Political Costs and Strategic Corporate Communication*

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Abstract

Do industries use advertising strategically when subject to the threat of political costs? Communication via advertising can assuage public concerns, which, in turn, reduces the incentives for elected officials to impose regulations on the industry. We identify expected political costs using cases of repeated industry testimony at congressional hearings. To disentangle strategic advertising in response to the threat of political costs from advertising for other reasons (e.g., reputation building or to generate sales), we exploit the fact that only politicians overseeing industry-relevant hearings can impose costs on a given industry. We find that subsequent to these hearings, affected industries increase their advertising by 132% more in the electorates of the politicians overseeing the hearings, relative to the increase in the electorates of other politicians. The strategic increase in advertising is magnified in the electorates served by the most senior politicians on the committees and those with the most politically engaged citizens. The increase is also pronounced in election years, when the hearings are longer, contain more negative language, or include a higher proportion of legislation-related words. Moreover, our results are not driven by politicians' decisions to serve on committees relevant to their local-area firms. In sum, our findings provide novel evidence about corporate communication with non-investor stakeholders.

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1 Introduction

Researchers have long postulated that the political process can impose costs on firms (e.g., Stigler, 1971; Peltzman, 1976; Jensen and Meckling, 1976). One source of these costs is the public, whose pressure can motivate politicians to impose unfavorable regulation or legislation on firms. Thus, to minimize the risk of these adverse outcomes, managers have incentives to positively influence the firm's public image (Zingales, 2017). In this spirit, Watts and Zimmerman (1978) identifies three specific channels through which managers can limit expected political costs. First, firms can directly influence their image with politicians through lobbying. Second, firms can make income-decreasing accounting choices to reduce the negative attention that high profits draw (commonly known as the "political cost hypothesis"). Third, firms can use advertising to improve the firm's public image, reducing citizens' demand for politicians to take action.

A substantial body of literature supports the first two channels: lobbying (e.g., Hochberg et al., 2009; Richter et al., 2009) and accounting techniques to reduce reported profits (e.g., Ramanna and Roychowdhury, 2010; Boland and Godsell, 2020).[1] By contrast, the evidence is surprisingly scant with regard to the third channel: communication with the public through advertising in response to expected political costs.[2] The central contribution of our paper is to provide some of the first evidence on this mechanism.

[1] See De Figueiredo and Richter (2014) and Boland and Godsell (2020) for excellent reviews of the respective literature.

[2] Prior work in marketing and political science focuses on advertising in the context of election campaign advertising and candidate choice (e.g., Huber and Arceneaux, 2007; Gordon and Hartmann, 2013) and on issue advertising. Research on the latter topic investigates efforts to *increase* issue salience with the intention of facilitating political action (e.g., Falk et al., 2006; Hall and Reynolds, 2012; Kalla and Broockman, 2021). By contrast, we consider advertising by corporations that is intended to improve public sentiment (e.g., Fombrun and Shanley, 1990) in strategically important constituencies and thus reduce public demand for political intervention over an industry's activities.

To illustrate corporate use of advertising in response to the threat of political costs, consider the following anecdote. In 2018, Facebook was the subject of public scrutiny and political attention over the social networking site's privacy practices and was also subject to a congressional hearing involving the firm's Chief Executive Officer (CEO), Mark Zuckerburg. In light of the scrutiny, Facebook initiated an advertising campaign, "Here Together." Part of the advertising messaging stated, "From now on, Facebook will do more to keep you safe." This messaging was intended to reassure the public about the firm's ability to improve its data-management practices without political intervention.[3]

The economic intuition underlying advertising when firms face political costs is straightforward. Corporate efforts to positively influence the firm's image can reduce public concern about an issue. Political scientists have long contended that politicians' first-order incentives are to pursue actions that put them in the best position for reelection (Mayhew, 1974). Thus, from an industry's perspective, improving its public image is a mechanism through which it can reduce politicians' incentives to take adverse actions against the industry.[4]

To convincingly answer the question of whether corporations strategically use advertising when subject to the threat of political costs, we exploit the fact that political oversight of industries is delegated to congressional committees. Importantly, only a subset of the politicians in Congress sits on each committee. We use this geographic variation in political oversight to identify advertising in response to the threat of political costs. In other words, we examine whether firms advertise with greater intensity in strategically important electorates.

[3]Appendix A presents additional details of the campaign.

[4]Zingales (2017) offers advertising as part of a menu of mechanisms that firms can use to control their image in society. In contrast to the other mechanisms such as employment, data ownership, media ownership, and research funding, firms can easily and quickly amend their advertising efforts to improve their image in response to an adverse event.

Before we elaborate on our strategy to identify strategically important electorates, we first discuss our primary empirical measures. To measure communication via advertising, we use a novel dataset containing industry-by-industry advertising expenditures, measured at the county-year level. We operationalize potential political costs using instances of *repeated* corporate testimony within an industry at congressional hearings.

Some hearings occur in which politicians do not intend to impose legislative or regulatory costs on firms. Instead, they intend to provide positive exposure to firms for ideological reasons or because of political connections (Lee and Osgood, 2019), or simply for information gathering purposes. These instances are more likely to manifest in one-off or two-off (i.e., when both relevant House and Senate committee hold a single hearing involving an industry) hearings. Thus, we focus on instances in which there are at least three testimony events by industry members within a calendar year. Compared to events involving one or two industry hearings, events involving three or more industry hearings contain a higher proportion of legislative words, are less likely to include firms that contribute to the committee chair or have operations in the chair's state, and are more likely to follow periods of high stock volatility for the testifying firm. Thus, instances of three or more events likely represent an escalation of congressional interest in regulating the industry's affairs.

For each set of industry-relevant hearings, the U.S. can be divided into two groups of electorates. The first group includes the electorates of politicians who do not serve on the committees holding industry-relevant congressional hearings, and thus have limited ability to impose political costs on the industry. Industry advertising spending in this first group represents general advertising or reputation-building efforts (e.g., Chakravarthy et al., 2014). The second group includes the electorates of the politicians serving on the congressional

committee(s) that hold industry-relevant hearings (i.e., the "strategically important electorates"). These electorates include the citizens towards whom advertising occurs for general or reputation-building reasons, but also to reduce the demand for political intervention.[5]

Our primary empirical tests use the second group as the treatment sample and the first group as the control. In other words, we compare the change in the industry's advertising expenditures for the strategically important electorates to the other electorates. We provide an example to illustrate our approach in Appendix B.

Our full sample consists of 1,489,450 observations at the industry-county-year level between 2015 and 2019. The sample period includes 450 unique congressional testimonies by 213 corporations. We empirically document that after repeated hearings involving industry member testimony, the industry's advertising spending increases. Importantly, the increase in spending is greater in strategically important electorates than in other electorates. In economic terms, the increase in industry advertising expenses directed to strategically important electorates is 132 percent greater than the change in the industry's advertising expenditures in other electorates. Our tests include industry-county fixed effects to capture time-invariant factors that may explain an industry's advertising spending in a particular county and year fixed effects to control for time-varying trends in overall advertising spending.

Although our identification strategy helps to rule out many alternative explanations for our findings, a remaining concern relates to selection. In particular, politicians choose to serve on the congressional committees that are most relevant for the firms in their electorates.

[5]Our objective is to understand whether firms use advertising strategically when subject to the threat of political costs. A natural extension of our study would be to examine the subsequent outcomes: is strategic advertising effective in limiting legislation? However, such outcomes are jointly determined by various factors that we cannot control for, including the extent of the underlying issue and the extent of the industry's response.

Thus, following industry member testimony at congressional hearings, increased industry advertising spending in strategically important electorates could simply reflect corporate efforts to build reputations with geographically proximate stakeholders, such as customers and employees. Our results are unlikely to be driven by selection for two reasons. First, our primary findings are robust to a battery of sensitivity tests in which we apply different criteria to eliminate electorates from the treatment sample that may be subject to this selection concern. Second, several institutional factors (including congressional and party rules about committee membership and the breadth of committee responsibilities) further limit the likelihood of selection driving our findings.

Next, we examine cross-sectional variation in corporate incentives to strategically use advertising campaigns when subject to the risk of political costs. We begin by studying variation in the expected benefits of strategic advertising. We find that strategic advertising increases more in election years than in non-election years (i.e., when politicians are particularly sensitive to their constituents' preferences). In addition, strategic advertising is more pronounced in electorates that are represented by a senior member of a committee overseeing industry-relevant hearings. Strategic advertising is also more pronounced in counties in which local residents pay more attention to politics, and thus are more engaged and willing to contact their representatives.

We study variation in the extent of the expected political costs in multiple ways. First, we study variation in characteristics of the hearing text. We find the increase in strategic advertising is pronounced when the hearings are longer (i.e., the transcripts have more words), the introductory remarks are more negatively toned, have stronger or more hostile language, or contain more legislative words. Second, we examine variation in the characteristics of firms

that testify in hearings. We find that the increase in strategic advertising is pronounced when multiple firms in the industry testify in the same hearing, when the testimony is given by a CEO, and when a firm gives multiple testimonies in a compressed time period.

Third, we investigate variation in testifying firms' market-related activity around hearings. We expect advertising to increase the most following adverse or uncertainty-generating events. Consistent with expectations, we find that the increase in industry advertising expenditures is pronounced when the testifying firm's stock returns preceding the hearing are more negative and when the testifying firms' stock price volatility preceding the hearing is high. The increase is also pronounced when analyst forecast dispersion for the testifying firms is relatively large following the hearings. Collectively, the cross-sectional evidence is consistent with the notion that industries that face a greater risk of political costs and expect a larger benefit from influencing public perception are more likely to engage in strategic advertising.

In sum, the results provide robust evidence that when faced with political costs, industries strategically target their advertising efforts toward the electorates of politicians who oversee the industry. Our study is especially important in light of an ongoing debate about the extent of corporate influence in the political process, which primarily focuses on tools such as lobbying and PAC contributions (e.g., see OECD, 2013 and Drutman, 2015). We draw attention to a complementary and indirect mechanism to influence the political process: advertising strategically directed towards influential citizens.

Further, our work relates to at least three streams of academic literature. First, our study contributes to the literature on corporate efforts to influence the external information environment. Prior studies largely focus on these efforts in the context of investors (e.g.,

see Beyer et al. (2010)) and consumers (e.g., Schmalensee, 1978; Grossman and Shapiro, 1984). Our study complements prior work by documenting corporate efforts to influence the information environment of citizens as a mechanism to reduce firms' risk of political costs. In this vein, advertising represents a firm's efforts to use information to re-frame the attention on the firm. By contrast, downwards earnings management is a mechanism to manipulate the information environment and limit adverse public attention that high profits would draw.

Relatedly, our work is also relevant to a growing literature that examines firms' communication with non-investor stakeholders. Examples include communication with suppliers (Darendeli et al., 2021), competitors (Darrough and Stoughton, 1990), employees (Sran, 2021; Zhang, 2022), and jury pools (Cohen and Gurun, 2021). We contribute to this literature by drawing attention to a natural medium (advertising) through which firms communicate with constituents in strategically important electorates (those served by politicians that oversee the industry).

Second, our study is relevant to a growing literature examining firms' non-market strategies, particularly influence in the political process. Governmental intervention is warranted when a problem or inefficiency cannot be solved by market forces (e.g., Stigler, 1964; Coffee, 1984). Extant research largely focuses on firms' efforts to influence politicians' actions via three channels: lobbying, political contributions, and connections. Our study highlights a different channel through which firms attempt to limit governmental intervention: by using advertising to assuage citizens' concerns about the firms' ability to self-regulate and thus limit the need for government intervention.

Third, we contribute to a broad cross-disciplinary literature examining corporate reputational repair. Recent studies by Chakravarthy et al. (2014), Dai et al. (2020), and Akey

et al. (2022) document that following reputational loss, firms attempt to repair their reputations with multiple stakeholder groups including capital providers, customers, suppliers, employees, and local communities in which the firms operate. Our study complements this research by providing evidence of corporate efforts to influence reputations with a previously unexamined stakeholder: constituents of politicians who can impose political costs on the industry.

2 Setting

In this section, we provide background details about congressional committees and hearings, the role of committees in the legislative process, and politicians' committee membership choices.

2.1 Congressional Committees

In both the U.S. House and Senate chambers, congressional committees are subgroups of elected politicians from that chamber who are charged with responsibility for a specific area of policy or governance. These responsibilities include the consideration of bills and the oversight of agencies, programs, and activities related to the policy jurisdiction of the committee. In 2018, the House (Senate) had 20 (16) "standing" or "permanent" committees. These committees are permanent committees that specialize in particular subject areas. In 2018, the House (Senate) also had 1 (4) select committees and four joint committees. Select committees (also known as special committees in the Senate) are created for specific purposes, such as an investigation and are typically disbanded at the end of their intended

duties.[6]

2.2 Politicians' committee membership choices

Politicians' committee assignments depend on a variety of factors that are often outside of the preferences and control of a given politician. These include the number of vacancies on a given committee, the political needs of each party assigning members to committees, the number of members competing for a committee assignment, views on specific issues, seniority, party loyalty, and rules on the number and types of assignments that each member may hold (Smith et al., 2013). In addition, the Republican and Democratic parties and each chamber have specific rules and restrictions on the number and type of committee assignments that each politician can hold. For instance, to achieve geographical and ideological balance on committees, two Senators from the same state and party usually are not permitted to serve on the same committee (https://archives-democrats-rules.house.gov/Archives/jcoc2d.htm14).

Congressional committees also typically have wide ranging responsibilities. For example, consider the Senate Committee on Banking, Housing, and Urban Affairs. The committee is responsible for drafting two well-known legislative bills (the Sarbanes-Oxley Act of 2002 and the Dodd-Frank Act of 2010). However, the committee is responsible for legislation and regulatory oversight of the following diverse set of topics: nursing home construction; public and private housing; renegotiation of government contracts; urban development and urban mass transit, banks, banking, and financial institutions; federal monetary policy, including

[6]An example of these committees includes the House Select Committee on Benghazi in 2014. Because these committees generally do not have legislative jurisdiction and the ability to impose political costs on firms, we do not include them in our analyses. Two exceptions are the Permanent Select Committee on Intelligence in the House and the Select Committee on Intelligence. Because both of these committees are treated as permanent committees and continue from Congress to Congress, we include them in our sample. See https://www.senate.gov/committees/ for more details.

the Federal Reserve System.[7]

To put these facts in context, consider that in 2022, the chair of the Senate Committee on Banking, Housing, and Urban Affairs is a senator from Ohio and the ranking member is from Pennsylvania, two states that are not immediately associated with banking or urban affairs. Moreover, one might imagine that the state of New York would have representation on the committee given the concentration of banks in New York City. However, the committee has not included a senator from New York since Chuck Schumer departed the committee in 2016. Thus, committee assignments do not typically align perfectly with the geographic concentration of industries. This feature of congressional committee membership aids in our identification efforts to disentangle advertising that occurs in response to the threat of political costs from advertising for other reasons.

2.3 Congressional Hearings

Politicians use hearings as a method to gather information for use by a committee. Hearings can be broadly classified into four groups: legislative, investigative, oversight, and confirmation-related. Our sample focuses on legislative and investigative hearings because corporations can be invited (or subpoenaed) to testify at these events. By contrast, oversight and confirmation-related hearings are typically not relevant for corporations.[8]

Legislative hearings occur when committee members seek to gather information about the subject matter of the hearing with the intention of using that information to shape legislation. Investigative hearings usually involve the evaluation of allegations of wrongdoing

[7]See a full list of the topics under the jurisdiction of the committee here: https://www.banking.senate.gov/about/jurisdiction.

[8]Oversight hearings represent governance over the the executive branch of government and confirmation hearings involve the consideration of presidential nominations for executive branch and judicial positions.

by entities whose activities may suggest the need for a legislative remedy.[9] These hearings may lead to subsequent legislation. By contrast, it is possible that hearings are beneficial for firms. For instance, hearings could allow firms to placate politicians' concerns and provide opportunities to obtain publicity. However, we focus on instances of repeated testimony by industry members, which are unlikely to represent favorable events.

In sum, legislative and investigative hearings are primary mechanisms through which politicians acquire information to determine if regulation or legislation for an industry is required. In this vein, the hearings represent timely signals about political and public interest in possible legislation. Furthermore, when corporations are invited witnesses, a hearing likely represents a signal about congressional interest in legislation against the testifying firm and more broadly, the firm's industry.

2.4 The role of committees in the legislative process

Politicians serving on a given congressional committee are gatekeepers in the legislative process because these politicians control the outcomes of all legislative efforts related to their committee's purview. Although any politician can introduce a bill to Congress, every bill is directed for review to the congressional committee that oversees the policy area most closely related to the bill. The committee (and in particular, the seniormost committee members) evaluate the bill and may choose to accept, consider, or reject the bill.[10]

If the committee chooses to consider the bill, the committee can schedule hearings to investigate the merits and flaws of the bill.[11] Hearings may include testimony from various

[9] Investigative hearings can also occur because of wrongdoing by by private citizens or public officials acting in their official capacity.

[10] Although possible, newly-introduced bills are rarely accepted without further consideration.

[11] A hearing is not required for a bill to receive further action from the committee. However, hearings

stakeholders including relevant executive branch agencies, relevant industries, and groups representing interested citizens.[12] Committees can compel people to appear using subpoena power if necessary. In addition to hearings, committee members and their staff use informal briefings and other mechanisms to further assess the bill.

After a committee has held all scheduled hearings, the committee evaluates whether to advance the bill to a "mark-up" session. During these sessions, committee members can evaluate the information they have gathered. Any committee member may offer amendments to the bill and all members vote to accept or reject the amendments. A markup concludes when the committee agrees, by majority vote, to report the bill to the chamber. Committees typically only advance bills to a markup when there is an expectation that the bill will receive majority support on that vote.[13]

Once a committee has reported a bill to the respective chamber, the bill is placed into a list of all the bills eligible for floor consideration in that chamber. The senior members of the major party determine which bills will receive consideration by the entire chamber. Both chambers must accept the same version of a bill before it can be sent to the president for review.

occur more often than not.

[12]For example, during the process of drafting the Sarbanes-Oxley Act of 2002, the Senate Banking Committee undertook a series of 10 hearings over a six-week period. Witnesses included five former chairmen of the Securities and Exchange Commission (SEC), other experts, former regulators, leading academics, and representatives from consumer and industry groups (Lucas, 2004).

[13]See https://www.congress.gov/legislative-process/committee-consideration.

3 Data

We obtain advertising spending data from Borrell Associates Inc. (hereafter, "Borrell data"), a media consultancy firm, for the five calendar years between 2015 and 2019.[14] Borrell uses a proprietary methodology to calculate an estimate of industry-level advertising spend by U.S. county.[15] Their methodology relies on revenues received by local media companies and amounts spent on advertising by local businesses. The advertising data is available for 3,101 U.S. counties, which represents 99 percent of the total number of counties and county-equivalents in the country. Borrell primarily sells its services to commercial organizations. Their clients include Meta and McKinsey & Company. Borrell's data and analysis have also been referenced in comments submitted to U.S. government agencies, including the Federal Communications Commission.

Figure 1 illustrates the county-level dispersion of total advertising spending during our sample period. Darker shades indicate more spending. Specifically, counties in the highest quartile of advertising spending are shaded in dark blue. Counties in the lowest quartile of advertising spending are shaded in white. Unsurprisingly, densely populated areas are targeted with higher advertising spending than less densely populated areas.

Borrell classifies industries into 99 groups and identifies the SIC industry codes attributable to each of their industry groups in their data. For the years between 2015 and 2019, the data include 1,840,410 industry-county-year observations. We remove industry-

[14] Borrell does not offer data prior to 2015. We end our sample at the end of 2019 because of of pandemic-related shifts in corporate advertising spending behavior in 2020 and 2021.

[15] Although other data providers also provide advertising data (e.g., The Nielsen Company), a central advantage of the Borrell data for our purposes is that industry-level advertising expenditures are aggregated at the county level and available for virtually all US counties. This granularity is necessary for our identification approach.

county observations that report zero advertisement spending throughout the sample period. The final sample of 1,489,450 industry-county-year observations covers 99 industries across 3,101 counties. Table 1 shows that the average advertising spending per industry-county-year is $1.2 million. This amount is significantly right-skewed, with a median of only $64 thousand. Thus, in our empirical analyses, we take the natural logarithm of one plus dollar advertising spending, *AdSpending*. The Borrell data splits the dollar advertising spending into three types: Print, television (TV), and online. Within the three categories, the highest spending is on online advertising, followed by print, followed by TV. Our empirical tests below consider both aggregate advertising spending and the spending for each individual advertising medium.

Next, we collect the text files of all congressional hearings held between 2014 and 2018 from govinfo.gov.[16] Table 2, Panel A shows that there are 6,230 congressional hearings during our sample period.

The hearing text files typically follow a standardized format that lists the witnesses appearing at the hearing (either under a "Witnesses" heading or a list of individuals providing statements at the hearing), along with their professional affiliation and title. We extract this data and identify all hearings in which the first 10 kilobytes of the text file (which contains the witness list) contains the name of a Fortune 1000 firm.[17] For all the hearings in which we obtain a match, we manually read the file to verify that a matched company representative testifies at the hearing and thus eliminate false positive matches.[18]

[16]Note that congressional hearings lag advertising spending by one year.

[17]We use the names of all Fortune 1000 firms in the Compustat and SEC 10-K EDGAR filing database and include name variations created by the NBER algorithm.

[18]False positive matches can occur for a number of reasons. First, companies may be mentioned during the testimony but not present at the hearing. Second, an individual may inadvertently be identified as a company. For example, witness Stephanie Murphy may be identified as a match for Murphy USA (NYSE:MUSA).

Approximately 6 percent of the hearings, or 356 hearings, involve testimony from a Fortune 1000 firm. The year with the highest proportion of corporate testimony is 2015 (99 hearings), while the lowest is 2018 (48 hearings). Most hearings that have corporate testimony invite only one firm to testify, but sometimes multiple corporations testify in the same hearing. Table 2, Panel B shows that there are 450 corporate testimonies across the 356 hearings. Of the set of hearings involving corporate testimony, approximately 79 percent include testimony from one firm, 17 percent have testimony from two firms, and less than 5 percent have testimony from three or more firms.

We also collect the name of the congressional committee holding each hearing involving corporate testimony. Table 3 illustrates the committees holding the hearings in the House of Representatives (in Panel A) and the Senate (in Panel B). During our sample period, committees in the House of Representatives hear nearly 50 percent more corporate testimonies than the committees in the Senate. The Senate Committee on Energy and Natural Resources and the Senate Committee on Commerce, Science, and Transportation have the greatest proportion of corporate testimony (roughly 40% combined). The Committee on Energy and Commerce has the greatest proportion of corporate testimonies in the House (roughly 30%).[19]

Table 3, Panel C lists the top 10 firms in terms of frequency of appearance at congressional hearings. The firms that appear most frequently are Intel, Norton LifeLock, Microsoft, and Boeing (each of these firms gives 10 or more testimonies during our sample period).

To link the hearing data (at the firm level) to the advertising data (at the industry

[19]In Internet Appendix A, we show that our results are statistically and economically robust to excluding the commerce committees.

level), we use COMPUSTAT to identify each testifying firm's primary SIC industry code. We use a linking table provided by Borrell to map SIC codes to Borrell's 99 self-created industry classifications. Table 3, Panel D shows that the most common industries involved in congressional testimony are Manufacturing and other (42.4%), Computer-related services (14.7%), and Electric power utilities (8.4%).[20]

To identify instances in which industries face a material threat of political intervention, we create an annual industry-level indicator *PolAttention* that is equal to one if at least three congressional hearings include testimony from members of industry i during year *t-1*. Table 1 shows that these events occur for 7.3 percent of industry-years.[21]

Prior literature does not provide guidance about the number of congressional hearings that proxy for a significant threat of political costs. However, prior literature shows that sometimes invitations to testify before congress are beneficial for firms Lee and Osgood (2019). In particular, instances of one or two hearings in a year involving testimony from an industry are likely to represent favors for connected firms rather than potential risks of unfavorable regulations. One-off hearings (or effectively two hearings because of invitations from both the relevant House and Senate committees) could also simply represent informational gathering efforts by politicians, for instance for new or emerging issues.

By contrast, three or more hearings can represent considerable escalation in political

[20]Our main results are robust to eliminating hearings in the 'Manufacturing and Other' industry classification. See Internet Appendix A for more details.

[21]We do not attempt to identify the specific committees that have jurisdiction over an industry but instead, assume that if a committee holds a hearing, they have some jurisdiction over an industry. The U.S. Senate website states: "Setting jurisdictional boundaries among committees has always proved troublesome. While some jurisdictions apply to oversight of specific executive agencies or precisely defined functions, others are not so obviously described. As a result, a half-dozen or more committees may claim jurisdiction in such broad policy areas as the national economy or environmental protection." See https://www.senate.gov/artandhistory/history/common/briefing/Committees.htm.

attention. Three hearings can represent either repeated interest by a particular committee in hearing from an industry about a particular issue, interest in multiple issues related to the industry (which increases the risk of political costs related to at least one of the issues), or interest by multiple committees (which suggests the issue is of broad interest).[22]

To further support our use of three or more hearings as a proxy for expected political costs, Appendix C examines differences in firm and hearing characteristics for events involving one or two industry hearings, compared to events involving three or more industry hearings. Using probit regressions, we regress the indicator *PolAttention* on several characteristics. The sample includes all hearings that involve corporate testimony during the sample period, which spans 2015 through 2019. Thus, *PolAttention* is an indicator equal to one if at least three congressional hearings during year *t-1* include testimony from members of industry *i*. *PolAttention* is equal to zero if testimony by members of industry *i* occurs in only one or two congressional hearings during year *t-1* . The characteristics include: the proportion of the firm's operations that are located in the hearing committee chair's state (*Chair's State*), the amount of PAC contributions made by the testifying firm to the committee chair, scaled by total assets (*PAC*), the proportion of the words in the hearings that are related to legislation (*Legislative Words [Machine]*), the committee chairperson's ideological slant – where higher values indicate more liberalism (*Ideology*), the testifying firm's stock volatility in the 30 days prior to the hearing (*Stock Vol*), and the dollar amount of lobbying contributions made by the testifying firm (*Lobby*).

The empirical results show that these characteristics are systematically different across

[22]Consistent with this rationale, the positive relationship between advertising and one or two hearings is marginally significant. By contrast, the link strengthens when we use three, four, or five hearings as the threshold. See Internet Appendix B for more detail.

the events involving one or two industry hearings, compared to events involving three or more industry hearings. We find that firms in the one or two hearing group are more likely to have material operations in the committee chairperson's electorate and make larger PAC contributions to the committee chair. This is consistent with invitations to testify at one-off hearings representing favors to the firm. By contrast, firms that are invited to testify in events involving three or more hearings are less likely to have economically material operations in the electorate of the chairperson overseeing the hearing and make smaller PAC contributions to the chairperson.

Events involving three or more hearings contain relatively more legislative words during the hearings, illustrating the heightened intent to impose legislation. Firms invited to testify at events involving three or more hearings also have higher stock volatility in the 30 days before the hearings. This correlation is consistent with uncertainty-generating events preceding these hearings. Firms involved in these hearings also have significantly greater lobbying expenditures in the year before the hearings, suggesting these firms are on average subject to more political risk. Finally, we find for events involving three or more hearings, the committee chairperson's ideology is more likely to be liberal (and therefore more amenable to government intervention in corporate activities). However, this correlation is not statistically significant at conventional levels.

We turn now to our identification of strategic advertising spending. For each industry-year in which at least three hearings occur (i.e., *PolAttention=1*), some counties have congressional representation on the committees holding the hearings and some do not. For each county in our sample, we identify the congressional district and state in which the county is located using U.S. Census data. Using the congressional data from Professor Charles Stewart

III, we link the two Senators and at least one House Representative that represent each county each year.[23] If county c is represented by a congressional member that is involved in at least three hearings about industry i, we create an indicator, $PolAttention_{ComRep}$, equal to one. For all other counties in industry i, $PolAttention_{ComRep}$ is equal to zero. $PolAttention_{ComRep}$ is equal to one for approximately 2.1 percent of our sample.

Figure 2 illustrates the dispersion of geographic representation in our sample of hearings. In particular, counties that are represented by congressional members that oversees a significant number of congressional hearings (top quartile) are shaded in purple. Counties that are represented by congressional members that oversee relatively few hearings (bottom quartile) are shaded in light pink. The lack of a systematic geographic pattern in the figure is unsurprising. Members of Congress move through committees over time and rarely sit on committees that are directly relevant to firms in their constituencies.

4 Main Results

We begin by examining changes in advertising expenditures for industries facing congressional hearings using the following generic regression specification:

$$AdSpending_{ic,t} = \alpha_{ic} + \lambda_t + \beta_1 PolAttention_{i,t-1} + \varepsilon_{ic,t}, \tag{1}$$

where i indexes industries, ic indexes industry-counties, t indexes years, α_{ic} denotes industry-county fixed effects, and λ_t denotes year fixed effects. The dependent variable of interest,

[23] Some counties cross the boundaries of congressional districts. In these cases, we allow a county to be matched with each congressional district that overlaps with the county (and consider each county-district a pseudo county). Nonetheless, our findings and inferences are unchanged when we conduct our tests after excluding counties that span multiple congressional districts. See Internet Appendix A.

$AdSpending_{ic,t}$, is equal to the natural logarithm of one plus the dollar advertising spending by industry i within county c in year t. *PolAttention* is an indicator equal to one if at least three congressional hearings in year *t-1* include testimony from any member of industry i. Intuitively, we seek to capture cases in which an industry is subject to repeated congressional attention, and is thus a likely target of future legislation.[24] The coefficient on β_1 captures the average change in industry advertising spending after a year in which the industry is subject to *PolAttention*, compared to other years.

We present the results for this baseline specification in Table 4, Column (1). The positive coefficient on *PolAttention* is economically and statistically significant. It shows that industry-wide advertising expenditures increase by an average of 4.3 percent in the year following political attention on the industry. Although this finding is consistent with the notion that industries subject to the threat of political costs strategically engage in advertising to assuage the public, it could also simply represent industry efforts to engage in general reputation building or increase sales.

To better identify advertising expenditures that are a strategic response to the threat of political costs, we use the following specification for the remainder of our analyses (industry-county-year subscripts are suppressed for ease of interpretation):

$$AdSpending = \alpha + \lambda + \beta_1 PolAttention_{ComRep} + \beta_2 PolAttention_{NoComRep} + \varepsilon, \qquad (2)$$

In this model, we replace the *PolAttention* indicator from Equation 1 with two separate,

[24] A benefit of using multiple hearings is that in aggregate, these events are unlikely to be favorable events for the testifying firms or industry.

mutually exclusive, indicators.[25] Specifically, within an industry-year that is subject to at least three hearings, some counties are in the electorates of politicians serving on the committees conducting the hearings ($PolAttention_{ComRep}$), while the rest of the counties are not ($PolAttention_{NoComRep}$). Industry-years that are not subject to political attention serve as a control and capture general trends in corporate advertising expenditures.

The coefficient on $PolAttention_{NoComRep}$ serves as a baseline that captures an industry's general advertising expenditures (including those for reputation building and sales) in the year after the industry is subject to the threat of political costs based on multiple instances of industry member testimony at congressional hearings. $PolAttention_{ComRep}$ captures industry i's spending specifically in counties within the electorates of politicians serving on the committees that hold hearings involving testimony by industry members. Thus, the difference between $PolAttention_{ComRep}$ and $PolAttention_{NoComRep}$ captures the industry's incremental spending for strategic advertising in response to the threat of political costs.

In Column (2) of Table 4, we present results from estimating Equation 2. The coefficient on $PolAttention_{NoComRep}$ confirms that industry advertising expenses generally increase after repeated hearings involving testimony by industry members, by an average of 3.7 percent. However, the coefficient on $PolAttention_{ComRep}$ shows that industry advertising in the *ComRep* counties increases by 8.6 percent. The difference between $PolAttention_{ComRep}$ and $PolAttention_{NoComRep}$ shows that industry advertising expenses in the counties of congressional committee members increases by an *incremental* 4.9 percent. This increase is 132 percent greater than the increase in industry advertising expenditures for the set of counties represented by other politicians (*NoComRep*).

[25]This approach mirrors that of Christensen et al. (2013) in the IFRS setting.

In economic terms, the incremental change in industry advertising expenditures for counties in the electorates of politicians that attend an industry-relevant hearing amounts to \$59,079 per industry-county year.[26] For example, following industry-relevant hearings for industry i, of which at least one is attended by a Senator from Kansas, the industry increases its advertising spending in Kansas by \$6.2 million relative to other states that do not have a Senator who attends any of the industry-relevant hearings.[27]

To provide further insights about whether industries strategically use a specific type of advertising to communicate with voters, we take advantage of granularity in the Borrell advertising data. In particular, the data disaggregates total industry advertising spending across three mediums: television, print, and online. Like television and print advertising, online advertising can be targeted to well-defined geographic areas.[28] We reestimate Equation 2 for each of these advertising mediums to evaluate whether, on average, industries tend to focus their voter-specific advertising efforts on a particular medium. Columns (3) through (5) present the findings for each component of total advertising spending (*Print*, *TV*, and *Online*). The overall findings across each component corroborate our main results. The coefficients on $PolAttention_{ComRep}$ are all positive, statistically significant, and larger than the coefficients on $PolAttention_{NoComRep}$. Furthermore, the differences between $PolAttention_{ComRep}$ and $PolAttention_{NoComRep}$ in Columns (3) though (5) are smaller in magnitude compared to Column (2). Thus, it is not a particular type of advertising spending

[26]The mean advertising spending is approximately \$1,205,692. Multiplying \$1.206 million by the difference between the coefficients on $PolAttention_{ComRep}$ and $PolAttention_{NoComRep}$ of 0.049 gives \$59,079

[27]Kansas has 105 counties. Multiplying \$59,079 by 105 gives \$6.2 million.

[28]For instance in online advertising, Facebook allows advertisers to target ads towards a congressional district or zip code (https://www.facebook.com/business/help/717368264947302?id=176276233019487) and Google allows advertisers to engage in advertising at the city or post code level (https://support.google.com/google-ads/answer/2404184?hl=en.)

driving our results, but rather advertising spending in aggregate. All subsequent analyses in this manuscript use the aggregated advertising spending across all mediums as the dependent variable.

Although our empirical strategy helps to rule out many alternative interpretations, one remaining concern relates to selection. In particular, it is possible that politicians choose to serve on committees that are relevant to some set of economically important firms located within the politician's electorate.[29] Thus, increased advertising expenditures in those politicians' constituencies could also simply represent industry efforts to rebuild their reputation or generate more sales. We address this concern in a number of ways. First, institutional details discussed in Section 2 suggest this alternative explanation is unlikely to systematically explain our findings. Nonetheless, second, we conduct four sets of robustness analyses in which we exclude counties in which the largest industry members are headquartered, multiple industry members are headquartered, and testifying firms are headquartered or have primary operations. These tests are detailed in Internet Appendix C. Our main results remain statistically and economically robust across all of these specifications.

5 Cross-sectional Analyses

5.1 When do industries expect the greatest benefits from using advertising in response to the threat of political costs?

The use of strategic advertising in the presence of political costs should be pronounced when the expected benefits are highest. In Table 5, we study variation in the expected benefits in several ways. In particular, we study election versus non-election years, variation

[29]For instance, politicians representing the San Jose, CA area could choose to serve on committees relevant to technology, or politicians representing the Houston, TX area could choose to serve on energy-related committees.

in the seniority of the representatives on the committees that hold hearings, and variation in the extent to which local citizens pay attention to politics. For each of these cross-sectional variables, we create indicators that denote the presence or absence of the additional benefit of strategic advertising.

In Column (1), we study election years. Politicians are more likely to cater to public pressure in election years than in non-election years. Thus, industries subject to the threat of political costs in election years have relatively greater incentives to engage in strategic advertising efforts to alleviate public concerns about the industry. We create an indicator *Yes*, that is equal to one in presidential and midterm election years (2016 and 2018 in our sample period). Approximately 37.7 percent of our treated observations occur during one of these two election years. The observations in the remaining years are represented by a *No* indicator. We find that *ComRep* counties are incrementally more likely to experience increased advertising in an election year. Specifically, the difference between $PolAttention_{ComRep} \times Yes$ and $PolAttention_{ComRep} \times No$ is significantly positive (0.045). By contrast, the difference between $PolAttention_{NoComRep} \times Yes$ and $PolAttention_{NoComRep} \times No$ is not statistically or economically different from zero.

In Column (2), we examine the seniority of the congressional members of the committees that oversee the hearing. Targeted advertising should be more valuable in the electorates of the more senior members of the committee, who have greater control over the legislative decisions made by the committee. We create a *Seniority* variable equal to the number of hearings in industry i during year *t-1* in which a senior member of the congressional committee (measured as all politicians in the top quartile of the number of years served on the committee)

represents county c.[30] The median of *Seniority* is 1 and the mean is 1.7. We create a *High* indicator equal to one for industry-county-years in which *Seniority* is above the median (i.e., greater than 1). Note that *Seniority* can only be identified among counties that have representation on a committee overseeing at least one industry hearing. Thus, in Column (2), we partition the variable of interest, $PolAttention_{ComRep}$ into *High* (for above-median seniority) and *Low* (for at- or below-median seniority). The coefficient on $PolAttention_{ComRep} \times High$ of 0.108 is significantly larger than the coefficient on $PolAttention_{ComRep} \times Low$ of 0.075. These results illustrate that an industry's increased strategic advertising in the constituencies of committee members overseeing hearings is significantly larger when the members are more senior.

In Column (3), we study the extent to which advertising varies with local voter-level political engagement. Electorates with more politically engaged citizens are more likely to contact their representatives to voice their dissatisfaction with firm or industry practices. From the standpoint of an industry subject to potential political costs, the benefits from advertising are greatest in these politically engaged electorates. American National Election Studies (ANES) conducts political surveys every four years. We collect data from the survey year that overlaps with our sample period, 2016. One of the questions that is asked in the survey is "How often do residents pay attention to politics and elections?" The responses to this question vary from "Always" (20.21% of respondents) to "Never" (1.29% of respondents). The ANES data files provide the congressional district of the respondents, allowing us to measure local-level attention to politics. We create a variable, *Engagement*, equal to the

[30]For example, if committee X holds three hearings in a year involving industry i, and County A is represented by a member in the top quartile of seniority on committee X, *Senior* is equal to three for County A in year t-1.

average response to this question for each congressional district, ranging from 4 (Always) to 0 (Never). In Column (3) of Table 5, the *High* indicator is equal to one if *Engagement* is in the top quartile of the sample (i.e., above 2.75). We find that among represented counties, industry participants are more likely to increase spending when political engagement is high, compared to when it is not. The spending difference between $PolAttention_{ComRep} \times High$ and $PolAttention_{NoComRep} \times Low$ is significantly positive (1.7 percent). Moreover, this difference is statistically and economically larger than the difference for unrepresented counties.

5.2 Advertising spending and the severity of expected political costs

The increase in strategic advertising that we document above is likely to be pronounced when industries perceive political costs as being more likely to manifest. We study variation in expected political costs in several ways. First, in subsubsection 5.2.2, we consider characteristics of congressional hearings that can proxy for the risk of potential political costs. Second, in subsubsection 5.2.3 we consider market characteristics around congressional hearings to evaluate investor and analyst perceptions about the risk of political costs.

5.2.1 Congressional Hearing Language

The language that congressional members use during hearings is an indication of the severity of the hearing. We study five dimensions of the text of the hearing transcripts that capture variation in expected political costs: (1) hearing length, (2) tone, (3) strong language, (4) the proportion of legislation-related words using a word-embedding approach, and (5) the proportion of legislation-related words using our own reading of the transcripts. We discuss each of these in more detail next and present empirical results in Table 6.

First, longer hearings suggest that the politicians overseeing the hearing are attempting to collect more information about the subject of the hearing. This could occur because more witnesses have been called, or because the duration of the questioning or testimony events are longer. To determine the duration of hearings, we count the number of words in each congressional hearing transcript. For each industry-year, we calculate a variable *Words*, which represents the mean word count across all the hearings involving the industry. We then partition the hearing sample based on the median *Words* of 28,108. *High* and (*Low*) identify whether the average length of the hearings for industry i during year *t-1* is above (below) the median. Next, we reestimate Equation (2) after interacting each of $PolAttention_{ComRep}$ and $PolAttention_{NoComRep}$ with *High* (*Low*).

The findings in Table 6, Column (1) show that within *ComRep* counties, industries subject to political attention increase advertising spending 7.9 percent more when the length of congressional hearings is *High* than when the length is *Low*. This advertising increase is statistically and economically greater than that for *NoComRep* counties.

Next, we examine the extent to which the language in the hearing has a negative tone, and the extent to which strong words are used in the hearings. To evaluate these metrics, we obtain word dictionaries from Loughran and Mcdonald (2011). The findings in Columns (2) and (3), respectively show that within *ComRep* counties, industries subject to political attention increase advertising spending by 5.1 (9.7) percent more when the negative tone of the hearings (the use of strong words) is *High* than when these measures are *Low*. The increase is 4.8 (3.3) percent greater than the increase in *NoComRep* counties.

In two additional tests, we consider the nature of the language explicitly related to legislation in the congressional hearings using two different approaches. First, we use a word-

embedding approach to identify text in hearings that are subsequently followed by legislation versus the text in other hearings. Second, we self-identify words related to legislation: *Legislation, Legislative, Legislate, Regulation, Regulatory, Regulate, Bill, Act, Statute,* and *Enact*. We multiply the count of these words by 100 and scale by the total number of words in the hearing. We then average across all hearings for industry i during year *t-1*. The variables *High* (*Low*) indicate that the proportion of legislative words for a given industry hearing event is above (below) the sample median.

The findings in Columns (4) and (5) show that within *ComRep* counties, industries involved with hearings that have an above median proportion of legislation-related words increase advertising spending by more than those industries involved with hearings that have a below median proportion of legislation-related words. The increase of 7.5 percent in Column (4) and 12.0 percent in Column (5) is statistically and economically greater than that of the industries in *NoComRep* counties.

5.2.2 Congressional Hearing Characteristics

The risk of political costs are also likely to vary with hearing characteristics. Expected political costs are higher when: (1) the hearings involve multiple firms, (2) a corporate CEO is present at a testimony event, and (3) multiple testimony events by a single firm take place in a compressed time window. We present empirical results in Table 7.

First, we consider the differential effect when more than one Fortune 1000 firm testifies in at least one of the hearings. Attendance by multiple firms can represent a broader level of scrutiny or industry-wide concerns and thus a greater chance of regulatory intervention. We create a variable, *Multiple Firms* equal to the number of hearings in industry i and year *t-1*

in which more than one firm testifies in the same hearing. In Column (1), we partition the *PolAttention=1* sample into industry-years with an above-median count of *Multiple Firms* (i.e., 2 or more hearings), and below median (*Low*). The findings show that relative to *NoComRep* counties, *ComRep* counties increase advertising spending 4.4 percent more when the incidence of multiple firms testifying is *High* than when the incidence is *Low*.

In Column (2), *High* indicates that an above-median number of hearings in the industry-year involved testimony by a Chief Executive Officer. In some cases, the firm representative at a hearing is a lower-level manager, suggesting less concern from the firm about regulatory intervention. We find that *ComRep* counties experience greater advertising spending relative to *NoComRep* counties when the incidence of CEO testimony is high. Specifically, relative to *NoComRep* counties, *ComRep* counties increase advertising spending by an incremental 2.3 percent when an above-median number of CEOs testify. The increase in *NoComRep* counties' advertising spending does not statistically or economically vary with CEO testimony.

Finally, we create a variable *Same Firm Short Window* equal to the number of times in industry *i* and year *t-1* in which the same firm testifies three times within 90 days. Repeated testimony by a firm in a compressed window suggests more urgency on the part of Congress to take action. In Column (3), *High* indicates that at least one firm from an industry testifies at three hearings within 90 days. Relative to *NoComRep* counties, *ComRep* counties experience increased industry advertising spending of 6.3 percent when the same firm testifies multiple times in a short window (*High*) than when they do not (*Low*).

5.2.3 Market-based metrics

We study market-related characteristics of the testifying firm(s), focusing on the window around the hearings. Adverse market sentiment toward the firm can reflect investor and analyst concerns that politicians will engage in adverse regulatory or legislative actions against a testifying firm or its industry.[31] In Column (1) of Table 8, we study whether strategic advertising varies with the testifying firms' market adjusted stock returns in the 90 days before a hearing, averaged across all hearings for industry i during year *t-1*. We find that in counties without political representation on industry-relevant committees, industries subject to the threat of political costs are no more likely to increase advertising when returns are lower than when they are higher. Specifically, the difference between $PolAttention_{NoComRep} \times High$ and $PolAttention_{NoComRep} \times Low$ is statistically and economically insignificant. By contrast, industry advertising in *ComRep* counties is greater when testifying firms' market adjusted stock returns in the 90 days before a hearing are low, relative to when returns are high. The difference between $PolAttention_{ComRep} \times High$ and $PolAttention_{ComRep} \times Low$ is significantly negative (-0.039).

In addition to the use of market returns as a proxy for the extent of expected political costs, we also examine market-based uncertainty using stock price volatility. Higher uncertainty among investors and analysts suggests a higher level of expected political costs and greater marginal returns from strategic advertising. In Column (2) of Table 8, we study the testifying firms' market-adjusted volatility in the 90 days before their testimony events, averaged across all hearings for industry i during year *t-1*. *High* indicates that the testi-

[31] A recent paper by Ridge et al. (2019) documents that firms experience positive market returns in the short-run window around congressional testimony events. However, they do not consider the entire period between the hearing announcement date and the hearing date, limiting the inferences that can be drawn.

fying firms' market-adjusted volatility in the 90 days before a hearing, averaged across all hearings for industry i during year *t-1*, is above the median. Similarly, in Column (3), *High* indicates that analyst earnings forecast dispersion for testifying firms, measured within 30 days after testimony events, is above the median. In both columns, we find that among *ComRep* counties, industries involved in hearings that are associated with *High* uncertainty undertake a larger increase in the strategic advertising than when uncertainty is *Low*. The increase among *ComRep* counties is statistically and economically larger than the increase among *NoComRep* counties.

6 Additional Analyses and Robustness Tests

In the Internet Appendix, we conduct a variety of additional analyses and robustness tests. First, Internet Appendix A presents results from robustness tests. Our primary results are statistically and economically similar when we exclude large counties, exclude the "Manufacturing & Other" industry, and control for Hassan et al. (2019)'s measure of P-risk.

In Internet Appendix B, we consider alternative ways of measuring and timing expected political costs. In our main analyses, we identify the presence of political attention on an industry (i.e., *PolAttention*) based on three hearings involving testimony from the industry's members. We show that our main results attenuate when we use one or two hearings, and strengthen when we use four or five hearings. In our main tests, we examine the change in advertising in the year after the hearing. We find that the increased advertising expenditures decays over time and by the third year after the hearing, there is no meaningful change in advertising expenditures.

7 Conclusion

When subject to political costs, firms can employ a variety of tools to attempt to mitigate the costs. These tools include lobbying, income-decreasing accounting choices, and the use of advertising campaigns to reduce public concerns, and thus the public pressure on politicians to impose political costs. Relative to research on lobbying and the use of income-decreasing accounting choices, little is known about firms' strategic use of advertising when they are subject to political costs. Our study provides some of the first evidence on this mechanism.

To identify expected political costs, we use instances of political scrutiny based on repeated industry member testimony at congressional hearings. Our empirical design compares a scrutinized industry's advertising expenditures in the electorates of the politicians overseeing the hearings (i.e., strategically important electorates) to the industry's advertising expenditures in other electorates.

We find that following repeated hearings involving industry member testimony, the industry's advertising spending increases. Importantly, the increase in spending is greater in strategically important electorates than in other electorates. In economic terms, the increase in industry advertising expenses directed to the electorates of congressional committee members is 132 percent greater than those directed to other electorates.

We also show that the increase in strategic advertising is larger when the expected benefits of advertising are high and when the expected political costs are high. In sum, our results provide robust evidence that when faced with political costs, industries use advertising strategically to communicate with the electorates of politicians who have legislative responsibility for the industry.

Our study is pertinent to an ongoing debate about corporate intervention in the political process. We provide broad evidence of a relatively under-examined mechanism used by firms – strategic and targeted advertising – when faced with political costs. Although we offer some of the first steps in understanding the implications of corporate testimony at congressional hearings, a number of interesting research questions still remain unanswered.

For instance, what other actions do firms and industries take around the increased political risks following congressional attention? Do firms amend their disclosure behavior or engage in ESG related activities? How do lenders and other stakeholders amend their relationships with affected firms in light of increased political scrutiny? Are corporate efforts to limit political costs ultimately successful?

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A An Illustrative Example: Corporate Advertising In Response to the Threat of Political Costs

In 2018, Facebook, Inc. (NASDAQ:FB ; now known as Meta Platforms, Inc.) faced political scrutiny about Facebook.com's privacy and data-security related practices. In particular, Cambridge Analytica, a data-analytics firm, acquired the private Facebook data of tens of millions of users through a data leak in 2014. The data was alleged to have been used to provide analytical assistance to campaigns for U.S. presidential candidates.

The firm's CEO, Mark Zuckerburg, testified at multiple Congressional hearings. The firm subsequently engaged in an advertising campaign that included a 60 second TV commercial. A screenshot of the commercial appears below.

The intent of the commercial is likely to reduce public concerns about Facebook's ability to protect their customers' privacy and responsibly manage their data, and in turn, improve public sentiment towards Facebook. For instance, at the 38 second mark, the narrator says: "That's going to change. From now on, Facebook will do more to keep you safe and protect your privacy, so we can all get back to what made Facebook good in the first place: friends. Because when this place does what it was built for, then we all get a little closer."

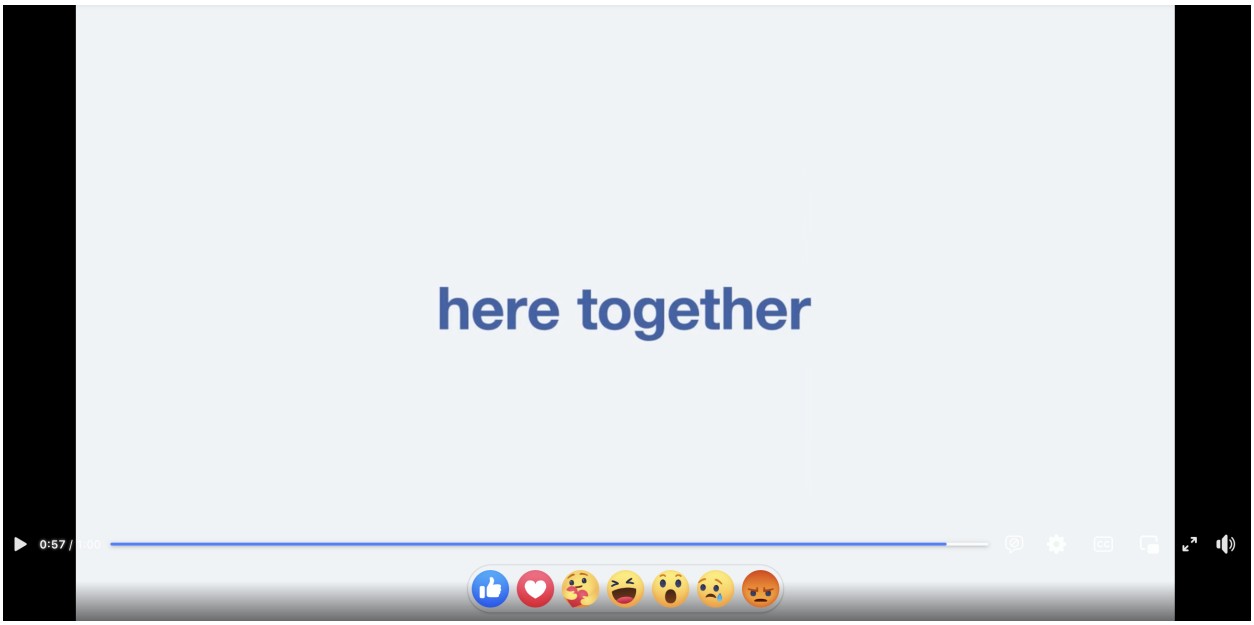

Figure A1 Advertising in Response to Political Attention. A screenshot from the 60 second commercial Facebook, Inc. used to respond to political attention. The full ad can be found here: https://www.facebook.com/facebook/videos/10157309509986729/.

B Illustration of Research Design

The following example illustrates our approach. NRG Energy Inc (NYSE: NRG) is an American energy company, with operations in 11 states. In 2017, the firm was ranked 229 on the Fortune 1000 list. In the same year, the firm, and more broadly the industry, was under pressure to reduce its carbon emissions from operating electricity generating facilities. On September 13, 2017, the U.S. Senate Committee on Environment and Public Works ("CEPW" hereafter) held a hearing titled "Expanding and Accelerating the Deployment and Use of Carbon Capture, Utilization, and Sequestration." 21 senators, representing 21 states, serve on the CEPW. NRG was invited to testify at this hearing and was represented by a senior executive (David Greeson, Vice President of Development).

In this example, NRG's testimony at a congressional hearing serves as a proxy for political attention on NRG and its industry.[32] Our treatment sample is the 21 states of the senators that serve on the CEPW. The control sample is the remaining 29 states. Thus, our empirical strategy examines changes in advertising expenditures by NRG's industry in the electorates (i.e., states) of the politicians serving on the CEPW, relative to the industry's changes in advertising expenditures in all other states without representation on the committee. Advertising spending in the electric power utilities industry from 2017 to 2018 increased by an average of $20,256 for each county in the 21 treated states and $17,025 for each county in the 29 control states (and Washington, D.C.). The difference-in-differences of $3,231 suggests that 17.8 percent of the change in county-level advertising spending is incurred to reduce expected political costs.[33]

[32]This example is a simplification of our approach for illustrative purposes. In our empirical analyses, we identify potential political costs based on at least three instances of any industry member testifying at a congressional hearing occurs within a year. The hearing at which NRG testifies is one of multiple hearings involving testimony by same-industry members.

[33]Politicians may select to serve on the committees relevant to the firms operating in their local areas, making it difficult to identify advertising in response to the threat of political costs. We address this concern in Internet Appendix C. For the purposes of this example, excluding the 11 states in which NRG operates leaves 15 states that are treated and 25 states that are untreated. The difference-in-differences estimate increases to $7,490.

C Determinants of *PolAttention*

	(1) *PolAttention*
Chair's State	-0.250***
	(0.075)
PAC	-0.310***
	(0.066)
Legislative Words (Machine)	1.346**
	(0.658)
Ideology	0.143
	(0.317)
Stock Vol.	31.073***
	(11.017)
Lobby	0.035***
	(0.007)
Year FE	Yes
Observations	450
R^2	0.093

This table examines differences in firm and hearing characteristics between events involving one or two industry hearings and events involving three or more industry hearings, using probit regressions. *PolAttention* is an indicator equal to one if at least three congressional hearings during year *t-1* include members of industry *i*. *PolAttention* is equal to zero if one or two of the congressional hearings during year *t-1* include members of industry *i*. The characteristics include: the proportion of the firm's operations that are located in the hearing committee chair's state (*Chair's State*), the amount of PAC contributions made by the testifying firm to the committee chair, scaled by total assets (*PAC*), the proportion of the words in the hearings that are related to legislation (*Legislative Words (Machine)*), the committee chairperson's ideological slant, increasing in liberalism (*Ideology*), the firm's stock volatility in the 30 days prior to the hearing (*Stock Vol*), and the dollar amount of lobbying contributions made by the testifying firm, logged (*Lobby*). The sample includes all hearings that involve corporate testimony during the sample period, which spans 2015 through 2019. Standard errors clustered at the year level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.

D Variable Definitions

This table contains descriptions of the primary variables used throughout the paper.

Variable	Description	Source
Abnormal Return	The market-adjusted return for a testifying firm in the 90 days preceding a hearing, averaged across testifying firms in all hearings for industry i during year *t-1*.	CRSP
Abnormal Volatility	The market-adjusted volatility for testifying firms in the 90 days preceding a hearing, averaged across testifying firms in all hearings for industry i during year *t-1*.	CRSP
AdSpending	The natural log transformation of one plus the sum of print, television, and online media advertisement expenditure.	Borrell
Analyst Forecast Dispersion	The standard deviation of analyst earnings forecasts for testifying firms within 30 days after a hearing, averaged across testifying firms in all hearings for industry i during year *t-1*.	IBES
CEO Testimony	The number of hearings for industry i in year *t-1* in which a Chief Executive Officer testifies (instead of a lower-level employee).	govinfo.gov
Dollar Spending	The total dollars of print, tv, and online media advertisement expenditure.	Borrell
Δ*Dollar Spending*	The annual change in total advertisement expenditure for industry i county c year t, scaled by the advertisement expenditure in year*t-1*.	Borrell
Election	An indicator equal to one if year t is a congressional election year.	congress.gov
Engagement	The engagement score of citizens in county c based on the survey question "How often do residents pay attention to politics and elections." The response of "Always" is coded as 4, "Most of the time" as 3, "About half of the time" as 2, "Some of the time" as 1, and "Never" as 0.	ANES
Legislative Words (Human)	The number of legislative words in a hearing transcript multiplied by 100, divided by the number of words in the transcript, averaged across all hearings for industry i during year *t-1*. Legislative words include: *Legislation, Legislative, Legislate, Regulation, Regulatory, Regulate, Bill, Act, Statute,* and *Enact*.	govinfo.gov

Legislative Words (Machine)	The number of legislative words in a hearing transcript multiplied by 100, divided by the number of words in the transcript, average across all hearings for industry i during year *t-1*. Legislative words are obtained through a word embedding approach, in which we correlate words with legislative outcomes.	govinfo.gov
Length	The number of words in hearing transcripts, averaged across all hearings for industry i during year *t-1*.	govinfo.gov
Lobby	The dollar amount of lobbying expenditure by industry i in year t.	opensecrets.org
Multiple Firms	The number of hearings for industry i in year *t-1* in which multiple firms testify at the same hearing.	govinfo.gov
Negative Tone	The proportion of negative words in the opening statement of a hearing that involves members from industry i during year *t-1*, where negative words are based on the Loughran and Mcdonald (2011) dictionary.	govinfo.gov
PolAttention	An indicator equal to one if at least three congressional hearings involve testimony from members of industry i during year *t-1*.	govinfo.gov
$PolAttention_{ComRep}$	An indicator equal to one if *PolAttention* equals one, and members of the congressional committees holding at least three hearings during year *t-1* represent county *c*.	govinfo.gov and Charles Stewart III's congressional data
$PolAttention_{NoComRep}$	An indicator equal to one if *PolAttention* equals one, and members of the congressional committees holding a hearing during year *t-1 do not* represent county *c* in at least three hearings.	govinfo.gov
Same Firm in Short Window	The number of incidences for industry i in year *t-1* in which the same firm testifies three times in a 90-day window.	govinfo.gov
Seniority	The number of hearings for industry i in year *t-1* in which a senior congressional committee member (top quartile of tenure on the committee) represents county *c*.	Charles Stewart III's congressional data
Strong Words	The proportion of strong words in the opening statement of a hearing that involves members from industry i during year *t-1*, where strong words are based on the Loughran and Mcdonald (2011) dictionary.	govinfo.gov

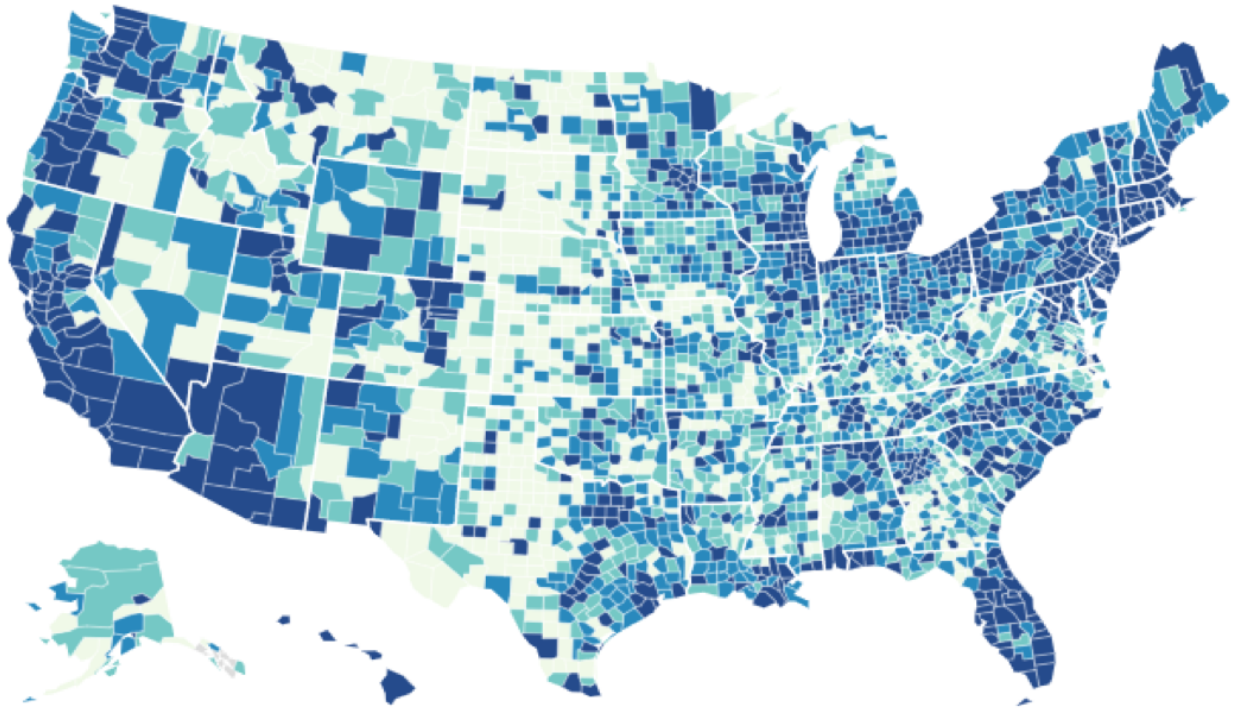

Figure 1 Advertising Heat Map. This map illustrates the total dollars of advertising spending by county during our sample period. The darkest shade of blue is the top quartile, while the lightest shade of blue is the bottom quartile.

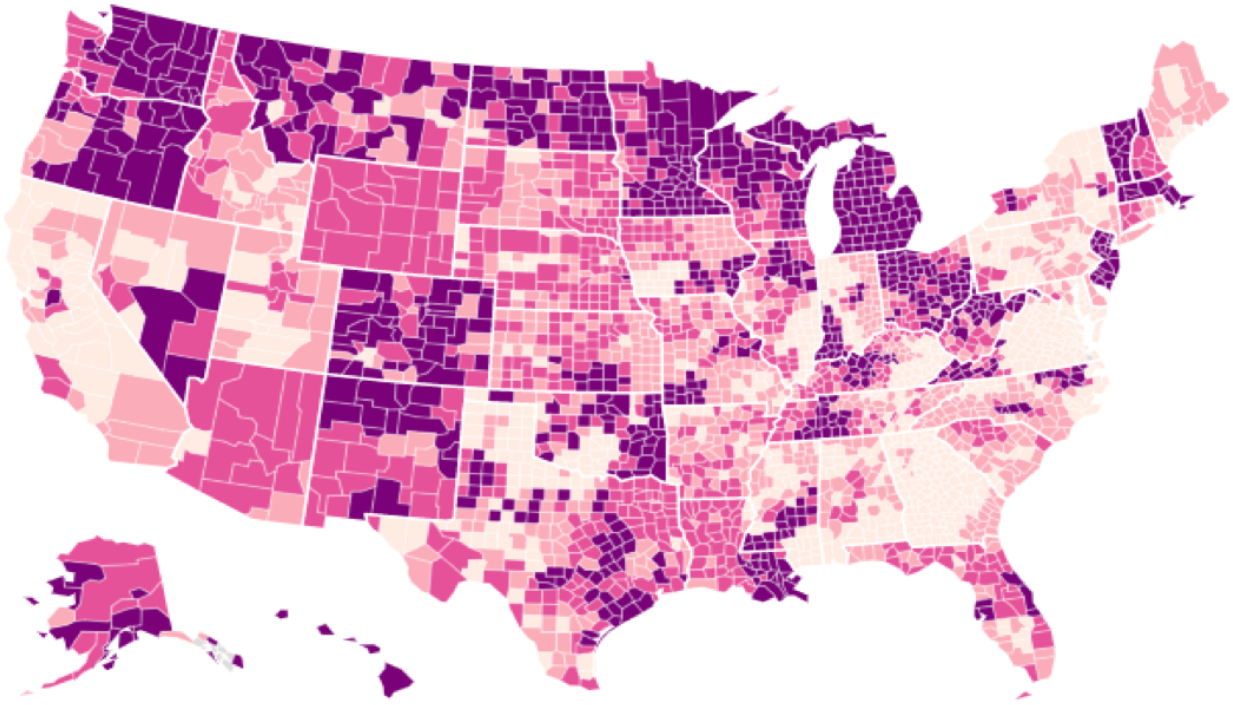

Figure 2 Representation Heat Map. This map illustrates the counties that are most frequently represented by members of congressional committees that hold hearings during our sample period. The darkest shade (purple) is the top quartile, while the lightest shade (light pink) is the bottom quartile.

Table 1
Descriptive Statistics

	Obs	Mean	Std Dev	25th Pctl	50th Pctl	75th Pctl
Advertising Data						
Dollar Spending	1,489,450	1,205,692	6,582,648	12,747	63,586	356,310
Dollar Spending_Print	1,489,450	323,036	1,897,542	2,834	15,538	86,890
Dollar Spending_TV	1,489,450	230,792	1,629,493	1,179	8,741	55,492
Dollar Spending_Online	1,489,450	651,864	3,732,907	6,486	31,990	185,895
ΔDollar Spending	1,155,422	0.066	0.132	0.006	0.059	0.110
Dependent Variables						
AdSpending	1,489,450	10.962	2.975	9.453	11.060	12.784
AdSpending_Print	1,489,450	9.545	2.908	7.950	9.651	11.372
AdSpending_TV	1,489,450	8.810	3.216	7.073	9.076	10.924
AdSpending_Online	1,489,450	10.321	2.912	8.778	10.373	12.133
Independent Variables						
PolAttention	1,489,450	0.073	0.260	0.000	0.000	0.000
$\text{PolAttention}_{ComRep}$	1,489,450	0.021	0.144	0.000	0.000	0.000
$\text{PolAttention}_{NoComRep}$	1,489,450	0.052	0.221	0.000	0.000	0.000
Cross-sectional Variables						
Abnormal Return	108,459	−0.002	0.044	−0.024	0.004	0.028
Abnormal Volatility	108,459	0.007	0.004	0.005	0.007	0.009
Analyst Forecast Dispersion	108,459	0.340	0.350	0.140	0.236	0.405
CEO Testimony	108,459	1.798	2.743	0.000	1.000	2.000
Election	108,459	0.377	0.485	0.000	0.000	1.000
Engagement	1,488,460	2.478	0.414	2.250	2.516	2.750
Legislative Words (Human)	108,459	0.020	0.007	0.015	0.019	0.022
Legislative Words (Machine)	243,818	0.149	0.061	0.113	0.138	0.181
Length	108,459	29,473	7,175	25,362	28,108	32,310
Multiple Firms	108,459	2.136	2.364	0.000	1.000	3.000
Negative Tone	108,459	0.018	0.005	0.015	0.018	0.020
Same Firm in Short Window	108,459	0.547	0.984	0.000	0.000	1.000
Seniority	31,580	1.714	2.368	0.000	1.000	3.000
Strong Words	108,459	0.009	0.002	0.008	0.009	0.010

This table provides descriptive statistics about the variables used in the study. All variables are at the industry-county-year level. The cross-sectional variables can only be measured among treated industry-county-years. All variables are defined in Appendix D.

Table 2
Congressional Hearings

Panel A: Sample selection

Year	No. of Hearings	No. of Hearings with Corporate Testimony	% of Hearings with Corporate Testimony
2014	1,293	81	6.3%
2015	1,506	99	6.6%
2016	1,142	54	4.7%
2017	1,303	74	5.7%
2018	986	48	4.9%
	6,230	356	5.7%

Panel B: Number of Corporate Testimonies per Hearing

	No. of Hearings	No. of Testimonies	% of Hearing Sample
1	280	280	78.7%
2	60	120	16.9%
3	14	42	3.9%
4	2	8	0.6%
	356	450	

This table provides descriptive statistics about congressional hearings from 2014 to 2018.

Table 3
Congressional Hearings by Chamber and Committee

Panel A: Number of Corporate Testimonies, by committee in the House of Representatives

	No. of Testimonies	% of Testimonies
Energy and Commerce	81	30.1%
Financial Services	31	11.5%
Transportation and Infrastructure	22	8.2%
Judiciary	20	7.4%
Science and Technology	19	7.1%
Agriculture	15	5.6%
Oversight and Government Reform	14	5.2%
Ways and Means	13	4.8%
Veterans Affairs	12	4.5%
Homeland Security	12	4.5%
Small Business	9	3.3%
Natural Resources	8	3.0%
Education and Labor	7	2.6%
Foreign Affairs	5	1.9%
Armed Services	1	0.4%
	269	

Panel B: Number of Corporate Testimonies, by committee in the Senate

	No. of Testimonies	% of Testimonies
Commerce, Science, and Transportation	42	23.2%
Energy and Natural Resources	30	16.6%
Homeland Security and Governmental Affairs	21	11.6%
Judiciary	17	9.4%
Banking, Housing, and Urban Affairs	16	8.8%
Finance	10	5.5%
Environment and Public Works	9	5.0%
Health, Education, Labor, and Pensions	9	5.0%
Small Business and Entrepreneurship	7	3.9%
Intelligence	6	3.3%
Agriculture, Nutrition, and Forestry	5	2.8%
Foreign Relations	4	2.2%
Veterans' Affairs	3	1.7%
Appropriations	1	0.6%
Armed Services	1	0.6%
	181	

Continued, next page

Table 3, Continued

Panel C: Top 10 Testifying Firms

Company Name	No. of Testimonies	% of Testifying Firm Sample
Intel Corp	15	3.3%
NortonLifeLock Inc	15	3.3%
Microsoft Corp	12	2.7%
Boeing Co	11	2.4%
CME Group Inc	9	2.0%
Alphabet Inc	8	1.8%
IHS Markit Inc	8	1.8%
Qualcomm Inc	7	1.6%
NASDAQ Inc	7	1.6%
American Water Works Co Inc	7	1.6%

Panel D: Top 10 Industries

Borrell Industry	No. of Testimonies	% of Testifying Firm Sample
Manufacturing & Other	191	42.4%
Computer-related Services	66	14.7%
Electric Power Utilities	38	8.4%
Financial Services (securities brokers, investment advisors)	35	7.8%
Insurance Services	27	6.0%
Other Utilities (Gas, water, sewer)	16	3.6%
Banks	13	2.9%
Cable, TV, and Other Pay Services	12	2.7%
Telecommunications Services	12	2.7%
General Merchandise Stores	7	1.6%

Panels A and B provide descriptive statistics about congressional hearings, by chamber, from 2014 to 2018. Panel A describes hearings held by the House of Representatives and Panel B describes Senate hearings. Panels C and D provide detail about the sample of corporate testimony at congressional hearings. In Panel C, we provide the top ten firms in the sample, based on number of testimonies. In Panel D, we provide the industry classification of the testifying firms, based on Borrell's industry classification.

Table 4
Advertising Spending and Congressional Testimony

	Dependent Variable:				
	(1)	(2)	(3)	(4)	(5)
	AdSpending	*AdSpending*	*Print*	*TV*	*Online*
(a) PolAttention	0.043***				
	(0.003)				
(b) PolAttention$_{ComRep}$		0.086***	0.062***	0.067***	0.065***
		(0.006)	(0.005)	(0.004)	(0.006)
(c) PolAttention$_{NoComRep}$		0.037***	0.034***	0.036***	0.024***
		(0.003)	(0.003)	(0.003)	(0.003)
(b)−(c)		0.049***	0.029***	0.032***	0.041***
Year FE	Yes	Yes	Yes	Yes	Yes
Industry-County FE	Yes	Yes	Yes	Yes	Yes
Observations	1,489,450	1,489,450	1,489,450	1,489,450	1,489,450
R^2	0.983	0.983	0.989	0.994	0.985

This table examines the relationship between advertising spending and testimony at congressional hearings. The sample period spans 2015 through 2019. The dependent variable in Columns (1) and (2), *AdSpending*, is the natural logarithm of one plus dollar spending in year t industry i and county c. The dependent variable in Column (3) is the natural logarithm of one plus dollar spending on Print advertising in year t industry i and county c. The dependent variable in Column (4) is the natural logarithm of one plus dollar spending on TV advertising in year t industry i and county c. The dependent variable in Column (5) is the natural logarithm of one plus dollar spending on Online advertising in year t industry i and county c. The independent variable of interest in Column (1) is *PolAttention*. *PolAttention* is an indicator equal to one if at least three congressional hearings during year *t-1* include members of industry i. The focus in Columns (2) through (5) is on the difference between *PolAttention*$_{ComRep}$ and *PolAttention*$_{NoComRep}$. *PolAttention*$_{ComRep}$ (*PolAttention*$_{NoComRep}$) is an indicator equal to one if at least three congressional hearings involve testimony from members of industry i during year *t-1* and county c is (is not) represented by a politician that serves on a committee that oversees the hearings. Standard errors clustered at the congressional district level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.

Table 5
Variation in Expected Benefits from Advertising

	Dependent Variable: *AdSpending*		
	(1)	(2)	(3)
	Election	Seniority	Local Attention to Politics
(a) PolAttention$_{ComRep}$ × Yes	0.107***		
	(0.007)		
(b) PolAttention$_{ComRep}$ × No	0.063***		
	(0.007)		
(c) PolAttention$_{NoComRep}$ × Yes	0.034***		
	(0.005)		
(d) PolAttention$_{NoComRep}$ × No	0.040***		
	(0.003)		
(e) PolAttention$_{ComRep}$ × High		0.108***	0.099***
		(0.007)	-0.008
(f) PolAttention$_{ComRep}$ × Low		0.075***	0.082***
		(0.007)	-0.007
(g) PolAttention$_{NoComRep}$		0.037***	
		(0.003)	
(h) PolAttention$_{NoComRep}$ × High			0.034***
			-0.003
(i) PolAttention$_{NoComRep}$ × Low			0.037***
			-0.004
(a)−(b)	0.045***		
(c)−(d)	-0.006		
[(*a*)-(*b*)]-[(*c*)-(*d*)]	0.051***		
(e)−(f)		0.033***	0.017**
(h)−(i)			-0.003
[(*e*)-(*f*)]-[(*h*)-(*i*)]			0.020*
Year FE	Yes	Yes	Yes
Industry-County FE	Yes	Yes	Yes
Observations	1,489,450	1,489,450	1,489,450
R^2	0.983	0.983	0.983

This table examines cross-sectional variation in the relationship between advertising spending and testimony at congressional hearings. The sample period spans 2015 through 2019. The dependent variable, *AdSpending*, is the natural logarithm of one plus dollar spending in year t industry i and county c. $PolAttention_{ComRep}$ ($PolAttention_{NoComRep}$) is an indicator equal to one if at least three congressional hearings involve testimony from members of industry i during year *t-1* and county c is (is not) represented by a politician that serves on a committee that oversees the hearings. In Column (1), *Yes* indicates that year t is an election year. The focus in Column (1) is on the difference between $PolAttention_{ComRep} \times Yes$ and $PolAttention_{ComRep} \times No$. This difference contrasts with the difference between $PolAttention_{NoComRep} \times Yes$ and $PolAttention_{NoComRep} \times No$. In Column (2), *High* indicates that county c has an above-median number of hearings in which senior committee members represent the county at hearings for industry i in year *t-1*. Seniority cannot be calculated for industry-counties without representation. Therefore, the focus in Column (2) is on the difference between $PolAttention_{ComRep} \times High$ and $PolAttention_{ComRep} \times Low$. In Column (3), *High* indicates that the congressional district is in the top quartile of citizens that pay attention to politics. Standard errors clustered at the congressional district level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.

Table 6
Cross-Sectional Variation in Hearing Text

	Dependent Variable: *AdSpending*				
	(1)	(2)	(3)	(4)	(5)
	Length	Negative Tone	Strong Words	Legislative Words (Machine)	Legislative Words (Human)
(a) PolAttention$_{ComRep}$ × High	0.121***	0.122***	0.116***	0.136***	0.140***
	(0.006)	(0.009)	(0.006)	(0.012)	(0.005)
(b) PolAttention$_{ComRep}$ × Low	0.043***	0.069***	0.019**	0.061***	0.020***
	(0.007)	(0.005)	(0.008)	(0.006)	(0.008)
(c) PolAttention$_{NoComRep}$ × High	0.047***	0.039***	0.058***	0.067***	0.055***
	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)
(d) PolAttention$_{NoComRep}$ × Low	0.022***	0.038***	-0.005*	0.033***	−0.002
	(0.004)	(0.004)	(0.003)	(0.004)	(0.005)
$(a) - (b)$	0.079***	0.053***	0.097***	0.075***	0.120***
$(c) - (d)$	0.025***	0.001	0.064***	0.034***	0.057***
$[(a) - (b)] - [(c) - (d)]$	0.054***	0.052***	0.033***	0.041***	0.063***
Year FE	Yes	Yes	Yes	Yes	Yes
Industry-County FE	Yes	Yes	Yes	Yes	Yes
Observations	1,489,450	1,489,450	1,489,450	1,489,450	1,489,450
R^2	0.983	0.983	0.983	0.983	0.983

This table examines cross-sectional variation in the relationship between advertising spending and testimony at congressional hearings. We use the text of the hearing transcripts to assess the severity of the hearing. In Column (1), *High* indicates the length of the hearings for industry i in year *t-1* is above-median. In Column (2), *High* indicates that the tone of the introductory remarks for industry i's hearings in year *t-1* is above the median. In Column (3), *High* indicates that the average proportion strong words for industry i's hearings in year *t-1* is above the median. In Column (4), *High* indicates that the average proportion of legislative words (using a word-embedding approach) for industry i's hearings in year *t-1* is above the median. In Column (5), *High* indicates that the average proportion of legislative words (using human assessment) for industry i's hearings in year *t-1* is above the median. The sample period spans 2015 through 2019. The dependent variable, *AdSpending*, is the natural logarithm of one plus dollar spending in year t industry i and county c. *PolAttention* is an indicator equal to one if at least three congressional hearings during year *t-1* include members of industry i. $PolAttention_{ComRep}$ ($PolAttention_{NoComRep}$) is an indicator equal to one if *PolAttention* is equal to one, and county c is (is not) represented by a politician that serves on a committee that oversees at least three hearings involving testimony from members of industry i. Standard errors clustered at the congressional district level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.

Table 7
Cross-Sectional Variation in Hearing Characteristics

	Dependent Variable: *AdSpending*		
	(1)	(2)	(3)
	Multiple Firms	CEO Testimony	Same Firm in Short Window
(a) PolAttention$_{ComRep}$ × High	0.097***	0.101***	0.109***
	(0.008)	(0.009)	(0.007)
(b) PolAttention$_{ComRep}$ × Low	0.062***	0.078***	0.055***
	(0.006)	(0.008)	(0.005)
(c) PolAttention$_{NoComRep}$ × High	0.030***	0.038***	0.029***
	(0.006)	(0.007)	(0.010)
(d) PolAttention$_{NoComRep}$ × Low	0.039***	0.037***	0.038***
	(0.003)	(0.003)	(0.003)
$(a) - (b)$	0.036***	0.024**	0.054***
$(c) - (d)$	−0.008*	0.001	−0.009
$[(a) - (b)] - [(c) - (d)]$	0.044***	0.023*	0.063***
Year FE	Yes	Yes	Yes
Industry-County FE	Yes	Yes	Yes
Observations	1,489,450	1,489,450	1,489,450
R^2	0.983	0.983	0.983

This table examines cross-sectional variation in the relationship between advertising spending and testimony at congressional hearings. We use the characteristics of the hearing to assess severity. In Column (1), *High* indicates that the number of hearings for industry i in year *t-1* that involve more than one Fortune 1000 firm in the same hearing is above the median. In Column (2), *High* indicates that the number of hearings for industry i in year *t-1* that involve testimony by a Chief Executive Officer is above the median. In Column (3), *High* indicates that the the number of incidences for industry i in year *t-1* of the same firm testifying at three hearings within 90 days is above the median. The sample period spans 2015 through 2019. The dependent variable, *AdSpending*, is the natural logarithm of one plus dollar spending in year t industry i and county c. *PolAttention* is an indicator equal to one if at least three congressional hearings during year *t-1* include members of industry i. *PolAttention*$_{ComRep}$ (*PolAttention*$_{NoComRep}$) is an indicator equal to one if *PolAttention* is equal to one, and county c is (is not) represented by a politician that serves on a committee that oversees at least three hearings involving testimony from members of industry i. Standard errors clustered at the congressional district level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.

Table 8
Cross-Sectional Variation in Capital Markets

	Dependent Variable: *AdSpending*		
	(1)	(2)	(3)
	Abnormal Returns	Abnormal Volatility	Analyst Forecast Dispersion
(a) PolAttention$_{ComRep}$ × High	0.070***	0.130***	0.099***
	(0.007)	(0.009)	(0.014)
(b) PolAttention$_{ComRep}$ × Low	0.109***	0.053***	0.073***
	(0.007)	(0.006)	(0.005)
(c) PolAttention$_{NoComRep}$ × High	0.038***	0.042***	0.035***
	(0.004)	(0.003)	(0.005)
(d) PolAttention$_{NoComRep}$ × Low	0.035***	0.029***	0.039***
	(0.003)	(0.004)	(0.003)
$(a) - (b)$	−0.039***	0.077***	0.026*
$(c) - (d)$	0.003	0.012***	−0.005
$[(a) - (b)] - [(c) - (d)]$	−0.042***	0.064***	0.031**
Year FE	Yes	Yes	Yes
Industry-County FE	Yes	Yes	Yes
Observations	1,489,450	1,489,450	1,489,450
R^2	0.983	0.983	0.983

This table examines cross-sectional variation in the relationship between advertising spending and testimony at congressional hearings. The sample period spans 2015 through 2019. The dependent variable, *AdSpending*, is the natural logarithm of one plus dollar spending in year t industry i and county c. *PolAttention* is an indicator equal to one if at least three congressional hearings during year *t-1* include members of industry i. *PolAttention*$_{ComRep}$ (*PolAttention*$_{NoComRep}$) is an indicator equal to one if at least three congressional hearings involve testimony from members of industry i during year *t-1* and county c is (is not) represented by a politician that serves on a committee that oversees the hearings. The difference between *PolAttention*$_{ComRep}$× *High* and *PolAttention*$_{ComRep}$× *Low* captures the difference among represented industry-county-years that are subject to the hearings. The difference between *PolAttention*$_{NoComRep}$× *High* and *PolAttention*$_{NoComRep}$× *Low* captures the difference among unrepresented industry-county-years that are subject to the hearings. The first difference of interest is between *PolAttention*$_{ComRep}$× *High* and *PolAttention*$_{ComRep}$× *Low*. In Column (1), *High* indicates that the testifying firms' market-adjusted returns in the 90 days preceding the hearings for industry i in year *t-1* are above the median. In Column (2), *High* indicates that the testifying firms' market-adjusted volatility in the 90 days before the hearings for industry i in year *t-1* is above the median. In Column (3), *High* indicates that the testifying firms' analyst forecast dispersion in the 30 days after the hearings for industry i in year *t-1* is above the median. Standard errors clustered at the congressional district level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.

Internet Appendix for "Political Costs and Strategic Corporate Communication"

A. Robustness

B. Measurement and Timing of Variables

C. Identification

Internet Appendix A: Robustness

In this Appendix, we conduct several additional robustness tests.

Removing hearings held by the commerce committees

The commerce committees hold more hearings than other committees in our sample. They account for 30.1% of hearings in the House of Representatives and 23.2% of hearings in the Senate. In Column (1) of Table IA1, we do not allow hearings held by the commerce committees in our treatment. Our results remain economically and statistically significant after the removal of these cases, suggesting that our findings are not driven by the commerce committees.

Removing observations in the "Manufacturing & Other" industry classification

Firms in the "Manufacturing & Other" industry represent the largest proportion of testifying firms (with approximately 42 percent of testimony events). In Column (2) of Table IA1, we do not allow the "Manufacturing & Other" industry to be treated by a hearing. Our results remain economically and statistically significant after the removal of these cases, suggesting that our findings are not driven by the advertising spending activity for the "Manufacturing & Other" industry.

Removing counties with more than one congressional district

The matching process between counties and congressional districts can be noisy. A particular concern relates to over-representation of counties with large populations. These counties typically include multiple congressional districts because congressional districts are, by de-

sign, of roughly equal size. Examples of such counties include Cook County in Illinois (which includes the Chicago area) and Los Angeles County in California.[34] As noted in section 3, each congressional district within a county is set as a psuedo-county and the advertising characteristics for the county are identically applied to each psuedo-county in our dataset. We repeat our analyses after removing these psuedo-counties from our sample. Column (3) of Table IA1 shows that our findings are robust to the exclusion of these psuedo-counties. The difference between $PolAttention_{ComRep}$ and $PolAttention_{NoComRep}$ is positive and statistically significant at the one percent level.

An alternative measure of expected political costs based on Hassan et al. (2019)

A recent study by Hassan et al. (2019) introduces a measure of firm-level political risk based on the share of quarterly earnings conference calls that firms devote to political risks. To better understand how our proxy of political risk based on repeated industry member attendance at congressional hearings differs from the information captured by the Hassan et al. (2019) measure, we repeat our primary analyses after including the Hassan et al. (2019) measure of P-risk. The results in Column (4) of Table IA1 show that our results are robust to the inclusion of P-Risk. Both variables are statistically significant at the one percent level, suggesting they capture complementary characteristics of firms' political risk environments.

[34]For instance, in 2012, there were 11 congressional districts within Cook County, IL (https://www.cookcountyclerkil.gov/sites/default/files/pdfs/Congressional%20Districts.pdf).

Table IA1
Robustness

	Dependent Variable: *AdSpending*			
	(1) Exclude Commerce Committees	(2) Exclude Manufacturing & Other	(3) Exclude Large Counties	(4) Political Risk Control
(a) PolAttention$_{ComRep}$	0.067***	0.074***	0.105***	0.085***
	(0.005)	(0.007)	(0.009)	(0.006)
(b) PolAttention$_{NoComRep}$	0.021***	0.038***	0.043***	0.035***
	(0.003)	(0.003)	(0.005)	(0.003)
Prisk				0.012***
				(0.001)
$(a) - (b)$	0.047***	0.036***	0.062***	0.049***
Year FE	Yes	Yes	Yes	Yes
Industry-County FE	Yes	Yes	Yes	Yes
Observations	1,489,450	1,489,450	983,065	1,489,450
R^2	0.983	0.983	0.959	0.983

This table presents the relationship between advertising spending and testimony at congressional hearings. The sample period spans 2015 through 2019. The dependent variable, *AdSpending*, is the natural logarithm of one plus dollar spending in year t industry i and county c. The focus is on the difference between $PolAttention_{ComRep}$ and $PolAttention_{NoComRep}$. $PolAttention_{ComRep}$ ($PolAttention_{NoComRep}$) is an indicator equal to one if at least three congressional hearings involve testimony from members of industry i during year *t-1* and county c is (is not) represented by a politician that serves on a committee that oversees the hearings. In Column (1), *PolAttention* cannot be equal to one if the hearings are held by the commerce committees. In Column (2), *PolAttention* cannot be equal to one if the hearings involve the "Manufacturing and Other" industry. In Column (3), *PolAttention* we exclude counties that span more than one congressional district. In Column (4), we control for Hassan et al. (2019)'s P-Risk measure. Standard errors clustered at the congressional district level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.

Internet Appendix B: Measurement and Timing of Variables

How many hearings present a substantial risk of political costs?

In our main analyses, we identify the presence of political attention on an industry (i.e., *PolAttention*) based on three hearings involving testimony from a given industry's Fortune 1000 members. We choose three hearings to capture a meaningful risk of regulatory intervention. In Table IA2, we evaluate the robustness of our analyses when we define *PolAttention* using alternative numbers of hearings involving industry members. In Column (1), we define a *PolAttention_Alt* indicator based on industry member attendance at a minimum of one congressional hearing. Approximately 16.4 percent of our sample industry-county-years experience one hearing. As in our main specification (2), the focus of the table is in the difference between $PolAttention\_Alt_{ComRep}$ and $PolAttention\_Alt_{NoComRep}$. We find a small increase in industry advertising expense of 2.9 percent, but no incremental spending for *ComRep* counties. This result is consistent with one congressional hearing involving a given industry representing a very limited threat of regulatory intervention. In Column (2), we examine the effects when industry member attendance occurs at a minimum of two congressional hearings, affecting 9.0 percent of the sample. The increase in industry advertising expense following these hearings grows compared to Column (1), and we find marginally significant incremental spending for *ComRep* counties.

In Column (3), we reproduce our main result, which is based on three hearings during an industry-year. The incremental advertising expense for counties in the electorates of committee members overssing industry hearings increases by 4.9 percent. In Columns (4) and (5),

we consider the effects for a requirement of four and five congressional hearings that involve industry members, respectively. Moreover, the incremental spending for *ComRep* counties grows both economically and statistically to 6.4 percent in Column (4) and 7.1 percent in Column (5). These results illustrate that targeted advertising spending monotonically increases with the risk of regulatory intervention as measured by the number of hearings that involve industry member testimony.

Time Series Changes in Advertising Expenditures

We further examine the time-series change in advertising expenses around congressional hearings in Table IA3. We begin in Column (1), evaluating the change in advertising expenditures in the same year as the hearing (year t). We find an insignificant change in industry advertising expense, and a marginally significant (1.6 percent) increase in targeted advertising spending. Column (2) replicates our main results and shows a significant increase in industry spending and an incremental increase for *ComRep* counties.

Column (3) considers the change in advertising expenditures two years after the hearings. We find an economically small, but statistically significant change in industrywide spending. We find no evidence of a change in targeted advertising spending in *ComRep* counties. In other words, the coefficient on $PolAttention_{ComRep}$ is neither statistically nor economically significant. Column (4), examining three years after the hearing, shows no meaningful change in advertising expenditures. The time-series supports our inference that the advertising expenditures occur when the expected cost of regulatory intervention is highest.

Table IA2
Advertising Spending and Variation in the Number of Congressional Hearings

	Dependent Variable: *AdSpending*				
	(1)	(2)	(3)	(4)	(5)
	1 Hearing	2 Hearings	3 Hearings	4 Hearings	5 Hearings
PolAttention_Alt$_{ComRep}$	0.030***	0.041***	0.086***	0.097***	0.116***
	(0.003)	(0.004)	(0.006)	(0.006)	(0.006)
PolAttention_Alt$_{NoComRep}$	0.029***	0.035***	0.037***	0.034***	0.045***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
$(a) - (b)$	0.001	0.006*	0.049***	0.064***	0.071***
Year FE	Yes	Yes	Yes	Yes	Yes
Industry-County FE	Yes	Yes	Yes	Yes	Yes
Observations	1,489,450	1,489,450	1,489,450	1,489,450	1,489,450
R^2	0.983	0.983	0.983	0.983	0.983

This table presents the relationship between advertising spending and testimony at congressional hearings. The sample period spans 2015 through 2019. The dependent variable, *AdSpending*, is the natural logarithm of one plus dollar spending in year t industry i and county c. In Column (1), *PolAttention_Alt* is an indicator equal to one if at least one congressional hearing during year *t-1* includes members of industry i. In Column (2), *PolAttention_Alt* requires at least two congressional hearings. In Column (3), *PolAttention_Alt* requires at least three congressional hearings. In Column (4), *PolAttention_Alt* requires at least four congressional hearings. In Column (5), *PolAttention_Alt* requires at least five congressional hearings. *PolAttention_Alt*$_{ComRep}$ (*PolAttention_Alt*$_{NoComRep}$) is an indicator equal to one if at least (1, 2, 3, 4, or 5) congressional hearings involve testimony from members of industry i during year *t-1* and county c is (is not) represented by a politician that serves on a committee that oversees the hearings. Standard errors clustered at the congressional district level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.

Table IA3
Timing of Spending and Congressional Testimony

	Dependent Variable: *AdSpending*			
	(1)	(2)	(3)	(4)
	PolAttention_{t}	$\text{PolAttention}_{t-1}$	$\text{PolAttention}_{t-2}$	$\text{PolAttention}_{t-3}$
(a) $\text{PolAttention}_{ComRep}$	0.016^{*}	0.086^{***}	-0.002	-0.004
	(0.008)	(0.006)	(0.009)	(0.014)
(b) $\text{PolAttention}_{NoComRep}$	0.001	0.037^{***}	0.008^{***}	0.001
	(0.004)	(0.003)	(0.003)	(0.006)
$(a) - (b)$	0.016^{**}	0.049^{***}	-0.010	-0.005
Year FE	Yes	Yes	Yes	Yes
Industry-County FE	Yes	Yes	Yes	Yes
Observations	1,191,560	1,489,450	1,191,560	893,670
R^2	0.993	0.983	0.983	0.982

This table presents the relationship between advertising spending and testimony at congressional hearings. The sample period spans 2015 through 2019. The dependent variable, *AdSpending*, is the natural logarithm of one plus dollar spending in year t industry i and county c. The focus of this table is on the difference between $PolAttention_ComRep$ and $PolAttention_NoComRep$. The focus is on the difference between $PolAttention_{ComRep}$ and $PolAttention_{NoComRep}$. $PolAttention_{ComRep}$ ($PolAttention_{NoComRep}$) is an indicator equal to one if at least three congressional hearings involve testimony from members of industry i during year *t-1* and county c is (is not) represented by a politician that serves on a committee that oversees the hearings. In Column (1), *PolAttention* is an indicator equal to one if at least three congressional hearings during year t include members of industry i. In Column (2), *PolAttention* is measured in year *t-1* (this is our main result from Table 4). In Column (3), *PolAttention* is measured in year *t-2*. In Column (4), *PolAttention* is measured in year *t-3*. *PolAttention* × *Represented* is an indicator equal to one if *PolAttention* is equal to one, and county c is represented by one of the members of the congressional committee overseeing the hearing. Standard errors clustered at the congressional district level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.

Internet Appendix C: Identification

Our identification strategy helps to rule out many alternative explanations for our findings. However, a remaining alternative interpretation for our findings relates to the notion that political representation on a particular committee is not random and, in particular, partly determined by the economic interests of firms in politicians' electorates. Thus, following an industry member's testimony at a congressional committee hearing, increased industry advertising spending in the electorates of committee hearing members could simply reflect efforts to repair reputations with the firms' geographically proximate stakeholders such as employees and customers.

There are several reasons that this interpretation is unlikely to explain our findings. First, congressional committees typically have wide ranging responsibilities (see Section 2.2 in the manuscript for a detailed discussion of politicians' committee membership choices). Thus, politicians serving on a committee may do so because constituents' economic interests are related to the committee's purview, but these are often unrelated to a specific hearing held by that committee.

Second, we conduct four sets of robustness analyses in Table IA4 to further evaluate this concern. First, we reestimate Equation (2), but require that *PolAttention* only be set equal to one if county c does not include the headquarters of a testifying firm. If testifying firms are located in an area in which their industry members are concentrated (for example, financial services firms in New York City, technology firms in San Jose, or energy firms in Houston), then excluding these areas reduces the likelihood that our results are driven by increased advertising spending in the industry's local area, as opposed to the locations

served by members of Congress. In Column (1), we show that our results are statistically and economically similar to our main results.

Our second robustness test addresses the possibility that because some industries are more concentrated in terms of the locations of the largest industry members (for example, banks or technology firms), politicians serving the various electorates in which these firms are located may choose to serve on relevant committees. To rule out the possibility that our findings are driven by increased advertising by industry members in these politicians' electorates, we again estimate Equation (2). In Column (2), we consider industry concentration. We require that *PolAttention* can only be equal to one if county c does not contain the headquarters of five or more Fortune 1000 industry peers. Third, in Column (3), we require that *PolAttention* can only be equal to one if county c does not contain the headquarters of *any* of the five largest firms in the industry (where size is based on market capitalization). Our findings corroborate our main inferences. Fourth, we require that *PolAttention* can only be equal to one if county c is not within a state in which the testifying firm has operating activities. We identify operating activities based on the measure developed by Garcia and Norli (2012) that uses state mentions in 10-K reports as a proxy for firms' operating activities.[35] The findings reported in Column (4) again corroborate our main inferences. In sum, the findings from these four robustness tests provide empirical support for the argument that our findings are not driven by advertising spending targeted to the primary locations of the the testifying firm or the major corporations in the industry.

[35]We thank Diego Garcia and Orvind Norli for making these data available on their website. We note that the data is available up to 2008 and we apply this data to our sample period. Although the timing difference may create some measurement error in firm operating locations, it is likely that because of the cost required to develop new operating locations, the operating locations are similar over time. Nonetheless, the results in Column (4) should be evaluated in light of potential measurement error.

Table IA4
Identification

	Dependent Variable: *AdSpending*			
	PolAttention $\neq$ *1* if...			
	(1) HQ state of testifying firm in committee member's state	(2) County c has HQ of ≥ 5 industry members	(3) County c has HQ of *any* of industry's 5 largest firms	(4) A testifying firm has operations in State s
(a) PolAttention$_{ComRep}$	0.088***	0.061***	0.051***	0.089***
	(0.006)	(0.006)	(0.006)	(0.007)
(b) PolAttention$_{NoComRep}$	0.037***	0.032***	0.010***	0.040***
	(0.003)	(0.003)	(0.002)	(0.003)
$(a) - (b)$	0.051***	0.029***	0.042***	0.049***
Year FE	Yes	Yes	Yes	Yes
Industry-County FE	Yes	Yes	Yes	Yes
Observations	1,489,450	1,489,450	1,489,450	1,489,450
R^2	0.983	0.983	0.983	0.983

This table presents the relationship between advertising spending and testimony at congressional hearings. The sample period spans 2015 through 2019. The dependent variable, *AdSpending*, is the natural logarithm of one plus dollar spending in year t industry i and county c. The focus is on the difference between $PolAttention_{ComRep}$ and $PolAttention_{NoComRep}$. $PolAttention_{ComRep}$ ($PolAttention_{NoComRep}$) is an indicator equal to one if at least three congressional hearings involve testimony from members of industry i during year *t-1* and county c is (is not) represented by a politician that serves on a committee that oversees the hearings. In Column (1), *PolAttention* cannot be equal to one if the headquarter state of testifying firm is the same as the state of politician's constituency. In Column (2), *PolAttention* cannot be equal to one if county c includes the headquarters of at least five Fortune 1000 industry peers. In Column (3), *PolAttention* cannot be equal to one if county c includes the headquarters of *any* of the the top five firms (where size is based on market capitalization) in the industry. In Column (4), *PolAttention* cannot be equal to one if a testifying firm has operations in state s, using Garcia and Norli (2012)'s classifications. Standard errors clustered at the congressional district level are reported in parentheses underneath the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels using two-tailed tests, respectively.