, stemming from close elections, changes to congressional committee composition, intense political negotiations, changes to regulatory structures and institutions as well as international events (Baker et al. 2016). These sources of uncertainty and risk



(a) Firm Lobbying and Political Risk Levels **(b)** Political Risk and Lobbying Expenditure

Figure 1: Political Risk Weakly Predicts Corporate Lobbying. *Note:* The figure shows the relation between political risk and lobbying activity among publicly held firms. Firms that lobby and firms that don't are similarly exposed to political risk. Political risk measured with data from Hassan et al. (2019), lobbying measured with data from Kim (2018). Further data details in section 3. Firms that never lobby are excluded in panel b for aesthetic purposes.

can have a profound impact on firms. Importantly, the cost often arises, because the firm does not know the state of the future regulatory environment—not because politicians impose policies that are unfriendly to business (Canes-Wrone and Park 2012). The uncertainty about future policy causes significant frictions, forcing firms to postpone important decisions, e.g. their employment and investment decisions (Gulen and Ion 2015; Al-Thaqeb and Algharabali 2019; Canes-Wrone and Park 2012; Canes-Wrone and Park 2014). Ultimately, this harms the firms' financial returns significantly (Iqbal et al. 2020).

However, the influence of political risk on firm performance is not uniform across all types of firms. Apart from certain firm characteristics (Gulen and Ion 2015), there is also growing evidence that firms' relationship to the political system can sometimes mitigate the negative effect of political risks (Acemoglu et al. 2016). One such relationship between corporations and the political system is lobbying, through which we argue that firms can mitigate the negative effects of increased political uncertainty. This is consistent with the view of lobbying as insurance (Ban et al. 2019; LaPira and Thomas 2017; Liu 2020), where firms mobilize politically to extract information about upcoming policy-changes,

thereby reducing uncertainty.

Through lobbying, firms can extract the information they need to navigate successfully during periods of increased political risks. Lobbying usually involves substantial exchanges of information in a two-way process, which can give the lobbying firm access to information about the likely states of future regulatory environments (Finer 2018). This decreases the uncertainty during times of increased political risks. Therefore, increased access to information from policymakers, and thus decreased uncertainty, should mitigate the negative impact of increased political risk for corporations.

In sum, the reason we are interested in generalized political risk is that it induces a type of cost on firms, which can be mitigated through lobbying. Consequently, we argue that an increase in firm-specific political risk should lead to an incentive for firms to increase their lobbying activity. Additionally, we argue that an increase in lobbying activity should decrease the negative effects of political risk on firms' financial performance.

2.2 Why Firms Don't Lobby Despite Positive Returns

The account where firms eliminate political uncertainty by hiring lobbyists to gather information requires that firms can enter the market for lobbying services with little friction, subject to a fixed cost common to everyone. However, if this were the case, we would expect two things. First, corporations would be uniformly pushed into lobbying when they observe costly changes in their political environments. Second, returns to lobbying would be driven to zero by entry. In the following, we will argue that all firms are not aware of the returns to lobbying. The deterrent effect of this entry barrier is compounded by large fixed costs associated with building a political presence.

2.2.1 Information Failure and Fixed Costs of Lobbying

Our main argument is that most firms do not know what the returns to lobbying would be for them. This creates an information failure on the market, which makes it difficult for firm managers to trade off costs and benefits of developing a political strategy. Even while external factors like political risk may harm the company, they do not know whether

lobbying to reduce such costs would be worthwhile.

Policy is unpredictable, and while returns to lobbying may be positive in expectation, they are highly uncertain (Drutman 2015). This uncertainty can be eliminated, but arriving at good estimates of the returns to lobbying requires effort, and is costly for the firm's management. This is compounded by the principal-agent problem inherent in lobbying: since the lobbyist always has an incentive to overstate her value, the firm can never truly trust the lobbyist's estimate of the returns to a political strategy (Hirsch et al. 2019).

This creates an inherent uncertainty surrounding the benefits of lobbying. On the other hand, the costs of building a political presence are more easily discernible. Importantly, the firm cannot simply hire a lobbyist and expect information to start flowing. Rather, successful information extraction requires that the firm already has developed its skills for political maneuvering, and has established networks among policymakers and regulatory agencies. These can then be activated during periods of risk and uncertainty. Building on the analogy of firm insurance prevalent in the literature (Ban et al. 2019; LaPira and Thomas 2017; Liu 2020), one would expect that increased firm-risk would make firms with existing insurance policies more likely to increase their premiums but would not cause firms without insurance policies to start buying these (Mayers and Smith 1982).[1] Importantly, building such a political presence requires paying a high fixed cost (Bombardini 2008). There are two elements to these entry costs.

First, as Drutman (2015, ch. 6) argues, corporations have to invest in political skills before lobbying makes sense. Importantly, they have to build the ability to define their political goals in more concrete terms than, e.g., a lower regulatory burden. While the firm will use lobbyists to consult and help define workable policy goals, successful lobbying requires that management invests some of its own time in the endeavor. Managers have to build a political mindset, and develop an understanding of the firm's political goals as well as how to obtain them. This is all part of building corporate political capacity (Martin 1999).

[1] See also Colquitt and Hoyt (1997) for additional evidence on corporate risk management.

Second, an important reason for hiring a lobbyist is to buy into her network (Blanes i Vidal et al. 2012; Hirsch et al. 2019; McCrain 2018). While this helps the firm, it still has to establish its own political presence—the policymakers may know the lobbyist the firm has hired, but they still have to get to know and understand the firm, its operations, and come to trust the information it delivers (Drutman 2015, p. 129).

In a nutshell, eliminating the uncertainty surrounding the returns to lobbying requires that the firm's management at least has a basic understanding of the knots and bolts of lobbying as well as policymaking. They need to build political capacity themselves in order to be able to define the firm's policy goals and understand the political environment. Finally, a political presence does not arise over night. Even if the firm relies on contract lobbyists, it has to build long-term relationships with political decision-makers.

Based on this discussion, we can moderate the prediction about the impact of political risk on firm lobbying and revenue. First, firms should only react to political risk by lobbying if they already have built a political presence. For that type of firm, lobbying becomes a default solution to deal with political risk factors. For those with no pre-existing political engagement, lobbying does not enter as a solution to political problems, because they do not know the returns, but can easily estimate the costs. Second, since a lobbying campaign is not built over night, any positive return should be realized with a significant time lag. This compounds the cost a firm has to be willing to carry in order to build a successful lobbying campaign.

2.2.2 Overcoming Information Failure on the Market for Lobbying Services

How do firms overcome the information failure on the market for lobbying services? One way is to learn from established practices of other corporations. Management research suggests that one important way firms learn from each other is through networks of shared board members. In particular, the arrival of a new member of the board of directors transfuses information from other firms into the organization (McDonald et al. 2008). This allows the corporation to learn about successful and unsuccessful strategies elsewhere (Zhu and Chen 2015). This is particularly useful for firms that have little knowledge about

the context they are supposed to make decisions about (Xia et al. 2018).

The previous literature shows how the arrival of an experienced director can shape acquisition (McDonald et al. 2008; Zhu and Chen 2015), particularly in foreign countries where managers have little to no contextual knowledge (Xia et al. 2018; Zhu and Chen 2015). This is comparable to the situation of firm managers who have no experience with the political realm, but find themselves in a situation of heightened political risk. The new board member—who has served as a director of a firm that lobbies—arrives with information about the standard practices in other firms, and how the previous company evaluated the effectiveness of its lobbying activity. It is important to note that the director typically is not involved in the daily operations of the firm, but rather provides advice for the longer term, and acts as a check on senior management (Lorsch and Maciver 1989). However, she will likely question why there has not been developed a political strategy, and share her experience with it in her former positions. In this way, the new arrival transfuses information about lobbying into the corporation, making it more likely that firms will establish a political presence, where they previously had none.

2.3 Implications for firm behaviour

The above reasoning leads to three observable implications for how an increase in political risk shape firm behaviour and outcomes with regards to lobbying and its impact on firm performance.

First, When faced with immediately increased political risk, a firm with current lobbying activity will increase its lobbying activity, whereas a non-lobbying firm facing the same increase in political risk will not immediately start lobbying due to lack of information about the lobbying market.

Second, the increase in lobbying activity enables the lobbying firm to mitigate the negative consequences of increased political risk, whereas the non-lobbying firm is faced with the negative consequences of increased political risk on the firm's strategy. E.g., new investment has to be postponed, the firm has to forego new sales contracts etc. Consequently, the increased political risk has a substantial negative impact of the non-

lobbying firm's performance (including revenue), whereas the lobbying firm, due to the risk-mitigating effect of (increased) lobbying, is able to have unchanged or at least less negatively impacted performance.

Finally, when a director with previous experience from lobbying firms arrive, they can help firms acquire the information they need to pursue a lobbying strategy. This, in turn, will push the previously non-lobbying firm into lobbying activity.

The comparison between how increased political risk dynamically affect firm behaviour and performance and how this differs between the lobbying status of the firms is presented in Figure 2. The figure should not be considered as ranking the importance of the implications, but rather as depicting a stylized process over abstract time-periods. While all of the implications help shed light on the theory, the tests regarding the arrival of directors should be given most weight in evaluating the balance of the evidence.

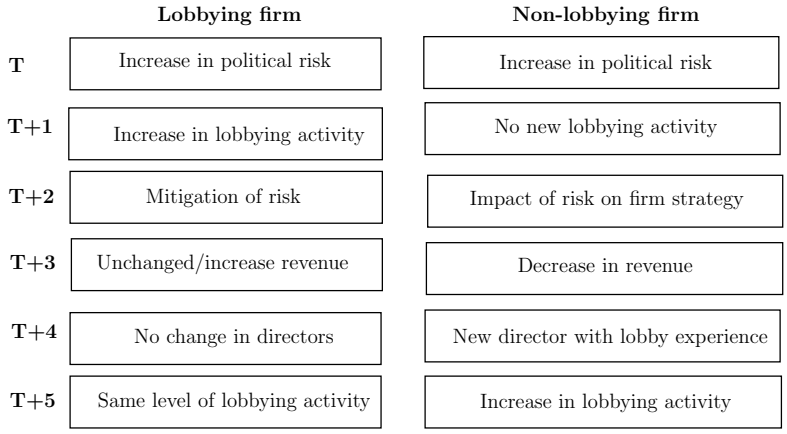


Figure 2: Observable Implications of Information Failure on the Market for Lobbying Services.

3 Empirical Strategy

Testing our three observable implications about the political behavior of firms requires a number of different data sources and that we confront issues related to causal identification. Here, we outline our strategy for testing each of the three predictions.

3.1 Political Risk and Lobbying: Data and Identification

Our first prediction is that firms should only use lobbying to deal with political risk if they already have established a lobbying presence. To investigate this, we draw on several sources of firm-level data. First, to capture firm-level risk in a general sense, we draw on Hassan et al. (2019) who construct a text-based measure. They leverage the fact that most publicly listed corporations hold quarterly earnings conference calls, where management shares its view on firm performance. To the extent that political risk factors are deemed to play a part in shaping earnings, these calls can be used to quantify management's assessment of the firm's political risk exposure. Combining dictionaries of words related to politics and risk, Hassan et al. (2019)'s measure capture the proportion of a conference call that contains political risk bigrams.

Second, we draw on a newly released data on corporate lobbying made available in the LobbyView database (Kim 2018). Kim (2018) collects the original lobbying filings made under the Lobbing Disclosure Act, and applies a series of machine learning techniques to parse them correctly. For our purposes, this data represents a large improvement over other public sources, e.g. bulk data from the Center for Responsive Politics (CRP), because it contains the unique *COMPUSTAT* firm identifier that allows us to easily match lobbying behavior to firm-level risk and financial characteristics. We measure lobbying activity at the extensive margin (whether a firm filed a lobbying report in the given quarter), and the intensive margin (the logged expenditure on lobbying in the given quarter). Combined with the data on firm-level risk, this provides a dataset of a total of 262,488 firm-quarter observations.

When we examine the link between political risk and lobbying behavior, we estimate the following regression model at the firm-quarter level:

$$Lobby_{iq} = \delta \cdot lnPRisk_{iq} + \delta_2 LobbyHistory_{is} + f(lnPRisk_{iq} \cdot LobbyHistory_{is}) + \gamma_i + \sigma_q + \epsilon_{iq} \tag{1}$$

Here, *Lobby* captures one of our two measures of lobbying activity, and *PRisk* is

the Hassan et al. (2019) estimate of political risk. *LobbyHistory* is the proportion of previous quarters, where the firm filed a lobby report. We are both interested in the correlation between *PRisk* and *Lobby*, and the interaction between *LobbyHistory* and *PRisk*. Importantly, since the interaction between *LobbyHistory* and *PRisk* is non-linear, we use the Hainmueller et al. (2019) binning estimator to estimate *f(.)*, the functional form of the interaction between the two variables. This allows us to zoom in on the firms that have no history of lobbying and compare them to firms with varying degrees of lobbying experience. X is a set of firm-level financial covariates, capturing firm-size obtained from *COMPUSTAT*. Specifically, we also collect data on total assets, and cash holdings. γ is a firm fixed effect, capturing time-invariant characteristics, and σ capturing homogeneous shocks in time. ϵ is an idiosyncratic error term.

3.1.1 Randomized Rule-Change as a Source of Political Risk

There are a number of threats to identification in this broad regression analysis. First, we have no way of distinguishing between political risk emerging from the federal and state level. Therefore, we do not always know whether starting a federal lobbying campaign would be an optimal decision.[2] Second, the fixed effects estimates are identified under the assumption that lobbying behavior would change equally, if firms had seen the same change in political risk. However, political risk and lobbying are likely endogenous to each other. Additionally, large firms tend to lobby much more, and while we do control for size in our regressions, this may not be enough to deal with that source of confounding. Finally, the research on how to estimate an unbiased effect of a continuous treatment with firm and year fixed effects is still ongoing (Callaway et al. 2021; Goodman-Bacon 2021). These issues present a problem for causal inference. Therefore, we leverage a federal-level randomized natural experiment to confirm the causal effect of federal government intervention on corporate lobbying.

On July 28, 2004, the Securities and Exchange Commission (SEC) announced the

[2]Note, however, that we also show that *federal* lobbying is effective in mitigating the negative effect of the Hassan et al. (2019) measure of political risk. This suggests that it would be rational for firms to lobby federally as when they observe an increase in generalized political risk. This reassures us that our findings should not be driven by corporate lobbying at the state level.

only randomized trial in the agency's history. From 2005 through 2007, the SEC selected one-third of the Russell 3000 and suspended those firms from prior shortselling restrictions (known as the 'uptick rule'). Importantly, we can use the period after the announcement and before the actual rule-suspension as one of exogenously increased political risk. In this period, there was no actual policy change, but treated firms would still be likely to increase lobbying to extract information and mitigate any short-term uncertainty induced by the experiment.

We obtain data on the experiment from Litvak et al. (2016). Importantly, the SEC unintentionally partially ruined their own randomization scheme by partially lifting the uptick rule from the control group among firms in the Russell 1000, while the control group among smaller firms remained as clean controls (Black et al. 2020). To deal with this, we zoom in on the Russell 1000, where the randomization still holds (as recommended by Black et al. 2020). An additional reason for this choice is that the removal of the uptick rule was highly unlikely to affect substantive short-selling among the largest firms, since they were typically also traded on regional stock exchanges and electronic exchanges that did not limit short-selling. The combination of looking at firms that were most unlikely to affected by the rule-change and in the period before the rule-change went into affect bolsters the claim that any increased lobbying activity was driven by the political intervention itself—but unrelated to any substantive effects the policy-change might have.[3]

Since LDA reports summarize lobbying expenditures at the semester-level prior to 2008, we examine the final semester of 2004 as the treated period, and use the period from 2000 and until the treatment to establish a baseline of lobbying behavior. We estimate a regression of the following form:

$$\Delta Lobby_{is} = \delta_1 RegSHO_{is} + \delta_2 LobbyHistory_{is} + f(RegSHO_{is} \cdot LobbyHistory_{is}) + \epsilon_{is} \quad (2)$$

Here, $\Delta Lobby_{is}$ denotes the semesterly change in lobbying behavior in firm i. *RegSHO*

[3]Litvak et al. (2016), indeed, find no increase in share price nor short-sale trading volume, indicating little to no substantive effect overall.

denotes the group of pilot firms treated in the SEC's experiment, and *LobbyHistory* captures the proportion of semesters in the pre-treatment period where the firm filed at least one lobby report. Thus, the estimate captures the change in lobbying behavior in the treated group relative to the control group. Again, we use Hainmueller et al. (2019) to estimate the non-linear interaction between randomized political exposure and a prior history of lobbying.

3.2 Appointment of Directors with Information on Lobbying Returns

Our third and final prediction is that firms will start lobbying once they obtain information about the returns to engaging politically. In particular, we expect that firms can obtain such information when they appoint a director who has served on the board of a firm that does lobby. To test this prediction, we draw on the BoardEx database, which contains comprehensive information about the population of directors serving on the boards of publicly traded corporations. This allows us to identify which directors serve on the boards of specific firms, and importantly, when new directors arrive. We merge the database with LobbyView to construct a measure of which firms that lobby. We use this to capture new appointments of directors with a background of board service in firms that do lobby. Importantly, we also construct a placebo independent variable that captures the arrival of directors from firms that do *not* lobby.

This measurement strategy captures the theoretical reasoning that the new director arrives with information about the returns to lobbying. However, looking at the effect of directors also comes with an empirical advantage compared to estimating the effect of new managers. In particular, directors play a limited role in the day-to-day management of the firm. Boards meet a few times per year, and generally serve to provide longer-term advice to the firm management. Ideally, they also represent shareholders and provide a check on the CEO (Lorsch and Maciver 1989). The limited involvement of directors in the daily operations make it unlikely that they are hired by firms to set up a lobbying operation. This would be much more likely if we were to investigate the effect of hiring a

new member of the C Suite.

We construct a firm-year panel, which we subset to firms that have never previously lobbied, and estimate a set of difference-in-differences model. First we use estimate the following fixed effects specification:

$$Lobby_{iy} = \beta DirectorArrival_{iy} + \omega_i + \sigma_y + \epsilon_{iy} \tag{3}$$

Lobby captures whether firm i files its first LDA report in year y. *DirectorArrival* is a binary indicator of the arrival of a new director with a background in firms that lobby. ω and σ are firm and year fixed effects, respectively. Since regressions with two-way fixed effects may return a downward bias of the ATT (Goodman-Bacon 2021), we also use the Imai et al. (2018) difference-in-differences estimator. In essence, this technique extracts each firm that is treated by the arrival of a director from a firm that lobbies and constructs a never-treated control group of firms. It then proceeds to estimate the difference-in-differences for each of these treatment events, finally averaging over all the estimates to produce an overall ATT. We also estimate a difference-in-difference-in-differences (triple difference) model, where we use the arrival of a director from firms that do not lobby as a placebo variable. This differences out the effect of changes in the board composition, isolating the impact of hiring directors from firms that lobby.

Finally, we construct an indicator of directors with lobbying experience arriving after a current board member dies. We use BoardEx's Announcement database, which includes public announcements about individual directors. We using this, we create a binary indicator of new directors arriving in the same year or one year after a director has passed away. We then estimate a specification similar to that shown in eq. (3) but with this treatment variable instead. Importantly, this captures board appointments that we can be quite sure are made unrelatedly to lobbying decisions.

3.3 Estimating Returns to Lobbying

Our prediction about the returns to lobbying is two-fold. First, while political risk should have an adverse effect on corporate financial performance, lobbying should partially mit-

igate them. Second, there should be positive returns to lobbying on average. However, they should materialize with a considerable time lag. To measure financial returns, we obtain data on annual sales revenue from *COMPUSTAT*.

3.3.1 Lobbying and the Adverse Effects of Risk

In order to examine whether firms can use lobbying activity to eliminate the negative effect of their political environment on financial performance, we estimate the following model at the firm-year level:

$$lnSales_{iy} = \delta_1 lnPRisk_{iy} + \delta_2 Lobby_{i,t-1} + \delta_3 (lnPRisk_{iy} \cdot Lobby_{i,t-1}) + \gamma_i + \sigma_y + \epsilon_{iy} \quad (4)$$

Importantly, this allows us to test how the effect of political risk on financial performance varies with the firm's lobbying activity. Here, we lag lobbying activity by one year to make sure it is not post-treatment to political risk.

3.3.2 Estimating the Time-Horizon of Lobbying Returns

To investigate the time-horizon of lobbying returns, we conduct a difference-in-differences analysis around the time when a corporation files its first lobbying report. A recent technique proposed by Callaway and Sant'Anna (2020) offers a neat way of estimating how effects vary over time when treatment events are staggered, as they are in our setting. In particular, they propose only using the firms treated at a particular point to estimate the single difference-in-differences for that so-called timing group. They then proceed to estimate the effect for each timing group in the data, and then average all of the estimated average treatment effects on the treated (ATTs) on the relative time periods before and after the firm starts lobbying.

We implement this by comparing the change in log revenue among firms that start lobbying during a particular year to the changes among all firms that never start lobbying. For each year, we then repeat the exercise. Finally, we average the estimated ATTs on relative event time.

3.4 Stylized Facts on the Stickiness of Lobbying

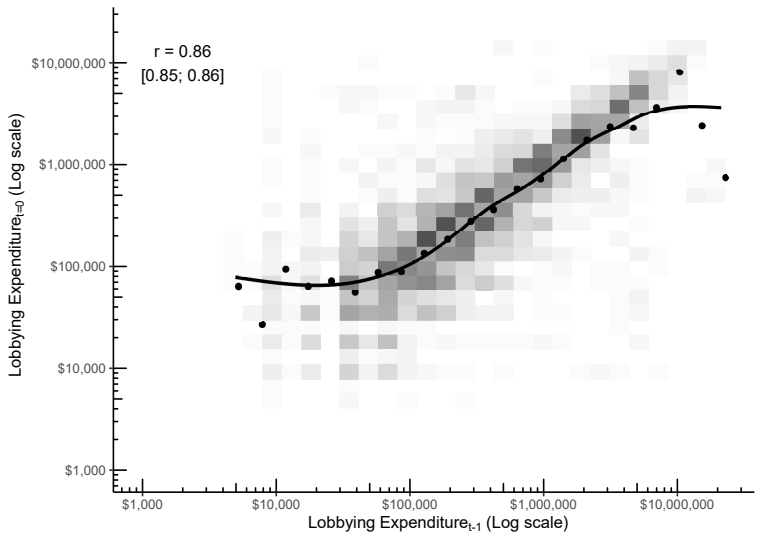
An interesting byproduct of the argument is that once a corporation has paid the fixed costs necessary to enter the market for lobbying services, they should use lobbying as a default strategy for dealing with the political realm. This suggests that lobbying activities should be highly path dependent or 'sticky'. In this section, we present a number of interesting descriptives that document this pattern.

In Figure 3, we present some stylized facts on the stickiness of lobbying (see also Huneeus and Kim 2018 for additional facts). Panel A visualizes the correlation between contemporaneous lobbying expenditure and expenditure in the previous year. This reproduces a finding in Huneeus and Kim (2018). Panel B shows how expenditure evolves over time after the initial filing, and Panel C shows the proportion of firms that keep filing each year after their initial filing.[4]

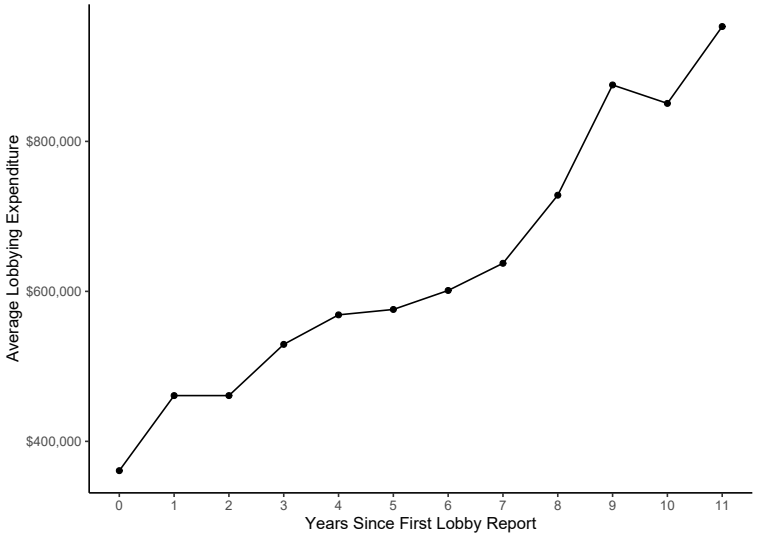
The patterns all testify to the stickiness of corporate lobbying. Once a firm files a lobbying report, it tends not only to keep doing so—it also tends to strongly intensify its lobbying activity.

Table 1 describes the firms in terms of financial characteristics. We split the sample into firm-years where there were no prior history of lobbying (Panel A), and where there were some (Panel B). Two important patterns emerge. First, firms that engage politically are on average many times larger (in terms of assets), more liquid, more profitable, and have a higher revenue. Second, for firms with no history of lobbying, filing the first lobbying report is a very rare occurrence with a probability of only 0.3%.

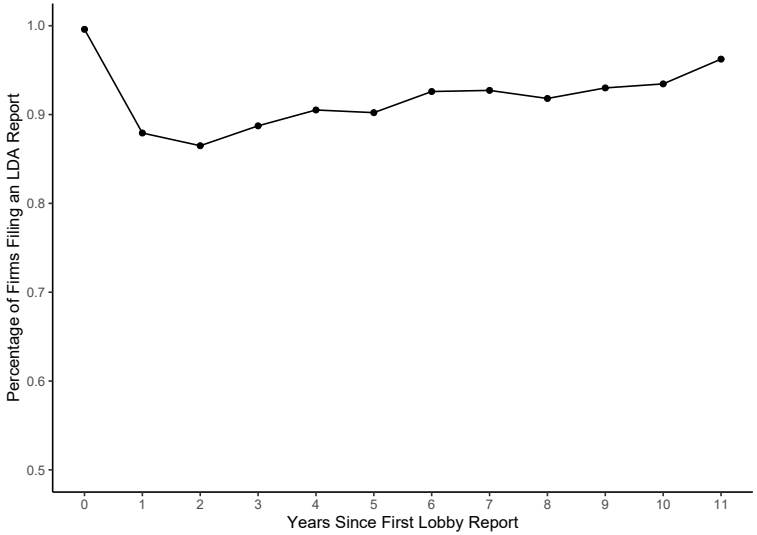
[4]Note that since some firms start lobbying closer to the end of the panel, the proportion reverts to 100% as we approach year 12 after lobbying commences. This is because only the firms that lobby for the entire period remain at that point.



(a) Lobby Expenditure is Path Dependent



(b) Lobby Expenditure Trends Upward After Initial Filing



(c) Proportion of Firms Filing after Initial Year with Lobbying

Figure 3: Once You Start Lobbying, You Never Go Back. *Note:* Panel A shows the correlation between lagged and contemporaneous lobbying expenditure, reproducing a finding in Huneeus and Kim (2018). Pearson's r and a 95% confidence interval printed in top left. Panel B shows the yearly average lobbying expenditure over time after the firm files its first LDA report. Panel C shows the proportion of firms that keep filing lobbying reports over time since their initial filing.

Table 1: Descriptive Statistics by Prior Lobbying Behavior

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
			Panel A: Firms with no Previous Lobby Activity				
Total Assets	203,939	9,093.679	83,493.520	0.000	28.514	1,468.778	3,771,200.000
Cash Holdings	200,329	391.835	4,942.862	−32.000	1.547	68.000	574,044.400
Gross Profits	199,336	809.688	4,130.041	−45,026.000	2.327	245.648	137,808.000
Revenue	199,373	2,470.449	12,801.460	−15,009.330	10.226	751.476	521,426.000
Proportion w/ LDA Report	247,400	0.003	0.055	0	0	0	1
Lobbying Expenditure	247,400	1,085.402	58,525.420	0	0	0	10,323,120
			Panel B: Firms with Some Previous Lobby Activity				
Total Assets	4,794	24,497.890	135,569.700	0.002	317.813	9,337.264	3,083,139.000
Cash Holdings	4,718	1,454.707	10,555.440	0.000	26.210	600.583	309,314.900
Gross Profits	4,703	2,245.641	6,456.154	−4,141.334	67.761	1,659.604	101,612.000
Revenue	4,703	6,481.634	18,015.610	−272.867	197.935	4,875.574	285,873.800
Proportion w/ LDA Report	4,808	0.661	0.473	0	0	1	1
Lobbying Expenditure	4,808	608,367.900	1,561,282.000	0	0	404,834	21,292,500

Note: Data is a firm-year panel. Firm financial characteristics for firm-years where the firm had filed no prior LDA reports are reported in Pane A. Panel B shows firm-years with some prior lobbying activity.

4 Results

In this section, we will present evidence on the three observable implications of information failure on the market for lobbying services. First, we expect a highly conditional effect of political risk on the corporation's lobbying behavior—those with a history of lobbying should react strongly, while those without one should not react at all. We will explore this using observational data as well as a natural experiment. Second, firms who have never lobbied before, should start lobbying, when they appoint a director with experience from the board of a firm that lobbies. Third, there should be positive economic returns to lobbying. These returns should partially materialize, because lobbying eliminates the negative effects of risk on the firm's bottom line. Additionally, there should be a time-lag before they are realized.

4.1 The Conditional Effect of Firm-Level Risk on Lobbying

We now explore the relationship between firm-level political risk and corporate lobbying. First, we will do so by leveraging a text-based measure of generalized political risk at the firm-level. Second, we will exploit a case of randomized regulatory change.

4.1.1 Generalized Political Risk Conditionally Increases Lobbying

In Table 2, we present fixed effects regressions of the overall correlation between lobbying activity on political risk. Column one shows the relation between political risk and the probability of lobbying. Column three shows the relation between risk and lobbying expenditure. Columns two and four adds controls for firm size. While we do estimate very precise correlations, the coefficients are very small.[5]

Importantly, the reason for the small estimates is that the large majority firms *never* engage in lobbying, and political risk plays no role mobilizing those firms politically. Fig-

[5]The results are similar to the ones reported in Hassan et al. (2019), besides the fact that we include firm fixed effects. It is important to note, however, that if we include firm fixed effects but use the replication data fro Hassan et al. (2019), we find no statistically significant correlation. This may be because the LobbyView (Kim 2018) data is of higher quality and contains less noise.

Table 2: Political Risk and Corporate Lobbying

	Dependent variable:			
	Lobby?		ln Lobby Expenditure	
	(1)	(2)	(3)	(4)
ln Political Risk	0.001***	0.004**	0.007***	0.044**
	(0.0002)	(0.002)	(0.002)	(0.020)
ln Total Assets		0.011		0.423**
		(0.020)		(0.207)
ln Cash Holdings		0.009		0.089
		(0.010)		(0.107)
Firm Fixed Effects?	Yes	Yes	Yes	Yes
Year-Quarter Fixed Effects?	Yes	Yes	Yes	Yes
Observations	262,488	11,112	262,488	11,112
Residual Std. Error	0.121	0.241	1.334	2.587

*Note: Data is a firm-quarter panel. Robust standard errors with firm-level clustering in parentheses.. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.*

ure 4, which plots the results from equation 1, shows this by interacting political risk with the firm's average pre-treatment tendency to lobby. Panel A shows how a 1% increase in political risk correlates with lobbying expenditure depending on how often the firm has lobbied previously. We uncover an extremely precisely estimated null correlation among the firms that never have lobbied before. Next, we investigate whether this conclusion changes, when a firm is exposed to a prolonged period of political risk. To do so, we calculate three moving averages of political risk. Panels B through D examines the correlation between lobbying expenditure and a 1% increase, respectively, one, two and three years of political risk. The correlation increases dramatically among firms that have lobbied before, and even approaches an elasticity of 1 among firms with intermediate prior lobbying levels in Panel D. However, even a prolonged period of political risk does not push firms that have not lobbied before into corporate political activity—in all three panels, we uncover very precisely estimated null correlations.

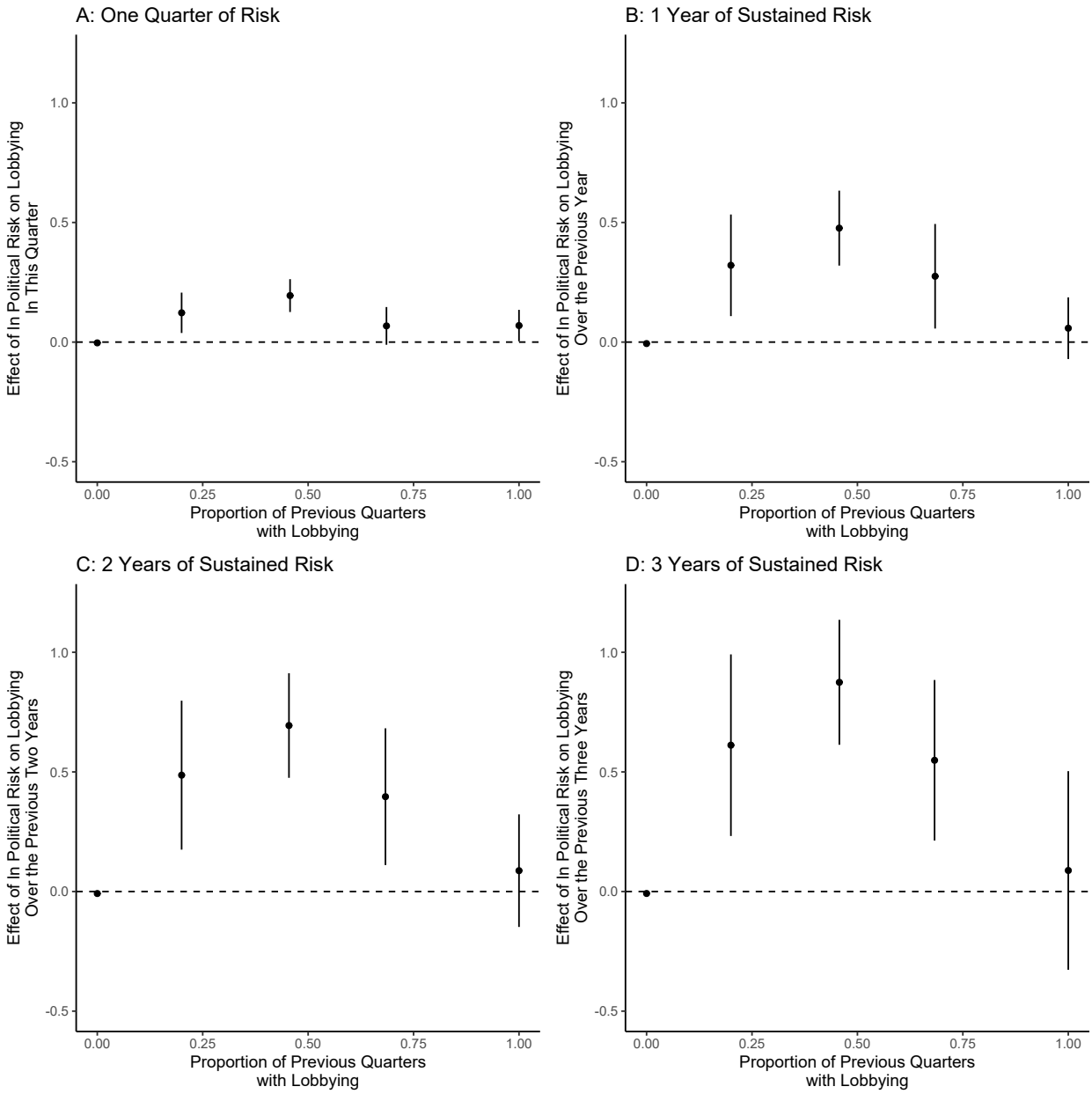


Figure 4: History of Lobbying Moderates the Effect of Political Risk. *Note: Estimates produces using the Hainmueller et al. (2019) binning estimator.*

4.1.2 Randomized Rule-Change Conditionally Increases Lobbying

To deal with issues related to causally identifying the effect of political risk on federal lobbying, we leverage the SEC's random removal of the uptick rule.

Table 3 shows that an important set of pre-treatment covariates are balanced. We examine covariates in the pre-treatment period 2000-2003, and show that firms that were treated with the removal of the uptick rule were neither more likely to lobby, to spend more on lobbying, to be larger (in terms of assets), to be more high-performing (in terms

of revenue and profits), nor to be more liquid. This suggests that the SEC was successful in its randomization scheme.

Next, we estimate the effect of the rule change, comparing changes in lobbying behavior in the final semester of 2004 to pre-treatment semesters among treatment and control firms. Again, we allow effects to vary depending on prior tendency to engage in lobbying, using the Hainmueller et al. (2019) binning estimator.

It is difficult to compare effect sizes between this experimental and the previous observational data. However, we can see that the pattern of these estimates replicate. We obtain a very precise null effect for firms that have never lobbied before. Effects are concentrated with firms that have tended to lobby before. Finally, the effects drop off among firms that have always lobbied, again suggesting a ceiling effect.

While we cannot investigate the persistence of these effects, because looking into the more distant future, the rule-change would come into force. However, this suggests that there is a causal effect of political risk on corporate lobbying, and that this causal effect is concentrated among firms that have a history of lobbying.

Table 3: Covariate Balance in the SECs Short-Selling Experiment

	Dependent variable:	
	Regulation SHO Pilot Firm?	
	(1)	(2)
Lobby?	−0.033	
	(0.055)	
ln Lobbying Expenditure + 1		−0.003
		(0.005)
ln Total Assets + 1	−0.004	−0.004
	(0.009)	(0.009)
ln Revenue + 1	−0.008	−0.008
	(0.013)	(0.013)
ln Gross Profits + 1	0.014	0.014
	(0.014)	(0.014)
ln Cash Holdings + 1	−0.005	−0.005
	(0.006)	(0.006)
Observations	21,427	21,427
R^2	0.001	0.001
Adjusted R^2	0.0003	0.0003
Residual Std. Error (df = 21418)	0.471	0.471
Note:	*p<0.1; **p<0.05; ***p<0.01	

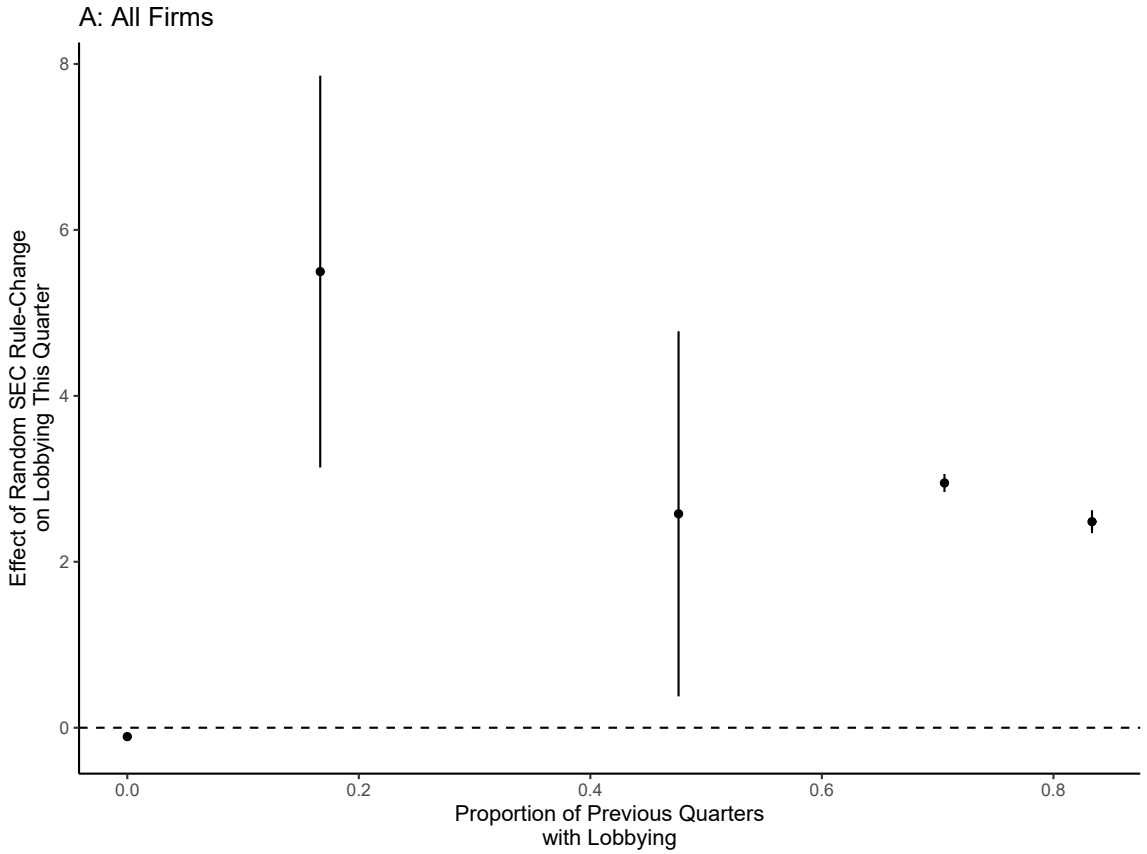


Figure 5: How the Effect of the SEC Experiment Varies with Prior Lobbying. *Note: Estimates produces using the Hainmueller et al (2017) binning estimator.*

4.2 Appointment of Directors from Firms that Lobby

In our final set of results, we examine how the arrival of new directors shape firm lobbying. In particular, the prediction is that if the other firms the director is connected to have experience with lobbying, the new director will have information on the value of lobbying campaigns. With her arrival, this information is transfused into the new firm, which consequently should become more likely to lobby. We examine this in Table 4. As we are interested in whether new information about lobbying pushes new firms to build a political presence, we subset the data to firms that have not previously filed an LDA report. In column 1, we estimate a model with fixed effects for firm and year, which suggests that firms that hire a director that has served on boards of firms that lobby increases the probability of lobbying by 0.5 percentage points. Importantly, since the baseline probability of filing the first LDA report (among firms that have never lobbied)

is 0.3%, this is a very large impact. The 90% confidence interval suggests that the lowest feasible effect is the same as the baseline probability. In column 2, we use the Imai et al. (2018) technique for dealing with staggered treatment timing. The results indicate that the two-way fixed estimate is biased downward. Here, we estimate that the probability of filing the firm's first LDA report increases by 0.9 percentage points. In this specification, the lower end of the confidence interval suggests that hiring this type of director at least doubles the probability of lobbying relative to the baseline. To account for the potential that large firms may experience differential trends compared to smaller firms, we match on the firm's total assets in column 3. In column 4, we also allow for differential trends by industry by matching exactly on the firms NAICS industry code. The results maintain.

One concern would be that this could be driven by organizational changes in general, and not the acquisition of new information. To deal with this, in column 5, we also run a difference-in-difference-in-differences model, where we compare our estimate of interest to the placebo impact of appointing a director from a firm that does not lobby. The result is not much different than the baseline estimate. Also, we note that the estimates from the Imai et al. (2018) technique suggests that this two-way fixed effects estimate is likely to be biased downward.

As mentioned previously, the major threat to identification is that firms appoint board members with lobbying experience, because they know that they are going to start lobbying. We follow two analytical strategies to make sure this does not drive our results. First, in column 6, we use data from BoardEx containing announcements made by individual directors to capture when board members pass away while they are serving on the board. We create a new treatment variable taking the value 1, when a director with lobbying experience is appointed during the year, or the year after, a director passes away. This captures board seats that are filled, because a board member dies. Importantly, these seats are unlikely to be filled, because the firm wants to start a lobbying presence. These appointments happen for reasons that have little to do with the firm's strategy. While the estimates are more noisy, we still find a significant increase in the probability that a firm will file it's first lobbying report.

Table 4: Appointing a Director from a Firm that Lobbies Increases Lobbying

	Dependent variable:					
	File First LDA Report					
	TWFE	Matched DD	Matched DD	Matched DD	Triple Difference	Director Death
	(1)	(2)	(3)	(4)	(5)	(6)
Director w. Lobby Experience	0.005***	0.009***	0.007***	0.006***		
	(0.002)	(0.001)	(0.001)	(0.001)		
Director w. Lobby vs. No Lobby Experience					0.004***	
					(0.001)	
Director Pass Away + Lobby Director Arrives						0.022*
						(0.013)
Estimator	TWFE	Imai et. al.	Imai et. al.	Imai et. al.	TWFE	TWFE
P(File LDA)	0.003	0.003	0.003	0.003	0.003	0.003
90% CI	[0.003; 0.008]	[0.006; 0.01]	[0.004; 0.009]	[0.003; 0.008]	[0.003; 0.006]	[0.001; 0.045]
Matched on Assets?	No	No	Yes	Yes	No	No
Exact Match on Industry?	No	No	No	Yes	No	No
Observations	163,722	163,722	163,722	163,722	163,722	163,722

*Note: The table presents results from a variety of difference-in-differences models estimated using different estimators, covariates, and placebos. Data is a firm-year panel. Only firms that have not previously filed an LDA report included. The dependent variable is whether the firm files its first LDA report. Robust standard errors with firm-level clustering in parentheses for two-way fixed effects models. Bootstrapped standard errors with firm-level clustering in parentheses for Imai et al. (2018) estimates. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.*

Second, based on our theory one observable implication is that political risk should increase lobbying propensity among the firms that have *recently but not concurrently* appointed a director that has served on the board of a firm that lobbies. The arrival of the new director would endow the firm with knowledge about when lobbying is effective—this would become useful when the firm sees an increase in political risk. To test this, Figure 6 shows the marginal effects from a two-way fixed effects regression where the measure of political risk is interacted with an indicator of whether a director with lobbying experience has arrived one or two years previously (but not in the same year). The results show that changes in political risk are strongly correlated with increased propensity to lobby in firms where directors with lobbying experience arrive. We cannot reject the null among firms that have not seen the arrival of such a director. Importantly, the estimated marginal effect is more than twice as large among the firms treated with lobbying information, and the difference is statistically significant.

It is important to note that this estimate arises in the sub-population of firms that have never lobbied before—the group of firms where we estimated very precise null effects of political risk previously.

4.3 Firm-Level Returns to Lobbying

Next, we turn to examining the firm-level returns to lobbying. We will first present estimates of how long it takes from a corporation starts its lobbying endeavor until it starts yielding returns. Second, we will examine whether lobbying reduces the negative effect of political risk.

4.3.1 The Time-Horizon of Lobbying Returns

We use the technique proposed by Callaway and Sant'Anna (2020) to estimate the time-horizon of lobbying returns. Figure 7 shows the results from this exercise. As we can see, there are positive economic returns to lobbying. However, they do not accrue with any certainty until three to four years after the first lobbying report is filed. Based on the evolution of expenditures over time that we showed in Figure 3b, at this point the average

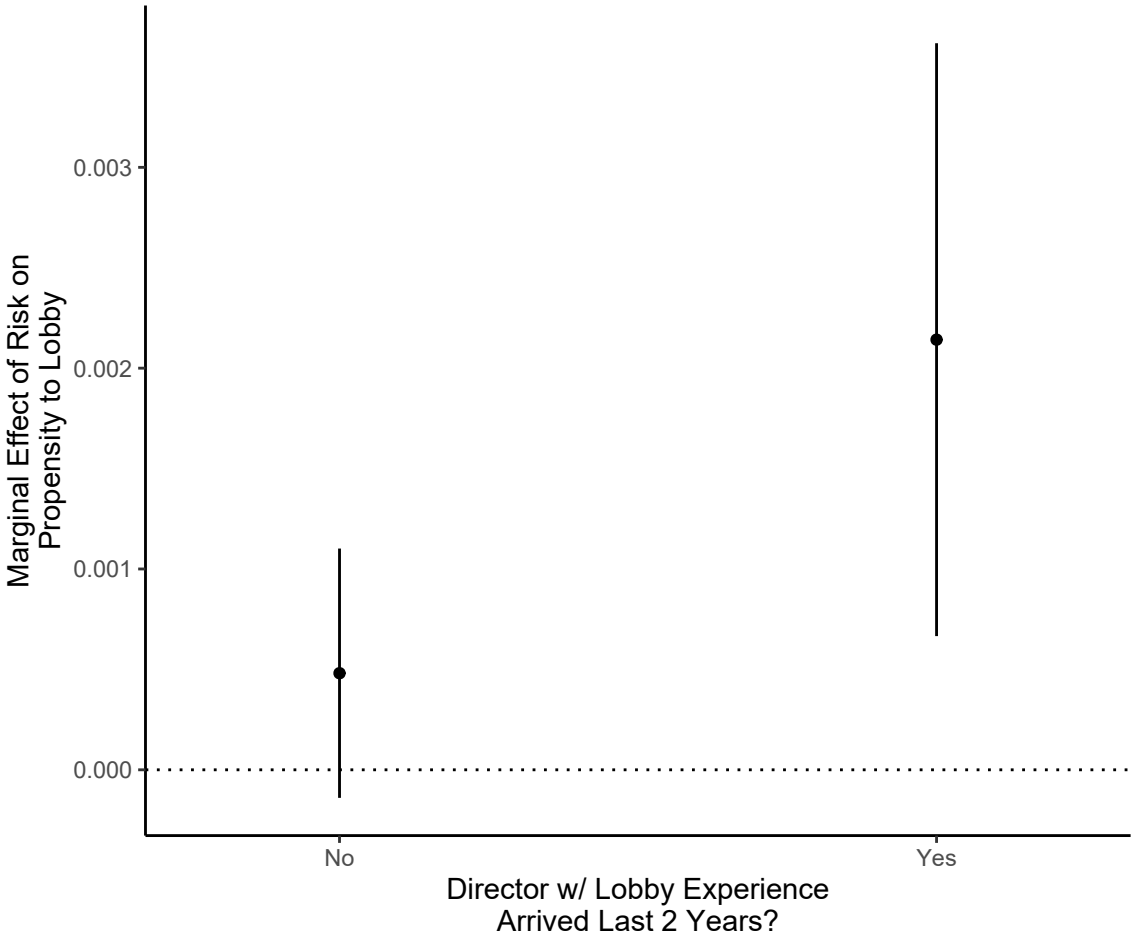


Figure 6: Effect of Political Risk is Moderated by Director Arrival. *Note: The figure shows the estimated marginal effects from a regression with firm and year fixed effects. Political risk is interacted with whether the firm has experienced the arrival of a director that also served on the board of a firm that lobbies. Marginal effects of political risk conditional on director arrival are shown. Robust standard error clustered on the firm-level. Solid lines are 95% confidence intervals.*

firm would have spent $1.8 million on its lobbying endeavor. We have also conducted an analysis, where we match on the firm's six-digit NAICS industry as well as pre-treatment total assets as a measure of firm size. We also allow for a period where the firm knows it will soon start lobbying. This yields smaller but also more precise estimates, overall supporting the interpretation presented here.

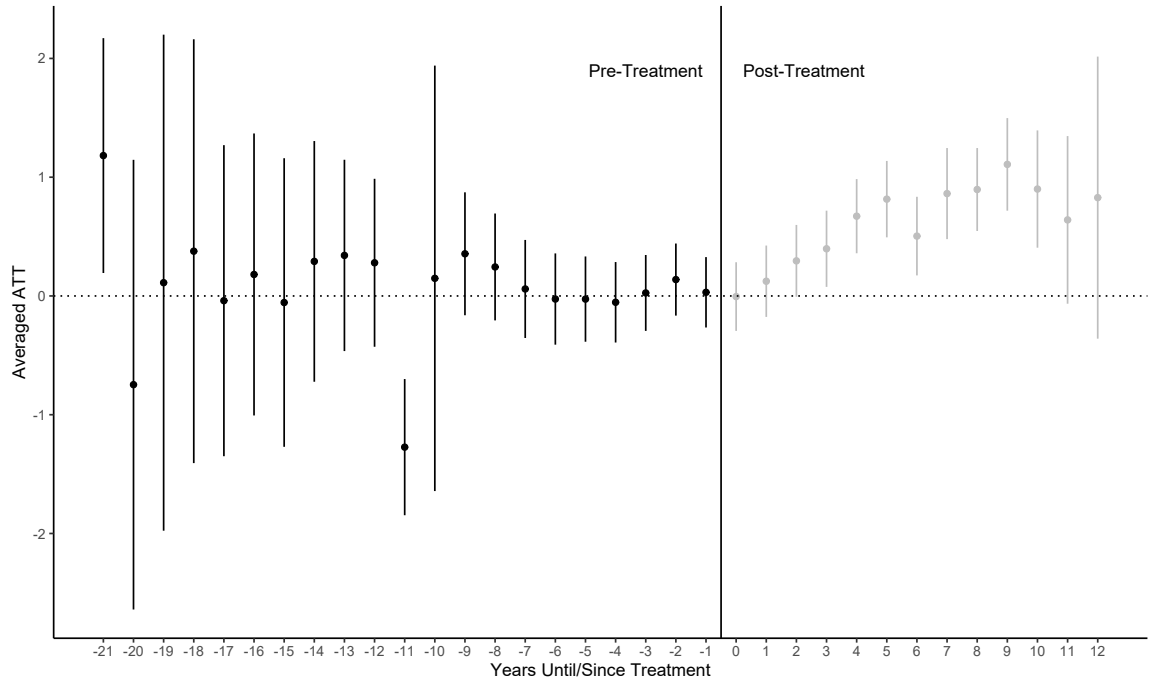


Figure 7: How Long Until Lobbying Generates a Return? *Note: Estimates are obtained using the Callaway and Sant'Anna (2020) technique where individual ATTs are estimated for each year, comparing changes in log revenue among firms that start lobbying to firms that never do so. Estimates are averaged on relative event time. Lines are 95% percent confidence intervals with firm-level clustering.*

4.3.2 Firms Use Lobbying To Mitigate Adverse Effects of Risk

Next, we examine how political risk shapes firm revenue negatively, and how this effect can be mitigated through lobbying. Table 5 shows the results from a series of models. Columns one and two show that there is a strong and robust positive relationship between lobbying expenditure and sales. In column three we introduce an interaction between political risk and lobbying activity. The results show that there is a strong negative effect of risk on revenue among firms that do not lobby—this effect drops as firms increase their lobbying expenditures. Column four adds controls for firm size, and the results maintain.

Figure 8 visualizes this pattern. As we can see, the negative effect of risk completely disappears when lobbying is intensive enough. The flip side of this is that the positive, unconditional effect of lobbying of sales is concentrated among firms in high-risk environments. This finding is in good accordance with theories of regulatory capture (Stigler 1971), as they suggest that firms can use lobbying to weaponize uncertainties about regulation against their competitors, who face similar risks but are not able to shape their regulatory environment.

Table 5: Lobbying Shapes the Effect of Political Risk on Revenue

	Dependent variable:			
	ln Sales + 1			
	(1)	(2)	(3)	(4)
ln Political Risk			-0.028^{**}	-0.031^{***}
			(0.013)	(0.012)
ln Lobbying Expenditure t-1	0.029^{***}	0.009^{***}	-0.0002	-0.003
	(0.003)	(0.002)	(0.005)	(0.004)
ln Total Assets t-1		0.631^{***}		0.580^{***}
		(0.006)		(0.042)
ln Cash Holdings t-1		-0.0004		0.007
		(0.003)		(0.014)
Pol. Risk X Lobby Spending t-1			0.002^{*}	0.002^{*}
			(0.001)	(0.001)
Firm Fixed Effects?	Yes	Yes	Yes	Yes
Year Fixed Effects?	Yes	Yes	Yes	Yes
Observations	167,853	161,697	3,334	3,280
Residual Std. Error	0.599	0.452	0.385	0.311

*Note: Data is a firm-year panel. Robust standard errors with firm-level clustering in parentheses. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.*

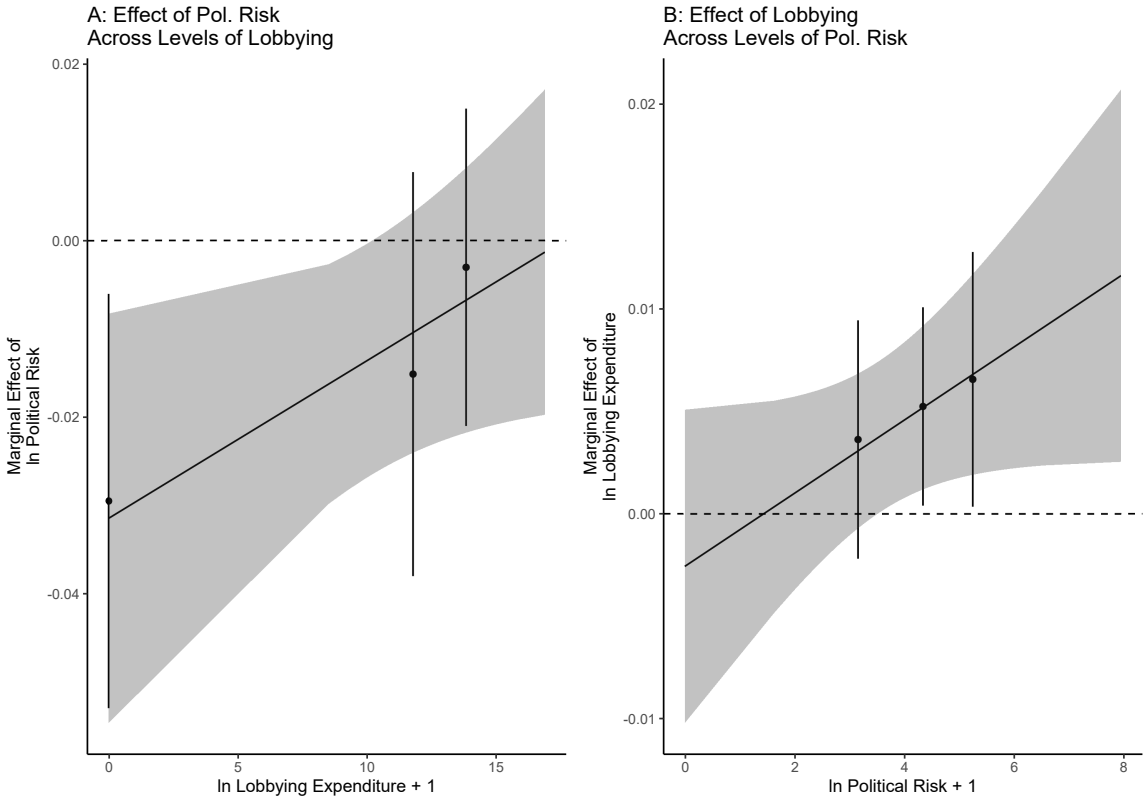


Figure 8: Lobbying Mitigates the Negative Impact of Political Risk. *Note: The straight fitted line is based on estimates in Table 5. Estimates from the Hainmueller et al. (2019) binning estimator show plausibility of the linearity assumption. All robust confidence intervals are 95% with firm-level clustering.*

5 Conclusion

In this paper, we have shed new light on an overlooked puzzle in the study of corporate lobbying: Why do some firms lobby consistently, while other firms never engage in political activity at all? Why do most firms not lobby even though there seems to be a sizable return to doing so? We theorized that due to information failure about the returns to lobbying, most firms simply do not think of it as an option. Instead, they rely on default behavior when exposed to political risk: If they have established a lobbying presence, intensifying it in response to changes in their political environment is straightforward. On the other hand, if they have no presence, establishing one is costly, and any returns are highly uncertain. While this uncertainty can be eliminated, doing so is costly and requires effort. These entry and information costs deter firms from lobbying—even in situations where it is associated with a positive return in expectation. However, when firms receive information about the best practices and experiences with lobbying in other firms, they do start building a political presence.

Our results support these predictions. First, we document that firms that lobby and firms that never do so react in fundamentally different ways to marginal changes in their political environments. Firms that have a history of lobbying increase their lobbying expenditure when faced with heightened political risk. However, firms with no such history *never* use lobbying as a response to changes in their political risk exposure. This holds both for periods of generalized political risk, and when they are exposed to randomized government intervention. The null results among firms with no history of lobbying were striking in their precision, suggesting that they, indeed, hold generally for that class of firm. Overall, this shows that firms rely heavily on their default behavior when dealing with political risk.

Second, we present evidence that there are economic returns to lobbying—changes in corporate political expenditures are associated with higher revenue, and with a lower cost to political risk. However, it takes several years before the returns materialize, testifying to the costs of lobbying. These findings add to our understanding of why lobbyism produces positive returns. Additionally, they directly link political risk exposure

to corporate financial performance, and provide us with a yardstick for evaluating the effectiveness of corporate lobbying. Therefore, these findings also put a finer point on the puzzle: Why do firms not use lobbying to deal with the costs imposed by political risk, when it is an effective way of doing so?

Finally, we present evidence on why that is. We show that when a new director is appointed, and she has board experience from a firm that does engage in lobbying, the firm starts establishing a political presence. This shows that firms react to new information about lobbying. In particular, when they learn about the practices and experiences with lobbying elsewhere, they are more likely to start lobbying, too. By showing that firms start lobbying when they receive new information, we can indirectly quantify the strength of the information failure. In particular, the lower limit on the confidence interval in our preferred specification suggests that firms double their propensity to lobby relative to the baseline when they hire this type of new director. This is particularly striking when we compare it to the very precise null effect of even a prolonged period of risk, or to the fact that 90% of firms never lobby.

There are a number of possible extensions for future research. First, we take a number of steps to make sure that our null results are not driven by firms lobbying at the state level, rather than the federal level. However, it would be valuable for future research to treat state-level lobbying as a quantity of interest instead of a nuisance. This would also help delineate how far the results presented here can be generalized. Second, other political strategies remain less utilized than lobbying. While we have found that the results also hold for corporate campaign donations (will be included soon). Still, it would be to investigate other forms of political activity more extensively, as this would help illuminate whether the information failure is only present narrowly on the market for lobbying services, or whether it holds for investments in non-market strategy more broadly.

References

Acemoglu, Daron, Simon Johnson, Amir Kermani, James Kwak, and Todd Mitton (2016). "The value of connections in turbulent times: Evidence from the United States". In: *Journal of Financial Economics* 121.2, pp. 368–391. ISSN: 0304-405X. DOI: https://doi.org/10.1016/j.jfineco.2015.10.001. URL: https://www.sciencedirect.com/science/article/pii/S0304405X16300605.

Al-Thaqeb, Saud Asaad and Barrak Ghanim Algharabali (2019). "Economic policy uncertainty: A literature review". In: *The Journal of Economic Asymmetries* 20, e00133. ISSN: 1703-4949. DOI: https://doi.org/10.1016/j.jeca.2019.e00133. URL: https://www.sciencedirect.com/science/article/pii/S1703494919300726.

Ansolabehere, Stephen, John M De Figueiredo, and James M Snyder Jr (2003). "Why is there so little money in US politics?" In: *Journal of Economic perspectives* 17.1, pp. 105–130.

Baker, Scott R., Nicholas Bloom, and Steven J. Davis (July 2016). "Measuring Economic Policy Uncertainty*". In: *The Quarterly Journal of Economics* 131.4, pp. 1593–1636. ISSN: 0033-5533. DOI: 10.1093/qje/qjw024. eprint: https://academic.oup.com/qje/article-pdf/131/4/1593/30636768/qjw024.pdf. URL: https://doi.org/10.1093/qje/qjw024.

Ban, Pamela, Maxwell Palmer, and Benjamin Schneer (2019). "From the Halls of Congress to K Street: Government Experience and its Value for Lobbying". In: *Legislative Studies Quarterly* 44.4, pp. 713–752.

Baumgartner, Frank R and Beth L Leech (1998). *Basic interests*. Princeton University Press.

— (2001). "Interest niches and policy bandwagons: Patterns of interest group involvement in national politics". In: *The Journal of Politics* 63.4, pp. 1191–1213.

Black, Bernard S, Hemang Desai, Kate Litvak, Woongsun Yoo, and Jeff Jiewei Yu (2020). "Specification Choice in Randomized and Natural Experiments: Lessons from the Regulation SHO Experiment". In: *SMU Cox: Accounting (Topic)*.

Blanes i Vidal, Jordi, Mirko Draca, and Christian Fons-Rosen (2012). "Revolving door lobbyists". In: *The American Economic Review* 102.7, p. 3731.

Bombardini, Matilde (2008). "Firm heterogeneity and lobby participation". In: *Journal of International Economics* 75.2, pp. 329–348.

Brasher, Holly and David Lowery (2006). "The corporate context of lobbying activity". In: *Business and Politics* 8.1, pp. 1–23.

Butler, Daniel M and David R Miller (2021). "Does Lobbying Affect Bill Advancement? Evidence from Three State Legislatures". In: *Political Research Quarterly*, p. 10659129211012481.

Callaway, Brantly, Andrew Goodman-Bacon, and Pedro HC Sant'Anna (2021). "Difference-in-Differences with a Continuous Treatment". In: *arXiv preprint arXiv:2107.02637*. URL: https://arxiv.org/pdf/2107.02637.pdf.

Callaway, Brantly and Pedro HC Sant'Anna (2020). "Difference-in-differences with multiple time periods". In: *Journal of Econometrics*.

Canes-Wrone, Brandice and Jee-Kwang Park (2014). "Elections, Uncertainty, and Irreversible Investment". In: *British Journal of Political Science* 44.1, pp. 83–106.

— (2012). "Electoral Business Cycles in OECD Countries". In: *American Political Science Review* 106.1, pp. 103–122.

Colquitt, L. Lee and Robert E. Hoyt (1997). "Determinants of Corporate Hedging Behavior: Evidence from the Life Insurance Industry". In: *The Journal of Risk and Insurance* 64.4, pp. 649–671. ISSN: 00224367, 15396975. URL: http://www.jstor.org/stable/253890.

De Figueiredo, John M and Brian Kelleher Richter (2014). "Advancing the empirical research on lobbying". In: *Annual review of political science* 17, pp. 163–185.

Drope, Jeffrey M and Wendy L Hansen (2006). "Does firm size matter? Analyzing business lobbying in the United States". In: *Business and Politics* 8.2, pp. 1–17.

Drutman, Lee (2015). *The business of America is lobbying: How corporations became politicized and politics became more corporate*. Oxford University Press.

Egerod, Benjamin CK and Mogens K Justesen (2021). "Asset Specificity, Corporate Protection and Trade Policy: Firm-Level Evidence from Antidumping Petitions in Nineteen Jurisdictions". In: *British Journal of Political Science*, pp. 1–10.

Finer, David Andrew (2018). "What insights do taxi rides offer into Federal Reserve leakage?" In: *Chicago Booth: George J. Stigler Center for the Study of the Economy & the State Working Paper* 18.

Garlick, Alex (2021). "Interest group lobbying and partisan polarization in the United States: 1999–2016". In: *Political Science Research and Methods*, pp. 1–19.

Goodman-Bacon, Andrew (2021). "Difference-in-differences with variation in treatment timing". In: *Journal of Econometrics*.

Gordon, Sanford C and Catherine Hafer (2005). "Flexing muscle: Corporate political expenditures as signals to the bureaucracy". In: *American Political Science Review*, pp. 245–261.

Gordon, Sanford C, Catherine Hafer, and Dimitri Landa (2007). "Consumption or investment? On motivations for political giving". In: *The Journal of Politics* 69.4, pp. 1057–1072.

Grossman, Gene and Elhanan Helpman (1994). "Protection for Sale". In: *The American Economic Review* 84.4, pp. 833–850.

Grossman, Gene M and Elhanan Helpman (2001). *Special interest politics*. MIT press.

Gulen, Huseyin and Mihai Ion (Sept. 2015). "Policy Uncertainty and Corporate Investment". In: *The Review of Financial Studies* 29.3, pp. 523–564. ISSN: 0893-9454. DOI: 10.1093/rfs/hhv050. eprint: https://academic.oup.com/rfs/article-pdf/29/3/523/24450983/hhv050.pdf. URL: https://doi.org/10.1093/rfs/hhv050.

Hainmueller, Jens, Jonathan Mummolo, and Yiqing Xu (2019). "How much should we trust estimates from multiplicative interaction models? Simple tools to improve empirical practice". In: *Political Analysis* 27.2, pp. 163–192.

Hansen, Wendy L and Neil J Mitchell (2000). "Disaggregating and explaining corporate political activity: Domestic and foreign corporations in national politics". In: *American Political Science Review*, pp. 891–903.

Hansen, Wendy L, Neil J Mitchell, and Jeffrey M Drope (2005). "The logic of private and collective action". In: *American journal of political science* 49.1, pp. 150–167.

Hassan, Tarek A, Stephan Hollander, Laurence Van Lent, and Ahmed Tahoun (2019). "Firm-level political risk: Measurement and effects". In: *The Quarterly Journal of Economics* 134.4, pp. 2135–2202.

Hirsch, Alexander V, Karam Kang, B Pablo Montagnes, and Hye Young You (2019). "Lobbyists as gatekeepers: Theory and evidence". In: *Unpublished manuscript*. URL: https://hyeyoungyou.files.wordpress.com/2021/02/lobbyists.pdf.

Huneeus, Federico and In Song Kim (2018). "The Effects of Firms' Lobbying on Resource Misallocation". In: URL: http://web.mit.edu/insong/www/pdf/misallocation.pdf.

Imai, Kosuke, In Song Kim, and Erik Wang (2018). "Matching Methods for Causal Inference with Time-Series Cross-Section Data". Working paper available at http://web.mit.edu/insong/www/pdf/tscs.pdf.

Iqbal, Umer, Christopher Gan, and Muhammad Nadeem (2020). "Economic policy uncertainty and firm performance". In: *Applied Economics Letters* 27.10, pp. 765–770. DOI: 10.1080/13504851.2019.1645272. eprint: https://doi.org/10.1080/13504851.2019.1645272. URL: https://doi.org/10.1080/13504851.2019.1645272.

Kim, In Song (2018). "Lobbyview: Firm-level lobbying & congressional bills database". In: *Unpublished manuscript, MIT, Cambridge, MA. http://web. mit. edu/insong/www/pdf/lobbyview. pdf Google Scholar Article Location*.

Kim, Jin-Hyuk (2008). "Corporate Lobbying Revisited". In: *Business and Politics* 10.2, pp. 1–23.

LaPira, Timothy M and Herschel F Thomas (2017). *Revolving door lobbying: Public service, private influence, and the unequal representation of interests*. University Press of Kansas.

Litvak, Kate, Bernard S Black, and Woongsun Yoo (2016). "The SEC's Busted Randomized Experiment: What Can and Cannot Be Learned". In: *Northwestern Law & Econ Research Paper, Forthcoming*.

Liu, Huchen (2020). "Policy uncertainty and demand for revolving-door lobbyists". In: *Interest Groups & Advocacy* 9.4, pp. 470–494.

Lorsch, Jay and Elizabeth Maciver (1989). *Pawns or potentates: The reality of Americas corporate boards*. Boston: Harvard Business School Press.

Martin, Cathie Jo (1999). *Stuck in neutral: business and the politics of human capital investment policy*. Princeton University Press.

Mayers, David and Clifford W. Smith (1982). "On the Corporate Demand for Insurance". In: *The Journal of Business* 55.2, pp. 281–296.

McCrain, Joshua (2018). "Revolving door Lobbyists and the value of Congressional staff Connections". In: *The Journal of Politics* 80.4, pp. 1369–1383.

McDonald, Michael L, James D Westphal, and Melissa E Graebner (2008). "What do they know? The effects of outside director acquisition experience on firm acquisition performance". In: *Strategic Management Journal* 29.11, pp. 1155–1177.

Munger, Michael C (1988). "On the political participation of the firm in the electoral process: An update". In: *Public Choice* 56.3, pp. 295–298.

Oliver, Christine and Ingo Holzinger (2008). "The effectiveness of strategic political management: A dynamic capabilities framework". In: *Academy of Management Review* 33.2, pp. 496–520.

Olson, Mancur (1989). "Collective action". In: *The invisible hand*. Springer, pp. 61–69.

Richter, Brian Kelleher, Krislert Samphantharak, and Jeffrey F Timmons (2009). "Lobbying and taxes". In: *American Journal of Political Science* 53.4, pp. 893–909.

Schattschneider, Elmer Eric (1960). *The Semisovereign People: A Realist's View of Democracy in America*. Holt, Rinehart and Winston.

Stigler, George J. (1971). "The Theory of Economic Regulation". In: *The Bell Journal of Economics and Management Science* 2.1, pp. 3–21. ISSN: 00058556. URL: http://www.jstor.org/stable/3003160.

Tullock, Gordon (1989). *The economics of special privilege and rent seeking*. Vol. 5. Springer Science & Business Media.

Xia, Jun, Xufei Ma, Tony W Tong, and Weiwen Li (2018). "Network information and cross-border M&A activities". In: *Global Strategy Journal* 8.2, pp. 301–323.

Yackee, Jason Webb and Susan Webb Yackee (2006). "A bias towards business? Assessing interest group influence on the US bureaucracy". In: *The Journal of Politics* 68.1, pp. 128–139.

Zhu, David H and Guoli Chen (2015). "CEO narcissism and the impact of prior board experience on corporate strategy". In: *Administrative Science Quarterly* 60.1, pp. 31–65.