

Valuing Changes in Political Networks: Evidence from Campaign Contributions to Close Congressional Elections *

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ABSTRACT

This paper investigates the value of firm political connections to US congressional candidates using a regression discontinuity design. In a sample of close special elections occurring at times unrelated to firm-specific economic events or broader political events, I compare the abnormal returns of firms that contributed to winning candidates to those of firms that contributed to losing candidates. I find the wedge between these firms to be 1.7% to 6.8% of firm equity value. To assess which areas of policy matter most, I test which congressional committee assignment seats are the most valuable. In particular, the loss of a connection to the Senate Appropriations committee leads to a loss of \$1.9 billion in sales in the following year. Finally, I examine additional actions that firms take to develop political networks—directly hiring former government employees and engaging professional lobbyists—and find that these actions complement their contribution strategies.

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1 Introduction

The last decade has seen an increased interest in understanding the links between firms and politicians. Existing studies in finance and political economy offer mixed evidence on the efficacy and value of political connections, leaving unresolved the question of whether corporate political donations are effective in influencing policy decisions (and if not, why firms donate at all)¹. Given the size of the potential market for policy favours, firm investment in contributions to politicians seems surprisingly small.

Two challenges confront research in this area: accurately measuring political connections, and finding an econometric setting in which the endogeneity of firm political behaviour and firm outcomes can be disentangled. There is much debate in the literature regarding the measurement challenge. In this paper I measure political connectedness using firm political contributions to US Senators and Representatives, which is an approach also adopted by several other authors. This literature suggests that political contributions could represent either an investment in political capital or agency problems within a firm. For example, Cooper, Gulen, and Ovtchinnikov (2009) report a positive association between contributions and future returns to the firm, supporting the political capital hypothesis. On the other hand, Aggarwal, Meschke, and Wang (2012) find that this association is negative, which they interpret as evidence of agency problems. Coates (2012) finds that contributing firms trade at lower Tobins Q ratios following a court decision that allowed for less-restricted political donations, compared to a control sample of non-contributing firms. However, alternative measures of connectedness have been used. For instance, Goldman, Rocholl, and So (2009, 2013) study politically-connected boards of directors, though the mechanism is less clear since current politicians are legally barred from sitting on corporate boards. Other authors focus on exogenous connec-

¹Ansola-behere, Figuerdo and Snyder (2003) offer a concise survey of this apparent puzzle and avenues for future research.

tions: Do et al. (2012, 2013) examine long-established educational ties among politicians and managers, and Faccio and Parsley (2009) examine geographical connections.

I propose a novel econometric strategy to overcome the endogeneity challenge and investigate whether campaign contributions are value-enhancing: a regression discontinuity design that isolates exogenous changes in firms' (otherwise endogenous) political contribution networks. I compare the outcomes of firms connected to politicians who just *won* a close election to those connected to a politician who just *lost* a close election. I assume that there is a meaningful component of randomness in the outcome of an ex-post close election (Lee 2008) which allows me to isolate exogenous variation in firms' political networks. Using this exogenous variation, I can then causally estimate the value of a political connection to a firm in terms of election day cumulative abnormal returns.

A motivating example of how firms may derive cash flow benefits from political connections can be found in Senator John Thune's support of the Dakota, Minnesota, and Eastern Railroad (DM&E) company. In 2004, Thune unseated Tom Daschle, the leader of the Senate Democrats, in a narrow upset election, winning 50.6% percent of the vote. He was a lobbyist for DM&E for two years prior to running for the Senate and received a contribution from the firm during his campaign. In his first year in office he inserted a provision into a transport bill which allowed DM&E to apply for nearly \$2.5 billion in federal funding. As The New York Times (2010) noted, "It might be said that Senator John Thune went through the revolving door – backward." Ultimately the application was denied by an external government body, citing an "unacceptably high risk to taxpayers."

I measure firm connectedness both directly and indirectly. I define direct connections as contributions from firms directly to a politicians who themselves ran in close elections. I define indirect connections as firms giving money to senior politicians who were *not* involved in close elections but transferred money to colleagues who *were*. The economic intuition behind

these indirect connections is that firms give money to senior politicians who may be in a better position to influence their less senior party members in ways that outsiders cannot. The senior politician has more legal discretion over how the funds collected in this way are used, and can spend some of this money on perk consumption. I focus on contributions to politicians in close elections since there is likely to be a meaningful component of randomness in their outcome, which is necessary for regression discontinuity analysis to have a causal interpretation (Lee 2008). I provide evidence in support of this identifying assumption by showing that there are no observable differences between firms connected to winning politicians and firms connected to losing politicians. Moreover, I document that, in my sample of elections, politicians' aggregate fundraising is unrelated to their eventual margin of victory or defeat.

I consider two types of congressional elections: special elections and general elections. The interpretation of general election abnormal returns is noisy, since all House of Representative elections and one third of the U.S. Senate elections occur simultaneously—along with presidential, gubernatorial, and state legislature elections in some years. The outcome of these elections frequently include changes of control of different branches of the federal government. In such a setting, it is difficult to attribute changes in firm value to the outcome of specific elections. In contrast, close special elections offer the cleanest setting to estimate the market value of a connection since these elections are set on a day which is unrelated to firm-specific economic events. Furthermore, these elections do not typically lead to large changes in political control, allowing for clean inference about the value of the connection.

I find that political connections have a positive value, suggesting that they represent investment in political capital. Moreover, I estimate a higher range for this value than previous authors. The wedge, or difference in outcomes, between firms connected to a winning politician and a losing politician in a close special election ranges from 1.7% to 6.8% of firm equity value over a three to seven day event window. I show that there is not a confounding special-

election-day effect by considering those special elections that were *not* close. In those elections this wedge does not exist, supporting my contentions that these estimates capture the value of a political connection. In the larger but noisier sample of general elections, I confirm that both direct and indirect connections to winning and losing politicians are priced. The value of indirect connections has a higher economic magnitude: a one standard deviation increase in indirect connections leads to an increase of 120 basis points in abnormal returns, compared to an increase of 50 basis points for direct connections. I suggest that indirect connections are more valuable due to the existence of an internal market for party resources. I show that for each dollar transferred directly to a candidate, the political parties also spend, on average, ten dollars advertising for that candidate.

Not all connections appear equally valuable, however. To examine which areas of policy confer the greatest advantage to connected firms, I compare the value of different congressional committee assignments. Connection values vary across committee assignments since each congressional committee has complete jurisdiction over bills for their particular policy area. My results suggest that policy related to taxation, spending, the military, banking/finance, small businesses, and agriculture are the most important, whereas connections to the energy and commerce committees do not seem as valuable. I show that these connections have cash flow implications for firms by establishing that they lead to changes in future sales. In particular, the loss of a connection to the Senate Appropriations committee—the committee responsible for government spending—leads to a loss in future sales of \$1.9 billion in the following year. I provide evidence that these results are not simply capturing politicians' preferences for enacting policies that are favorable to certain industries or their constituents.

The connection values that I estimate are too large to plausibly result from a contribution of just several thousand dollars. Firms take other actions to support politicians which may not be observable. Contributions are a good measure of connectedness, but not an accurate

measurement of the intensity of the connection or the cost to the firm. To support the previous analysis, I consider two additional actions that firms take to develop and maintain political networks: directly hiring former government employees and engaging the services of professional lobbyists. At any given time, a third of the firms in my sample employ at least one former government employee, and two thirds spend money on professional lobbyists. These actions are subject to fewer constraints than campaign contributions and I find that firms spend significantly more money on these activities, complementing their contribution strategies. For every dollar contributed to a congressional incumbent, a firm spends, on average, 19 dollars lobbying. I examine the correlation between lobbying expense and contributions to incumbent politicians sitting on the congressional committees responsible for the same policy area and find that they are almost perfectly correlated. According to my analysis, direct connections are more valuable to firms that hire former government employees, while indirect connections are more valuable to firms that spend money lobbying. Taken together, this analysis suggests that firms engage in a variety of activities designed to develop and foster political connection networks, and that these activities are valuable to shareholders.

The remainder of the paper is structured as follows. Section 2 reviews the related literature; Section 3 describes the data and the empirical strategy; Section 4 reports the results; Section 5 investigates political network formation more descriptively; and Section 6 concludes.

2 Related Literature

The previous research looking at the value of political connections has defined “connectedness” in different ways. Fisman (2001) conducts an event study of firms which an economic consultancy described as connected to President Suharto in Indonesia. He documents negative returns in response to rumors about his worsening health. Faccio (2004) looks at political

connections of firms in 47 countries and defines a political connection as a firm where one of the firm's large shareholders or officers is a member of parliament, a minister or the head of state, or closely related to a top official. She documents correlations between institutional features of the countries in her sample and instances of firm connections and documents positive abnormal returns on the order of 1.5% for a 7 day window when the connections become "active." Goldman, Rocholl, and So (2009) consider the effect of having a politically connected Board of Directors on firm value of S&P 500 companies. They find that the market reacts positively to the nomination of a former politician to the board of directors and more so for Democrats than for Republicans. Ferguson and Voth (2008) look at the change in value of firms which were connected to the Nazi movement in Germany just after the Nazis seized power in 1933 and find that connected firms outperformed unconnected ones by between 5% and 8%. However, the connection mechanism or events that these papers study can be difficult to interpret. The advantage of studying firms' campaign contributions to politicians in special elections is that there is a clear firm choice to support specific politicians and an event setting which has a clear interpretation.

Other authors focus on exogenous connections such as geographical proximity or educational ties to politicians. Faccio and Parsley (2009) look at the CARs of firms geographically located near politicians who unexpectedly die and find that on average a connected firm experiences an abnormal return of -1.7% . Do et al. (2012) consider educational connections between politicians and board members. They also use a regression discontinuity design comparing CARs of firms connected to politicians who just won a close election to firms connected to politicians who just lost a close election. In contrast with previous studies, they find *negative* CARs for firms connected to politicians who just won a close election and attribute this to the election of a state politician to a federal office reducing the scope of benefits that the educational connection confers on the connected firms. In contrast with these papers, I look at endogenously chosen connections which are likely to be more economically important than

exogenously defined connections and find that endogenously chosen connections have a larger impact on firm value.

Another strand of the literature studies the effects of firms' campaign contributions on firm returns and value, but provides conflicting answers as to whether campaign contributions are good or bad for shareholders. Cooper, Gulen, and Ovtchinnikov (2009) look at firm donations to candidates' election campaigns and find a positive association between contributions and future returns, suggesting that this political behavior is an investment in political capital. They use a Heckman model to control for the sample bias which arises from firms choosing to engage in political activity. On the other hand, Aggarwal, Meschke, and Wang (2012) find a negative association between political contributions and future returns, which they contend indicates that politically active firms suffer from higher agency problems. Coates (2012) finds that firms that politically connected firms trade at lower Tobin's Q ratios after a Supreme Court case loosened restrictions on campaign contributions than a control group of firms that do not engage in this activity, which they also argue indicates agency problems in politically active firms. In contrast, this paper looks at endogenously chosen campaign contribution connections, but exploits exogenous variation in these connections in order to strengthen causal inferences about the value of a campaign contribution connection. The results in this paper are consistent with firms making investments in beneficial political capital as opposed to the contributions indicating agency problems in the politically active firms.

Another area of the literature attempts to pin down the channels through which political connections or political contributions may enhance value for firms. Ovtchinnikov and Pantaleoni (2012) present evidence that individuals donate money to politicians who are in a position to help firms in industries that are economically relevant in their congressional district. They find that these donations seem to lead to an increase in ROA and market-to-book ratios of firms in their congressional district. Tahoun (2012) documents a positive correlation between politi-

cians' stock holdings and firm contributions which he interprets as evidence of a tacit contract between politicians and firms to exchange favors. He then documents a positive association between ownership and the award of government contracts. Faccio, Masulis, and McConnell (2006) find evidence that politically connected firms are more likely to receive a bailout than a non-connected peer, controlling for a number of firm and country factors. Furthermore, the connected firms have lower industry adjusted accounting returns. Goldman, Rocholl, and So (2013) look at the effect of politically connected boards after shifts in control of different branches of the US government. They find that firms connected to Republicans receive more government contracts and firms connected to Democrats receive fewer government contracts after branches of the US government are won by the Republican party. Amore and Bennedsen (2013) look at the effect of shifts in political power on firms with family ties to politicians in Denmark, and find that positive shifts in power lead to higher firm revenues. Claessens, Feijen, and Laeven (2008) study the effect of political contributions in Brazil using data collected by the Brazilian National Election Court and find a positive relationship with firm value. They further find that the bank leverage ratio of firms which contributed to elected officials' campaigns substantially increased in the term following the elections suggesting that the politically connected firms have preferential access to financing. Duchin and Sosyura (2011) study how political connections influenced the TARP bailout recipients during the financial crisis and offer strong evidence that political connections did not affect the decisions of firms to apply for funding but did affect the choice of which banks received funding. Johnson and Mitton (2003) look at the performance of firms in Malaysia during the Asian Crisis and find that politically connected firms may be propped up by the government imposing capital controls on the country. I contribute to this literature by documenting which congressional committee assignments are the most valuable connections.

3 Empirical Strategy

3.1 Econometric Setup and Identification

The ideal empirical setting to study the effect of political connections on firm value would be to directly observe firm connections to politicians who were *potentially* in power, randomly assign some of them to elected office, and observe firm outcomes after the assignment. In practice, the econometrician is unable to observe “connectedness” directly and cannot randomly assign politicians to positions of power. One obvious way to examine the effect of connections would be to compare connected firms to a “control” group of unconnected firms in similar industries or with similar geographic operations. However, the choice of whether to engage in political activity such as making campaign contributions is endogenous: some unobserved heterogeneity could be driving both the decision of firms to make political donations and the observed differences in outcomes between politically connected and unconnected firms. Accordingly, I apply a regression discontinuity design (RDD) to close elections in order to establish causality as neatly as possible. My identifying assumption is that there is some component of randomness which determines the outcome of a close election, in addition to candidate, region, or time factors (Lee 2008). The RDD framework does not require that the election outcomes be *perfectly* random, only there is a non-trivial random-chance element to the outcome. I compare the outcomes of firms donating to candidates who just won to outcomes of firms donating to candidates who just lost, and document the causal effect of a “potential” political connection becoming an “active” political connection. I focus on elections which are ex-post close for two reasons. First, close elections are the setting where one would expect to observe meaningful abnormal returns; this is analogous to the value of at-the-money options. Second, there is no *direct* way to measure the level of randomness in the outcome of a particular race. In order to conduct this analysis, one must make assumptions about the elections that are most likely to meet this criterion. I follow Do et al.. (2012,

2013) in using the subsample of elections that were won or lost by five percentage points or less. I provide empirical and anecdotal evidence in favor of this identifying assumption below.

It may seem straightforward to estimate the “political return” to a dollar spent supporting a politician; however, it is unlikely that the dollar donation to a politician is the sole cost of establishing and maintaining political connections. For example, U.S. Congressional hearings on the 2008 financial crisis found that the mortgage provider Countrywide had a “VIP Loan Program” which gave subsidized loans to influential politicians such as Sen. Chris Dodd, the Chairman of Senate Banking Committee from 2007-2011 (U.S. House of Representatives 2012). More formally, Bertrand et al. (2004) investigate the benefits French politicians receive from firms. They find that firms with educational connections to politicians in power alter their hiring practices in politically sensitive areas during elections. I am implicitly assuming that campaign contributions are a component of the endogenously-chosen relationship between firms and politicians, and that this is a reasonable way to measure connectedness. The use of abnormal returns allows me to estimate the expected *net* benefit to a firm of having political connections.

The empirical analysis consists of two sections: the first section studies close special elections, while the second section looks at close elections in the standard US congressional election cycle. It is important to note that I am not looking at the *level* of a firm’s political connectedness, since I do not consider all firm donations (these are likely endogenous), but rather exogenous *shocks* to the level of a firm’s political connectedness. As described below, most U.S. Congressional elections occur on one fixed day every second year, making the clustering of elections for a direct RDD event study analysis problematic. Since firms can donate to multiple winning and losing candidates on the same day, the interpretation of abnormal returns on election day is much noisier.

3.2 Political Fundraising Data Description

Firms, unions, and trade organizations² cannot directly make political contributions. A firm must establish a legal body known as a Political Action Committee (PAC) which can solicit contributions from the members of the firm and donate them as the PAC sees fit. I focus on contributions from firm PACs to politicians instead of personal contributions made from firm managers to study the cleanest measure of political connection. Firm PACs are led by a treasurer who is frequently a lobbyist, former government employee, or other political specialist and is hired to make the best use of the PAC's funds. In contrast, individuals' personal contributions may reflect their own ideological biases or other characteristics which are unrelated to their firm, so the interpretation of these donations is not as clear as for the PAC donations.³

Politicians are not allowed to personally receive money from individuals or other organizations. They also establish PACs to raise and spend money running for election. I focus on two types of politician-specific PACs in this paper: Election PACs and Leadership PACs.⁴ Politicians use funds from their Election PACs to run election campaigns. I define a contribution from a firm's PAC to a politician's Election PAC as a *direct* connection. These contributions are legally capped at \$10,000 per election cycle.

²Henceforth I will refer to the collection of firms, unions, and industry organizations as institutional donors or contributions.

³For example, during the 1998 political cycle Goldman Sachs was managed by co-CEOs Jon Corzine and Hank Paulson and had a well-established PAC run by Judah Sommer. Sommer was a longtime aide to former NY Senator Jacob Javits and a lobbyist prior to working for the bank. The PAC, presumably benefiting from Sommer's political knowledge, contributed roughly equal sums to Democrats and Republican's while Corzine donated exclusively to Democrats and Paulson donated almost exclusively to Republicans. Both Corzine and Paulson later took on government positions with the parties that they donated to, so it is entirely plausible that their contributions were at least in part motivated by personal factors rather than firm factors, such as their post-Goldman Sachs careers.

⁴I exclude "soft money" organizations which were banned by the McCain-Feingold Campaign Finance reform in 2006 since soft money expenditures were not candidate specific. I also do not consider "Super PAC" donations which were created after the Supreme Court Ruling in *Citizens United v. Federal Elections Commission* on January 21, 2010 since Super PACs since not all Super PACs are required to disclose their donors and there is not always a clear mapping between Super PAC donors and the "recipient" politician. Excluding observations from the 2010 election cycle, when Super PACs were in operation, does not affect the results.

In addition to Election PACs, more experienced politicians often establish Leadership PACs. Contributions to Leadership PACs are subject to the same limits as Election PACs. Funds which a Leadership PAC receives cannot be used for direct campaign expenses such as advertising, but are otherwise largely unregulated. Politicians can use these funds to hire political consultants or to consume perquisites that are billed to the Leadership PAC.⁵ For example, Charlie Rangel, a long serving Democratic Representative from New York, spent \$64,500 on a portrait of himself and paid with funds from his Leadership PAC. These donations are frequently used to pass money around to other politicians who need the money for their elections and can serve as a way for former politicians to remain politically active after leaving office. For example, Sarah Palin's Leadership PAC, SarahPAC, raised 5.7 million dollars and contributed \$450,000 to 96 Republican congressional candidates in the 2010 cycle although she was not running for office in that election. Alfonse D'Amato was a Republican Senator who lost his bid for re-election in 1998 and remained an active donor through his Leadership PAC, Renew America PAC, donating to both Democratic and Republican congressional candidates in every political cycle since his defeat. I measure *indirect* connections using Leadership PAC contributions. I define firms as indirectly connected to a politician in a close election if they contributed money to a politician's Leadership PAC and he/she transferred money to a colleague in a close race.

The FEC data is transaction level data organized by election cycle.⁶ I aggregate contributor PAC to recipient PAC donations by year. Table 1 and Figure 1 present summary statistics and time series plots of the donations to Congressional Elections PACs and all leadership PACs from PACs affiliated with firms in CRSP. It is clear that total and average levels of donations

⁵FEC documents indicate that funds raised by Election PACs can be used for campaign expenses including operating expenses, loan repayments, and ballot initiatives, along with certain non-campaign expenses which include travel expenses for direct duties associated with being an elected official, donations to charities, and transfers to other politicians. No such restrictions are found in FEC documentation for Leadership PACs. These regulations are available from the FEC website or the author upon request.

⁶Federal Contribution Data is available from the FEC or the Sunlight Foundation, a non-partisan, non-profit devoted to providing data for US government transparency.

to both leadership and election PACs are increasing through time. The marked up-ticks in donations to elections PACs coincide with even years, when Congressional elections always occur. Although the total amount of donations to Election PACs is vastly higher than the total amount of donations to Leadership PACs, the average amount donated to an Election PAC is much smaller. This seems to be due to the fact that a more concentrated number of firm PACs donate to leadership PACs, and suggests that a subgroup of donors is more politically active. Table 2 lists the 40 industries with the highest Institutional PAC donations from 1998-2010 using the Center for Responsive Politics' (CRP) industry classification.⁷ The CRP is a non-profit organization which provides analysis and some data on political financing and lobbying activities in the United States. The CRP provides an industry affiliation which is similar to a two or three digit SIC for all donations from PACs which includes private firms and non-firm industry organizations, such as the National Restaurant Association.

3.3 Election Data Description and Identification

I obtain election data from the Federal Election Commission (FEC) for all federal elections from 1998-2010. Data for general election results are directly available to be downloaded. United States general elections are held on the Tuesday after the first Monday in November annually; however all House of Representative and Senate general elections occur in even numbered years, while Presidential elections occur in years divisible by four. A special election occurs when a politician's seat becomes open unexpectedly before his/her term has expired. This typically occurs because of a resignation or a politician's death. There were 67 House of Representative and Senate special elections from 1998-2010. Data for special elections is not available to be directly downloaded from the FEC's website, but officials of the

⁷The CRP classification has 321 industry classification, but the 40 listed in Table 2 account for more than 60% of the "Corporate PAC" donations, I list the top 40 industries to conserve space.

FEC Public Records office kindly compiled these results for this study. Table 3 reports details of the 13 close special elections in the sample.

Panel A of Figure 2 presents a histogram of the margin of victory for elections in the United States from 1998-2010. The average election was won by a margin of 37.7%, while the median election was won by 33%. The figure shows that a large set of elections are not contested in the general election, although there can be competitive primaries. The 5% cut-off which I impose for my analysis falls at about the sixth percentile, so in comparison with a generic election, these elections are close. One natural way to think about ex-ante close elections would be to look at polling data or data from prediction markets. Unfortunately, consistent polling data for House of Representative elections is not available. Prediction markets typically do not exist for House of Representative elections, and those which do exist for Senate races are typically illiquid. One measure of election closeness that is available ex-ante, however, is candidate fundraising. As described above, politicians must disclose their fundraising receipts at least quarterly. Publications such as *Roll Call* frequently publish the relative fundraising of candidates after these reports are released as a measure of the competitiveness of each candidate. Panel B of Figure 2 plots the average proportion of contributions received by the winning candidate against the margin of victory that he/she won by. Unconditionally, these variables are highly correlated, which is unsurprising. However, this proportion is statistically uncorrelated to the margin of victory for elections won by less than 5%. This relationship becomes significantly correlated around a margin of victory of 8%, suggesting that the sample of elections I am using was not ex-ante systematically predictable.

I offer anecdotal evidence about the randomness of several of the elections in the sample. A special election in NY-23 was held on November 3, 2009 to replace Rep. John McHugh who was appointed as Secretary of the Army in Barack Obama's Cabinet. Dierdre Scozzafava ran as a Republican, Bill Owens ran as a Democrat, and Doug Hoffman ran as a Conservative

Party candidate. Less than a week before the race, Scozzafava unexpectedly withdrew from the race and endorsed the Owens, the Democrat. A Siena Research poll was released the day before the election which indicated that 36% of likely voters would support Owens, 41% of likely voters would support Hoffman, but that 18% of likely voters were undecided (Siena Research 2009). Democratic candidate Bill Owens ultimately beat the Conservative Party candidate Doug Hoffman by a margin of 2.4%. This result marked the first time a Democrat held the seat since 1872 (Congressional Quarterly 2010). A different special election was held on March 31, 2009 in NY-20 to replace Rep. Kirsten Gillibrand's seat after she was appointed to fill Sen. Hillary Clinton's senate seat who became the Secretary of State for Barack Obama. The final election result was 50.23% for Democrat Scott Murphy and 49.77% for Republican Jim Tedisco, a difference of 726 votes. The final outcome was decided by the number of absentee ballots which were returned on time. Another example comes from the 2010 general election for Senate from Alaska. Lisa Murkowski, the Republican incumbent, narrowly lost the Republican primary to challenger Joe Miller by a margin of 1.8%. She then decided to run for re-election as a write-in candidate in the general election, facing Joe Miller, a Democrat challenger named Scott McAdams, and several minor party candidates. The election day results were 39% for Murkowski, 35% for Miller, and 23% for McAdams. Miller quickly issued a court challenge of the validity of enough of the write-in ballots to overturn the election results, but enough of the challenged ballots were deemed valid for the election results to stand. It is likely that in these types of elections, a meaningful component of the outcome was determined by chance.

I obtain balance sheet data from Compustat and construct firm abnormal returns by using the Fama French Three Factor value weighted model.⁸ The sample contains 97 firms which made 258 contributions to the special election candidates and have abnormal return data for

⁸Abnormal returns are computed by adjusting the raw return by the Fama-French three factor model. Model parameter estimates are computed with one year's trading data starting a month and a half before the election. The value weighted CRSP index, along with data from Ken French's website, are used for the estimation.

the analysis. I use two abnormal return windows, $(-1,+5)$ days to remain consistent with previous literature and $(-1,+1)$ days as a closer measurement of the election day effect. Columns (1) - (3) of Table 4 present summary statistics for the firms connected to politicians in the close special elections. Lee (2008) formalizes the statistical conditions which must be met for RDD analysis to have a causal interpretation. He suggests testing whether there are observable differences between firms connected to winning politicians and firms connected to losing politicians controlling for the candidate's vote share. I implement this test in columns (4) - (6) of Table 4. Columns (4)-(6) report the average values for the firms connected to the loser, the average difference for firms connected to the winner, and the p-value of the difference controlling for the vote share in the polynomial specification which I will be using in my later analysis, respectively. Firms connected to the politician who just won are statistically indistinguishable from firms connected to politicians which just lost along standard dimensions. Furthermore, firms did not contribute more money to winning candidates than to losing candidates, which suggests that the amount of firm contributions did not predict the outcome of the election. While a failure to reject a null hypothesis of non-significance is not conclusive, it does offer strong evidence in favor of the identifying assumption that firms connected to the winner are not systematically different than firms connected to the loser.

4 Results

4.1 Special Elections

The 13 close special elections all happen on different days (in fact typically in different years), so it is unlikely that there are any event day effects biasing the interpretation of the abnormal returns. I construct CARs using the Fama-French 3 Factor value weighted model. I verify that the connected firms do not make announcements in six day event windows using Factiva. In

24 firm/election pairs the firm donated money to both the winning and the losing candidate, effectively hedging itself against the outcome. In the first specification, I consider only the firms i that donated to either the winning candidate or to the losing candidate, but not both. I define a dummy variable Won which takes a value of 1 if candidate j won a close election and a value of 0 otherwise. I define another variable $Vote Share$ as the positive difference in vote share for a winning candidate or the negative difference in vote share for a losing candidate. For example, in a two person race where the winner obtained 51% of the vote, his/her $Vote Share$ value would be +0.02 while the losing candidate's $Vote Share$ value would be -0.02. I run the following specifications to see the value of "just winning" an election.

$$CAR_{i,j} = \alpha + f(Vote Share_j) + \beta_1 Won_j + Won_j \times g(Vote Share_j) + \varepsilon_{i,j} \quad (1)$$

Specifications (1)-(5) in Panel A of Table 5 examine the (-1,+5) day event window, to maintain consistency with previous literature, while Specification (6) examines the (-1,+1) day event window as is more standard in an event study. In this specification, each firm is either connected to a winning or a losing candidate, and β_1 captures the average difference in value for being connected to the winner. The results indicate that the wedge between the firm connected to the winner and the firm connected to the loser is 1.7% to 6.8%. Standard errors are clustered at the firm level but the results are more significant when clustering at the election or candidate level, as well as robust to using Eicker-White robust standard errors. When evaluating a RDD model, it is important to verify that the discontinuity term actually picks up a discrete change in the average value of the dependent variable and is not spuriously significant because of some underlying non-linearity in the dependant variable. Accordingly, I present a linear model, a linear spline model, a quadratic model, and a quadratic spline model, as is standard in the regression discontinuity literature.⁹ The results appear to be robust to model

⁹See for example, Angrist and Pischke (2009) Chapter 6, Cameron and Trivedi (2005) Chapter 25, Lee (2005) Chapter 3, and Lee (2008).

specification. Somewhat surprisingly, this wedge seems to be coming mostly from a *loss* in value in firms connected to the loser as opposed to an increase in value to firms connected to the winner; however, the most appropriate interpretation of the regression discontinuity design is of the average difference between the firm connected to the winner and the firm connected to the loser as opposed to average level of the firm connected to the winner or the average level of the firm connected to the loser. The lower end of range of these estimates is roughly what previous authors have found looking at more exogenous connections; however the upper bound of 6.8% suggests that the value of an endogenously chosen connection is likely higher than what the literature has previously found.

In unreported results I shrink the victory margin to 3 percentage points and repeat the estimation and find that my point estimates remain similar, both in sign and magnitude. In other unreported specifications I exclude the elections which contain the largest positive returns, the largest negative returns, and the sole Senate election iteratively to ensure that my results are not driven by influential elections and my results are robust. In further unreported specifications, I include Tobin's Q, log assets, leverage, and firm profitability as controls and find that my results are unchanged. This is not surprising as the event window I am considering is three to six days and, as shown in Table 4, standard corporate finance variables are uncorrelated with the variable of interest.

I next change the unit of observation by considering the firms which are connected to both the winning and the losing politician (i.e. those who are hedged against the election outcome). I define new variables, *Donated* which takes the value of 1 if a firm donated to only one politician in a special election and zero otherwise, *Don Won* which take a value of 1 if a firm

donated to only the winning politician in a special election and zero otherwise. Panel B of Table reports the results of the following specification.

$$CAR_{i,j} = \alpha + f(Vote Share_j) + \beta_1 Donated_{i,j} + Donated_{i,j} \times g(Vote Share_j) + \beta_2 DonWon_{i,j} + DonWon_{i,j} \times h(Vote Share_j) + \epsilon_{i,j} \quad (2)$$

In this specification, β_1 captures the effect of donating to a losing candidate *relative to a hedged firm*, while β_2 captures the differential effect of donating only to the winning candidate. The intercept captures the average abnormal return for the hedged firm. As before, specifications (1) - (4) of Panel A of Table 5 report the CAR results for the window (-1,+5) days while Specification (5) presents the results for the (1,+1) day window. Standard errors are again clustered at the firm level but the results are more significant when clustering at the election level. Unsurprisingly, the hedged firms do not experience a significant return. This does not indicate that the connection is valueless, but rather that the value has already been priced since there was a 100% probability of the firm having a connection with the politician who wins. Again, the firms which only donated to the losing candidate experience a sizable reduction in value, while the firms which donated only to the winning candidate experience a positive difference relative to the single donor firms who donated to the losing candidate. However, as can be seen in Panel B, there is no difference from the hedged firms' returns. As in the previous analysis, the most appropriate interpretation of these results is in terms of the wedge between the three different groups of firms - those firms connected only to a winner, those firms only connected to a loser, and those firms connected to both the winner and the loser. The estimated wedges are similar; the difference between being connected to only the winner as compared to only the loser is 1.4% (Specification (1)) to 6.8% (Specification (5)). I again report specifications with a variety of functional forms for the underlying vote margin.

Admittedly, it is not immediately obvious how to interpret the differences in the connection value estimates. It is not the case that a particular functional form is a “baseline” specification, so one way to think about these results is as producing a range of estimates. In this context, one could think of looking at the mean or median estimate, which are 3.4 and 2.96% respectively, with a standard deviation of 1.48. Although the observations are not independent, one can consider simple 95% a confidence interval of these estimates to as giving a range of likely values. Such an interval yields lower and upper bounds of 2.3 and 4.5% respectively, suggesting that my estimates are higher than the estimates found in the existing literature.

I next conduct a placebo test to ensure that the close special election regression discontinuity results are not picking up an overall special election event day effect. We would expect that in non-close elections, the analysis should not pick up a wedge between firms connected to winning and losing candidates. I perform the same analysis as in Panel A of Table 5 on the special elections which occurred on different days, were contested by more than one general election candidate, and were won by a margin larger than 5%. There are 1,091 firms/election contributions to either the winning or losing candidate in these special elections, in contrast with the 234 firms/election contributions which were made to one candidate in the close special elections. Specifications (1)-(3) of Table 6 present the regression discontinuity results for the (-1,+5) event window for various polynomial specifications, while specification (4) presents an estimate using the (-1,+1) event window. Standard errors are again clustered at the firm level, but the inference is robust to clustering at the election level. The coefficient on *Won* is never statistically significant, in stark contrast with the close general election results. The intercept is positive in all specifications, but never statistically significant at the 5% level. The insignificance of the placebo test results in the presence of a much larger sample suggests that the results obtained using the close special elections are indeed estimating the connection effect on the contributing firms.

4.2 General Elections

I next consider the abnormal returns of firms connected to politicians in the general elections. I look at the average effects for connections made to winning and losing politicians, then look at connections to incumbents or challengers, and finally look at how connections may differ by political party. I also examine whether the market prices firms' indirect connections that are made through Leadership PAC contributions. I then isolate the industries which are more politically active in terms of donations and repeat this analysis to see whether connections matter more in these industries. I finally study which areas of policy most important to my sample of firms by evaluating how these connection values vary for different congressional committee assignments.

Firm connections in the general elections are more complicated since 205 close general elections occurred on seven election days in my sample. I construct portfolios of a firms' connection shocks on each election day. I consider two types of campaign contribution connections to construct these portfolios: direct contributions from firms to candidates in close elections, along with contributions from firms to Leadership PACs which donated to candidates in close elections.

Looking first at direct connections, I examine at the number of winning and losing candidates j that each firm i supported in the two years (one cycle) prior to the close election at time t . Specifically I compute the following for each firm, cycle, candidate combination:

$$Won(Lost) P_{i,t} = \sum_j Donated_{i,j,t} \times Election Outcome_{j,t}$$

where $Donated_{i,j,t}$ takes the value of 1 if a firm i 's PAC donated to candidate j 's Election PAC in cycle t and 0 otherwise. $Election Outcome_{j,t}$ takes the value of 1 if politician j won (lost) the close election in cycle t and 0 otherwise. I construct the variable $Total P_{i,t}$ as $WonP - LostP$ to

look at a firm's net political connection portfolio. I then construct this measure to look at the number of winning (losing) incumbents (challengers) that firms i supports in cycle t , creating the variables *Incumbent Won P*, *Incumbent Lost P*, *Challenger Won P*, and *Challenger Lost P* to sum the number of winning and losing incumbents and challengers that a firm supported. I define a challenger as either a candidate who is directly challenging an sitting incumbent who is running for reelection or as a politician running in a race where there is no incumbent running. Finally, I construct this measure splitting winners and losers by political party, creating the variables *Republican Won P*, *Republican Lost P*, *Democrat Won P*, and *Democrat Lost P* to capture the portfolios of winning and losing Republican and Democratic candidates. I also construct contribution weighted values of these connection variables, $Amount\ Won(Lost)\ P_{i,t}$.

I also consider indirect connections to the political system made through contributions to firms' Leadership PACs. The intuition for this measure comes from the fact that Leadership PACs are typically operated by members of congress who hold more senior positions or may seek to advance in the party, and therefore may be in a position to influence internal political workings in ways which outsiders may not be able to. I first measure the connectedness of each Leadership PAC l in election cycle t according to the following formula:

$$LPAC\ Winners(Losers)_{l,t} = \sum_j Donated_{l,j,t} \times Election\ Outcome_{j,t}$$

where $Donated_{l,j,t}$ takes the value of 1 if a Leadership PAC l 's PAC donated to candidate j in cycle t and 0 otherwise. $Election\ Outcome_{j,t}$ is defined as above. I then sum the number of winners or losers that a firm is indirectly connected to through its leadership PAC

$$Indirect\ Won(Lost)\ P_{i,t} = \sum_l Donated_{i,l,t} \times LPAC\ Winners(Losers)_{l,t}$$

I finally construct the net portfolio of indirect connections, $Indirect\ Total\ P_{i,t}$ as $Indirect\ Won\ P_{i,t} - Indirect\ Lost\ P_{i,t}$.

I also create variables $Indirect\ Amount\ Won\ P$, $Indirect\ Amount\ Lost\ P$, and $Indirect\ Amount\ Total\ P$ by weighting the firm/LPAC connection by the amount that the firm donated in that cycle.

Panel A of Table 7 presents summary statistics of balance sheet data for firms with direct or indirect connections to politicians in close general elections. Panel B of Table 7 presents summary statistics for the general election connection variables. The different connection measures display a wide variation in values, however, one potential concern is that average value of the $Total\ P$ variable is 0.4, statistically different from 0. If the outcomes of the elections were perfectly random with each candidate winning with equal probability, the average value of this variable should not be different from 0. If firms were consistently able to forecast the outcome of these elections, the identifying assumption underlying the regression discontinuity could be suspect. However, Lee (2008) notes that even when agents have some ability to influence the discontinuity outcome the RDD can capture the weighted average treatment effect, provided that agents cannot completely predetermine the outcome.¹⁰ In the case of campaign contributions, assuming that there is a cost to supporting a candidate, this would be observed if firms were systematically able to predict the outcome of an election and only donated to the winning candidate. If such firms possessed the ability to forecast or systematically manipulate the outcome of the elections it should be present throughout time. However, in unreported results, I examine whether the average value of this variable is consistently positive in different election cycles and find that in some years it is significantly positive, in some years it is significantly negative, and in some years it is insignificantly different from 0. Furthermore, I construct the variables using only those elections which were won or lost at the 1% threshold, those elections which are most likely to be randomly determined, and find that

¹⁰Lee (2008) notes “In Summary, Propositions 2 and 3 show that localized random assignment can occur even in the presence of endogenous sorting, as long as agents do not have the ability to sort precisely around the threshold.” (pp 681)

the overall average value is -0.3, which is statistically different from zero at all conventional levels. Looking by cycle, at this threshold, I find that in all but two cycles, the average value of this variable is statistically negative, which suggests that the concern about endogenous sorting is minor.¹¹

I first run regressions of the three day abnormal returns on all of the political connection portfolio measures described above including election cycle and industry fixed effects, clustering standard errors at the firm level since there are only seven election cycles. Results are generally robust to clustering by election cycle. Table 8 reports the results of the analysis. Specification (1) suggests that the portfolios of winners and losers are priced by the market. I next look at whether this effect is driven by the portfolio of winning politicians or losing politicians. Specification (2) suggests that the market reacts positively to winning connections and negatively to losing connections. The magnitude of these connections is much smaller than the magnitudes which I found in the special elections setting, 7 to 8 basis points. A more natural interpretation of these results may be to look at the change in abnormal returns which occurs with a one standard deviation change to these connection portfolios. A one standard deviation increase in *WonP* leads to a 22 basis point increase in abnormal returns, while a one standard deviation increase in *LostP* leads to a 21 basis point decrease in abnormal returns. I next investigate whether these connections are driven by incumbents or by challengers. Specification (3) suggests these results are primarily (negatively) driven by incumbents losing, although there is weaker evidence that both challengers and incumbents winning elections lead to positive changes in value. Specification (4) looks at whether these results differ by party. Although the point estimates are positive for winning connections to both Republican and Democratic connections, it appears that Democratic connections matter more. These results are in line with the results of Goldman, Rocholl, and So (2009), who find that firms who

¹¹Eggers et al. (2013) examine the validity of using close elections for regression discontinuity designs and note that imbalances at the election threshold may arise by chance and do not automatically invalidate the identifying assumption.

nominate former Democrats to their boards experience higher CARs than firms who nominate former Republicans. Specification (5) looks at the *indirect* connections a firm has established by making Leadership PAC donations to senior politicians who transferred these donations to politicians in the close elections and finds that the market also prices these connections. Although the magnitude of the *Indirect Won P* and *Indirect Lost P* coefficients are smaller than the corresponding direct portfolio connections, the effect of a one standard deviation shock is larger. A one standard deviation increase in *Indirect Won P* leads to an increase in abnormal returns of 88 basis points, while a one standard deviation increase in *Indirect Lost P* leads to a decrease of 83 basis points. Finally, Specification (6) looks at the portfolio of connections that firms have made weighted by the donation amount. It does not appear that the donation amounts are priced by the market, however this could be in part due to the very different scaling of abnormal returns and donation amounts. Given that campaign contribution limits are not typically binding, but that a large number of firms do engage in political donations, perhaps the dollar weighted contributions are not a good measure of connection intensity. Clearly, the magnitudes of these regressions are much smaller than the magnitudes found in the context of special elections. In addition to the noisier interpretation of the general election event, it is not clear that all firms or industries would benefit equally from a connection. I next explore whether these values are higher in industries which seem to be more politically active.

I aggregate all industry donations from firms and industry associations to all candidates for each industry during my sample period and rank them to find those industries which are the largest donors using the Center for Responsive Politics definition described above. The 10 largest donating industries are, respectively, Commercial Banks and Bank Holding Companies, Attorneys and Law Firms, Pharmaceutical Manufacturing, Physician Specialists, Insurance Companies, Brokers, and Agents, Accountants, Life Insurance, Telephone Utilities, Electric Power Utilities, and Defense Aerospace Contractors.¹² These industries account ap-

¹²Results are robust to including more or fewer industries with significant aggregate donations.

proximately 40% of my CAR observations. I run the same regressions as above on the sample of firms which belong to these industries to see whether connections in these industries are more valuable than the average effect that I found previously. Table 9 presents my results. As expected, political connection values seem to be higher in these industries. All variables which were previously significant are still significant, and several variables which were previously insignificant become significant. Moreover, most of the point estimates increase by a factor of two or more. For example, the coefficient on *WonP* changes from 7 basis points to 17 basis points, as shown in specification (1), and the corresponding change in the effect of a one standard deviation increase changes from 22 basis points to 52 basis points. There is now a statistically significant reaction to Republican connections, as well as to Democratic connections as shown in Specification (4). Connections to winning Republicans are worth 10 basis point on average, while a connection to a losing Republican results in an average loss of 15 basis points. Furthermore, there also seems to be a higher value of incumbent politicians winning re-election and challengers winning a first time seat, since the coefficients on *Incumbent WonP* and *Challenger WonP* increase from 6 and 11 basis points to 11 and 29 basis points respectively, as shown in Specification (3). These results stand in contrast with the findings of Do et al, (2012), who find that firms with educational connections to politicians which move to higher office have negative abnormal returns. These politicians would form part a firms portfolio of winning challengers, and the positive, significant coefficient on *Challenger WonP* is inconsistent with their findings. This is not completely unexpected, however, since they argue that a quasi exogenous connection such as an educational tie is “diluted” when a politician moves from state office to federal office. One would expect that if a firm is *choosing* to donate to a politician seeking higher office that the market would react positively to the politician winning a seat. The contribution weighted direct connection measures are statistically significant on the sample of firms in actively donating industries, and have comparable economic magnitudes. A one standard deviation increase in the contribution weighted

connection measures lead to changes of the abnormal returns of about 45 basis points. Finally, the indirect connection coefficients are again small in unit magnitude, but are economically significant. A one standard deviation change in *IndirectWonP* leads to a 120 basis point increase in abnormal returns.

The economic magnitude of the indirect connections is relatively large. As described above, Leadership PACs are run by senior politicians who may be able to influence internal political processes in ways which outsiders like firms cannot. I provide evidence that the recipients of Leadership PAC funds are dependent on the financial support of their parties and that the parties coordinate resources into specific races. This resource coordination may give the recipient politicians an incentive to “toe the party line.” Political parties are able to directly allocate resources to politicians in ways that firms legally cannot. For example, Political Party PACs like the Democratic or Republican National Committees spend large sums of money on direct advertising on behalf of candidates. The Center for Responsive Politics has collected data on direct media expenditures by Political Party PACs from 2000-2010. During this time period, party spending on *advertising alone* amounted to 41% of the *total amount received* in contributions to Representative candidates and 45% of the total amount received in contributions to Senate candidates in close elections. I examine the correlation between total Leadership PAC contributions and direct political party media expenses to provide evidence that there is coordination of party resources which may allow senior politicians to exert influence over other members of their caucus. Table 10 presents the results of this analysis. The dependent variable is the total amount of money the political party spent on behalf of a candidate in a close election. *LPACContributions* represents the total amount of Leadership PAC contributions that the candidate received, *Senate* is a binary variable which takes the value of 1 if the candidate is running for the senate and 0 otherwise, *Incumbent* is a binary variable which takes the value of 1 if the candidate is an incumbent and 0 otherwise, *Won* is a binary variable which takes the value of 1 if the candidate ultimately won the election and 0 otherwise.

Specification (1) presents the univariate correlation between Leadership PAC contributions without year fixed effects. The variable is highly significant, and suggests that for every dollar a candidate receives as a transfer from a senior politician, the party spends nearly \$10 in additional advertising. This variable alone explains more than 25% of the variation in party advertising expenses. I add year fixed effects in Specification (2) and candidate characteristics in Specification (3). Leadership PAC contributions remain significantly correlated with party advertising expenses. The coefficient on *Senate* is positive since Senate races typically cost more than Representative races since they are statewide. The coefficient on *Incumbent* is negative, since challengers are often at a fundraising disadvantage compared to incumbents. The coefficient on *Won* is insignificant, suggesting that the outcome of the race was not sufficiently certain in advance for the parties to reallocate funds away from losing races. The results of this analysis support the idea that politicians in competitive races are dependent on support from their more senior colleagues and the parties at large. This dependence likely makes them more responsive to internal party pressures

The results presented so far provide strong evidence that the market prices connections between politicians and firms which make direct and indirect campaign contributions. However, politicians may have particular preferences to enact policies that favor certain industries or their home state at large, potentially to aid in future re-election campaigns. This possibility may confound the interpretation of my results since it could be that firms in certain states or industries would have benefited from these politicians' elections anyway. I address the concern about politicians acting favorably to firms which are headquartered in their home state by reconstructing the connection portfolio variables excluding all connections which are formed between politicians and firms which are located in the same state. Only about 10% of the close general election connections are between firms and politicians in the same state. Specifications (1)-(4) of Table 11 present the results of the abnormal return regressions for firms in the most actively donating industries on the modified political connection variables. The

results of these regressions are similar to the previous results for the same sample of firms. The number of firm observations declines because some firms have close election portfolios consisting only of politicians from their home state. I address the problem of the political connection valuation being driven by an industry effect rather than a firm effect by including industry/time interactions in the abnormal return regressions, where industry is defined at the three digit SIC level. Specifications (5)-(8) of Table 11 report the results of these regressions. The results again have similar magnitudes and significance as the previous results, however the adjusted R-squared increases from nearly 10% in the previous specifications to nearly 30%. This suggests that in addition to a firm specific connection effect, there is also a large industry component to the CARs.

4.3 Congressional Committee Analysis

I next look at the abnormal returns to firms who have donated to different Senate and House of Representative committees.¹³ The Senate has 18 committees, while the House of Representatives has 20 committees, each of which is responsible for a different area of policy. Congressional committees have a great deal of discretion over the introduction and timing of bills. Bills must be first introduced into and pass the relevant committee(s) before they can be considered for a general vote. Only about 5% of congressional bills and resolutions ultimately become enacted laws, suggesting that there is a large scope for committee members to affect policy in their jurisdiction. The close general elections offers a convenient setting to examine the relative value of different congressional assignments and to discover which areas of policy seem to be the most valuable.

I construct net portfolios of the number of winning politicians that a firm is connected to on each committee minus the number of losing politicians which sat on the committee

¹³Committee assignment data comes from Edwards and Stewart (2006).

for all standing congressional committees. I next rank each chamber's net portfolio score by the variation in this measure and run regressions on the CARs for the committees with the highest variation in connections. I focus on these committees in order to obtain the most precise estimates of committee connections, ranking committees by the number of firms which donate to them yields a similar set of committees.

I only present the results for the sample of firms in actively donating industries to conserve space. Results are similar in significance but smaller in size for the entire sample. Table 12 reports the results. Specification (1) in Panel A shows the baseline results for an Senate or House of Representatives connection. Both Senate and House connections are statistically significant. The most valuable Senate committees are those related to agriculture, taxes, banking, and the military with connection values that range from 45 basis points to 63 basis points. The most valuable House committees are those related to spending, taxes, small business, the military, and infrastructure with connection values ranging from 25 to 44 basis points.

4.4 Forward Sales Analysis

I next document that these connections have cashflow implications for firms by looking at changes in future values of sales. Congressional politicians have a great deal of influence over the allocation of discretionary government spending, so this is a natural place to look for cashflow benefits. I do not claim that this is the only mechanism through which firms can leverage their connections to extract value, but rather one of many. Belo, Gala, and Li (2013) find that firms with high exposure to government spending experience higher returns and cashflows under Democratic presidencies. Goldman, Rocholl, and So (2013) argue that politically connected boards may help in getting government contracts by looking at switches of control of branches of the federal government, so this could be one way that politicians affect their contributors' future sales. However, current politicians are not permitted to sit

on a board of directors, so positive results for winning politicians cannot be picking up the same political benefits that these authors are finding. On the other hand, politicians are also in a position to influence discretionary government spending which board members cannot directly influence. Cohen, Coval, and Malloy (2011) find evidence that changes in political committee chairs positions leads to changes in government spending policy which seems to crowd out private sector investment. However, politicians could be directing some of this spending to firms which they are connected to. In order to investigate this formally I consider the change in sales in the following year. I use this measure because my connections variables capture shocks to, or changes in a firms' political connectedness, and it seems natural to look at the corresponding changes in sales in the following period. I run the following regression:

$$\Delta Sales_{i,t+1} = \alpha + \beta_1 Connection_{i,t} + \beta_2 \Delta Q_{i,t} + \beta_3 \Delta Leverage_{i,t} + \beta_4 \Delta Size_{i,t} + \beta_5 \Delta Profitability_{i,t} + \varepsilon_{i,t+1} \quad (3)$$

Where ΔQ is the lagged change in Tobin's Q, $\Delta Leverage$ is the lagged change in leverage, $\Delta Size$ is the lagged change in log total assets, $\Delta Profitability$ is the lagged change in operating profit and $Connection$ is the measure of political connection under consideration. All specification include firm and cycle fixed effects. Standard errors are clustered by firm.

Table 13 presents the results of this analysis. Specification (1) and (2) show that there is a strong average effect for both connections to winning and losing politicians. These results suggest that an average connection leads to an increase in forward change in sales of 300 million, which is roughly 2% of total sales of these firms. It seems that these changes are driven by connections to incumbent politicians as shown in Specification (3). In contrast with the abnormal return results, Republican connections appear to matter more for changes in sales. At a first glance, this would also seem to be at odds with the evidence provided in Belo, Gala, and Li (2013), since they document higher cashflows under Democratic presidents, but they look

at returns on the industry level, while I am looking at specific firm connections. It is possible that aggregate spending levels are higher under Democratic presidents which benefits all firms in industries with high government exposure, while Republican congressional connections are more valuable for channeling sales to particular firms. This would also be consistent with the earlier evidence that adding industry/year interactions to the abnormal return regressions increased the model fit but did not change the magnitude or significance of the firm connection variables.

I explore the specific government mechanism more formally in specifications (5) and (6). As noted above, government contracts are one mechanism through which firms can benefit from government spending, in addition, politicians can help direct discretionary, commonly known as “earmark” spending, to particular projects. The Senate and House of Representative Appropriations Committees are responsible for the allocation of this spending. I next look at whether connections to the Senate Appropriations committee members lead to changes in sales. Specification (6) presents the results of this analysis. It seems that losses to connections of Appropriation committee members lead to significant losses in future sales, the point estimate on Senate Appropriation committee connections which are lost is -1,915, significant at the 1% level. The magnitude of this coefficient at first glance may be surprisingly large, however, the discretionary component of the US Federal Budget in 2010 was about \$1.4 trillion dollars, so this figure represents about 0.15% of the discretionary budget and about 10% of average firm sales, so this is economically sensible. I confirm that this is not driven by a simple Senate connection effect in Specification (5), where I regress changes in forward sales against portfolios of Senate and Representative winners and losers. The coefficient on the Losing Senator portfolio is significant at the 10% level, but more than four times smaller than the coefficient on the Senate Appropriations committee loss variable, suggesting that I am not capturing a simple Senator effect. I finally examine whether indirect connections lead to future changes in sales. Specification (7) reports the results of this specification, while the

coefficients have the expected signs, the magnitudes are much smaller and the coefficients are insignificant.

In unreported specifications, I run the same regressions omitting the firm fixed effects and examine the difference in the point estimates on the connection variables. The coefficients of the model excluding the firm fixed effect typically changes by less than 5% of the model where fixed effects are included, further suggesting that the connection variables are capturing exogenous variation in firms' connection networks. I do not include industry/year interactions in my primary specifications because some of the effect of a political connection can be favoring certain industries with a high concentration of donations and this would capture this level of variation. However, in unreported tests, I include this interaction and many of my results remain significant, including, most importantly, the Senate Appropriations connection measure. In further unreported tests, I include measures of connections which are weighted by the size of the donation to each politician, and find similar signs and significance levels to the connection number measures I report. I also look at the log level of forward sales, controlling for levels rather than changes in my control variables to ensure that my results are not driven by specification, and find similar results, again with the most significant results coming from shocks to the Senate Appropriations Committee members. Results of these tests are available upon request. In further unreported results, I examine whether political connections matter for the sample of politically active firms, and find that the coefficients on the connection variables are the same signs but they are not statistically significant. I attribute this to the fact that many of the politically active firms are in financial industries, and therefore not likely to benefit from government appropriations spending.

5 Discussion

The analysis so far has shown that direct and indirect political contributions represent valuable connections that are priced by the market. The estimated magnitude of these values are too large to plausibly be the result of a contribution that is capped at \$10,000. However, firms may influence politicians through other channels which may or may not be observable to the econometrician. In this section, I examine two other types of political behavior that are observable to the econometrician and more costly to the firm than political contributions, direct firm lobbying expense and firm employment of former government employees.

Since 1998, professional lobbyists have been required to register with the Office of the United States Senate and to report who their clients are, how much their clients are spending in lobbying activity, and to provide some details about the area of policy that they are being paid to lobby. In contrast with campaign contributions, lobbying expenditures are not constrained. I match the data to firms in my sample from the most actively donating industries. During the sample, these firms spent \$4.7 billion lobbying the federal government, which is 19.2 times larger than the \$245 million contributed to congressional incumbents over the same period.

I obtain data on the employment of former government employees from the Center for Responsive Politics (CRP).¹⁴ The CRP provides a searchable database which allows me to collect this data for the sample of firms in the actively donating industries. The majority of these employees worked as staffers for federal politicians in roles such as legislative director, chief of staff, or press relations. The data is presented in “resume” style, typically with dates of employment for both the public and private sector jobs. I collect data both as a binary variable indicating that a firm currently employs someone that previously worked in government, as well as the number of former staffers a firm hires. These employees are typically

¹⁴The CRP obtains this data from a variety of public and private sources. Details of the methodology can be found at <http://www.opensecrets.org/revolving/methodology.php>.

given titles such as “VP Legislative Affairs” and are employed as government specialists. For example, Time Warner has hired 25 former government employees, eight were affiliated with the congressional judicial committees, ten were affiliated with the congressional commerce committees, three worked for Republican congressional leaders, one worked for Democratic president Bill Clinton, and one worked for Nicolas Mavroules, a Representative who was convicted on 15 counts of corruption. The judicial committees are responsible for anti-trust policy, while the commerce committees are responsible for oversight of the communications industries.

Panel A of Table 14 presents summary statistics for the lobbying and employment data. Roughly one third of the firms employ former staffers in any given political cycle, while roughly two thirds of the firms engage in lobbying. Firms that hire former staffers, on average have two or three in a given cycle, while firms that lobby, on average spend \$3.69 million per election cycle.

In order to provide evidence that firms are incurring costs to influence politicians, reliable data at the firm/candidate/time level such as contribution data is necessary. Unfortunately, lobbyists are not required to disclose which politicians they are lobbying. However, as noted above, lobbyists are required to disclose the area of policy that they have been hired to advocate for. I use this data to show that firms are contributing to the same politicians who are responsible for the areas of policy that they are lobbying. Specifically, I match each area of policy in the lobbying records to the relevant committees in the Senate and House using the House and Senate Rules and examine the correlation between total contributions to members of each committee and lobbying expense to the policy area the committee is responsible for.¹⁵ Panel B of Table 14 presents the results of this analysis. Specification (1) presents this analysis for all observations, while Specification (2) examines only the sample of positive values. The

¹⁵In cases where a politician sits on more than one committee or a lobbyist has been hired to lobby about multiple policy areas, I divide the totals equally.

results indicate that for every dollar that a firm contributes to a congressional committee, it is simultaneously spending roughly 15 dollars lobbying the same area of policy. Since congressional committees have purview over any legislation which falls in their policy domain, these legislators should be the targets of the firm lobbying.

More generally, one can think of firms directly employing former government staffers in government affairs divisions as a more direct strategy to influence government policy, while paying professional lobbyists as a more indirect strategy. These actions, along with forming direct and/or indirect contribution connections, could be complementary actions or substitute actions. I first examine whether firms are more or less likely to lobby if they employ a former government employee, and then examine whether the connection values which were previously estimated differ in firms which lobby or firms which employ former staffers.

Panel C of Table 14 presents evidence of the likelihood of lobbying and hiring former staffers. In all specification, the independent variable is the binary variable *Employ*. The dependent variable in the regression presented in Specification (1) is the binary variable *Lobby*. The coefficient on *Employ* suggests that firms which employ former staffers are eight percent less likely to spend money lobbying. Specifications (2) and (3) repeat this analysis using the log amount spent lobbying and the amount spent scaled by firm assets and similarly finds a negative relationship between employing former staffers and lobbying. This suggests that the actions are more likely substitutes than compliments.

I explore how the connection values differ in firms which lobby and firms which employ former government employees. I rerun the baseline general election abnormal return regressions including interacting the *Total P* and *Indirect Total P* with *Lobby* and *Employ*. Table 15 presents the results of this analysis. In Specifications (1) and (2) the interaction of the direct connections and *Employ* is significantly positive, while the interaction with *Lobby* is insignificant. This suggests that the firms which engage in other direct political behavior benefit more

from direct connections to politicians. In contrast, in Specifications (3) and (4), the only significant interaction term is the interaction with *Lobby*. This suggests that firms which engage in other indirect types of political behavior benefit more from indirect connections to politicians.

6 Conclusion

This paper contributes to the emerging literature that attempts to estimate the value of firm connections to politicians. I look at firms' endogenous donations to US Congressional election candidates and employ a regression discontinuity design to causally identify the value of these connections. I examine cumulative abnormal returns of firms connected to politicians who narrowly win or narrowly lose a close election.

I first consider the smaller sample of close special elections and document a wedge of 1.7%-6.8% between firms connected to winning politicians and firms connected to losing politicians. This range is higher than the estimates previously reported in the literature. I next consider the larger but noisier setting of close general elections and construct portfolios of winning and losing connections.

On election days, the market reacts positively if a firm is connected to winning politicians and negatively if it is connected to losing politicians, but the magnitudes are smaller than for special elections. These results are driven primarily by incumbent, Democratic candidates. The market reacts more strongly to *indirect* connections which I measure through contribution to senior politicians' Leadership PACs. I provide evidence that these connections are stronger because of internal party resource allocation, where senior politicians may be able to influence party members in ways that firms cannot. I show that these effects are not driven by politicians' preferences for certain industries or by geographical preferences.

I then identify the areas of policy that matter most to the firms in my sample by examining which committee assignments are the most valuable. Connections to the banking, spending, agriculture, tax, small business, and military committees are the most valuable. I document a cash flow effect of these connections — future sales. I show that the loss of a connection to a Senator on the committee responsible for overseeing discretionary government spending leads to an average decrease in future sales of \$1.9 billion. I conclude by showing that political contributions are part of politically active firms' broader strategies of policy engagement. The results of this paper strongly suggest that firms' campaign contributions represent investments in political capital and have higher values than previous research has found.

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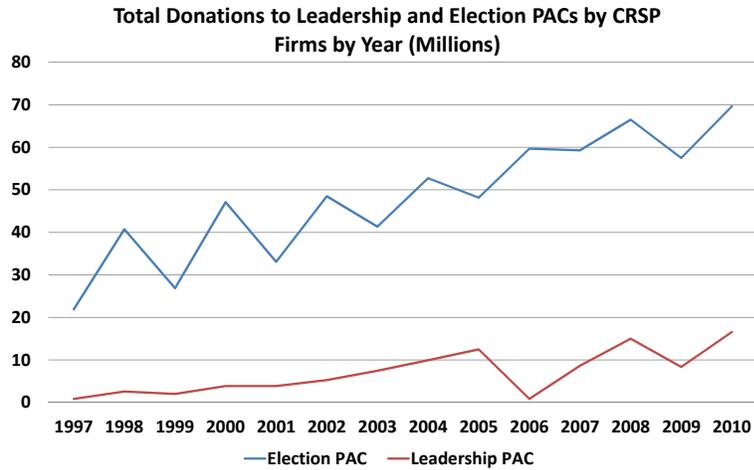
Appendix A - Variable Definitions

Variable	Definition	Source
Tobin's Q	(total assets + market equity - common equity - deferred taxes)/ total assets	Compustat
Market Leverage	Total debt / (market equity + Total debt)	Compustat
Book Leverage	Total debt / Total Assets	Compustat
Log Assets	The natural log of total assets	Compustat
Operating Profit	operating income/ total assets	Compustat
Cashflow/Assets	(Income Before Extraordinary Items + Depreciation) / Total asset	Compustat
Investment/Assets	(Capital Expense - Sale of Property) / Total Assets	Compustat
Contribution	Campaign contribution from a Donor PAC to a Candidate's Election PAC	Federal Election Commission
Margin	The percentage points by which a candidate won or lost a close election by	Federal Election Commission
Won	A dummy variable which takes the value of 1 if a firm is donated to a candidate won an election and zero otherwise	Federal Election Commission
Donated	A dummy variable which takes the value of 1 if a firm donated only one candidate and zero otherwise	Federal Election Commission
Don Won	A dummy variable which takes the value of 1 if a firm donated only to the winning candidate and zero otherwise	Federal Election Commission
Democrat	A dummy variable which takes the value of 1 if a firm donated to a Democrat candidate	Federal Election Commission
Abnormal Returns	Value weighted Cumulative Abnormal Returns computed using the Fama French three factor model for different daily event lengths	Eventus
ΔQ	The change in Tobin's Q (defined above)	Compustat
ΔLev	The change in Market Leverage	Compustat
$\Delta Size$	The change in log assets	Compustat
$\Delta Profitability$	The change in Operating Profit	Compustat
Won P	The number of winning candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Lost P	The number of losing candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Total P	Won P-Lost P	Federal Election Commission and Authors's Computation
Incumbent Won P	The number of incumbent winning candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Incumbent Lost P	The number of incumbent losing candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Challenger Won P	The number of challenger winning candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation

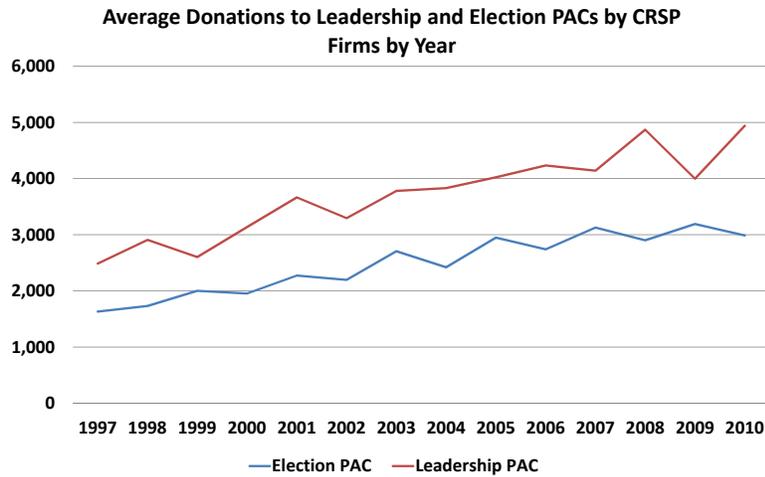
Challenger Lost P	The number of challenger losing candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Republican Won P	The number of Republican winning candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Republican Lost P	The number of Republican losing candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Democrat Won P	The number of Democratic winning candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Democrat Lost P	The number of Democratic losing candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Senate Won P	The number of winning Senate candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Senate Lost P	The number of losing Senate candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
House Won P	The number of winning House of Representatives candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
House Lost P	The number of losing House of Representatives candidates involved in a close general election that a firm donated to prior to the election	Federal Election Commission and Authors's Computation
Indirect Won P	The number of winning candidates involved in close general election that a firm indirectly supports via donations to Leadership PACs	Federal Election Commission and Authors's Computation
Indirect Lost P	The number of losing candidates involved in close general election that a firm indirectly supports via donations to Leadership PACs	Federal Election Commission and Authors's Computation
Indirect Total P	Indirect Won P-Indirect Lost P	Federal Election Commission and Authors's Computation
Amount Won P	The number of winning candidates involved in a close general election that a firm donated to prior to the election weighted by the firm's contribution to the candidate	Federal Election Commission and Authors's Computation
Amount Lost P	The number of losing candidates involved in a close general election that a firm donated to prior to the election weighted by the firm's contribution to the candidate	Federal Election Commission and Authors's Computation
Amount Total P	Amount Won P-Amount Lost P	Federal Election Commission and Authors's Computation
Log Amount Won P	The natural log of 1+ Amount Won P	Federal Election Commission and Authors's Computation
Log Amount Lost P	The natural log of 1+ Amount Lost P	Federal Election Commission and Authors's Computation
Log Amount Total P	The $\frac{\text{natural log of } Amount\ Total\ P}{\sqrt{Amount\ Total\ P^2 + 1}}$	Federal Election Commission and Authors's Computation

Figure 1. CRSP PAC Donations to Election and Leadership PACs

Figure (a) shows the total donations of PACs associated with firms in CRSP to all Leadership PACs and House and Senate Election PACs by year. Figure (b) plots the average donation to a Leadership PAC or a Senate or House Election PAC by year.



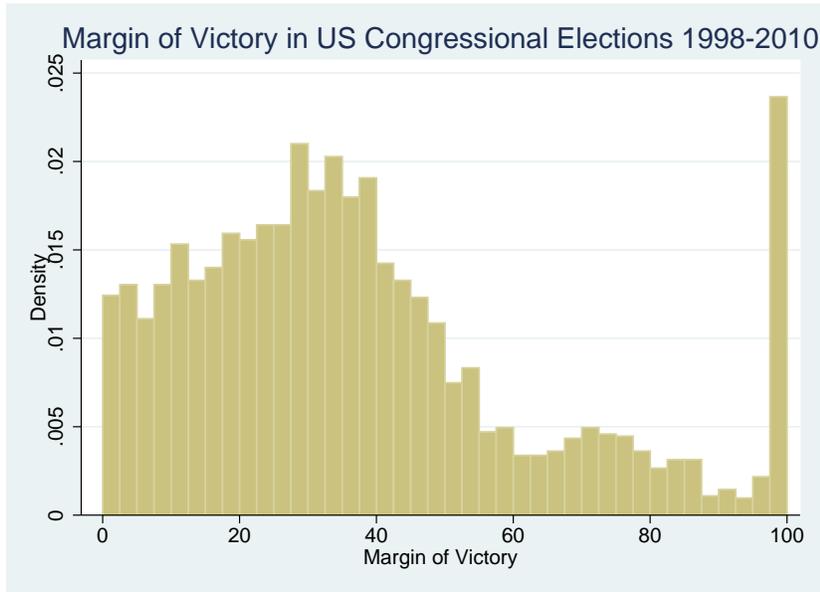
(a) Total Donations



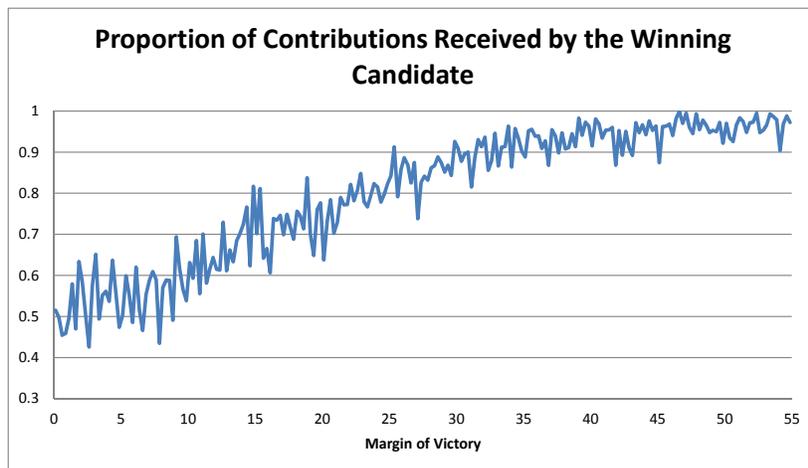
(b) Average Donations

Figure 2. Electoral Statistics

Figure (a) presents a histogram of the margin of victory for all U.S. general elections from 1998-2010. Figure (b) plots the average proportion of total contributions given to the winning candidate of an election on the Y-axis against the margin of victory that the candidate won the election by on the X-axis.



(a) Margin of Victory



(b) Proportion of Contributions Received by the Winning Politician

Table 1
CRSP Firm PAC Election and Leadership PAC Donation Summary Statistics

Panel A of the following table reports aggregate summary statistics for PACs donations affiliated with firms in CRSP to Senate and House Election PACs and all Leadership PACs by year. Panel B reports the same statistics for donations to individual Senate and House candidate Election PACs and all Leadership PACs by year.

Panel A - Aggregate CRSP Firm PAC contributions Summary Statistics								
Year	To Election PACs				To Leadership PACs			
	Total (mil)	Mean (thou)	St Dev (thou)	Number	Total (mil)	Mean (thou)	St Dev (thou)	Number
1997	21.92	30.74	53.93	713	0.86	4.61	5.68	187
1998	40.75	52.92	96.75	770	2.59	9.15	14.14	283
1999	26.87	38.01	82.95	707	2.03	7.13	14.17	285
2000	47.11	61.98	106.39	760	3.87	13.08	23.57	296
2001	33.06	48.13	93.30	687	3.89	13.01	27.08	299
2002	48.47	65.51	127.23	740	5.28	14.38	29.54	367
2003	41.33	57.57	121.79	718	7.46	18.29	33.74	408
2004	52.72	66.90	115.01	788	9.95	23.14	40.46	430
2005	48.15	63.78	112.12	755	12.48	27.98	50.38	446
2006	59.68	75.16	128.94	794	12.85	29.95	49.81	429
2007	59.28	80.66	139.98	735	8.65	23.01	49.38	376
2008	66.48	85.77	153.72	775	15.02	38.51	68.85	390
2009	57.49	81.55	165.95	705	8.37	22.76	58.06	368
2010	69.63	92.10	163.23	756	16.59	42.87	92.30	387

Panel B - CRSP Firm PACs to Individual PAC Summary Statistics								
Year	To Election PACs				To Leadership PACs			
	Total (mil)	Mean (thou)	St Dev (thou)	Number	Total (mil)	Mean (thou)	St Dev (thou)	Number
1997	21.92	1.63	1.78	13,431	0.86	2.49	2.44	347
1998	40.75	1.73	1.85	23,528	2.59	2.91	2.68	891
1999	26.87	2.00	2.28	13,427	2.03	2.60	2.65	781
2000	47.11	1.95	1.98	24,118	3.87	3.14	2.74	1,234
2001	33.06	2.27	2.38	14,545	3.89	3.66	3.37	1,062
2002	48.47	2.19	2.20	22,085	5.28	3.29	2.91	1,602
2003	41.33	2.71	2.60	15,277	7.46	3.78	3.19	1,974
2004	52.72	2.42	2.23	21,787	9.95	3.83	2.93	2,598
2005	48.15	2.95	2.71	16,330	12.48	4.02	3.14	3,103
2006	59.68	2.74	2.40	21,790	12.85	4.23	3.06	3,035
2007	59.28	3.13	2.79	18,958	8.65	4.14	3.06	2,089
2008	66.48	2.90	2.49	22,914	15.02	4.87	3.29	3,084
2009	57.49	3.19	2.94	18,018	8.37	4.00	3.09	2,095
2010	69.63	2.99	2.56	23,317	16.59	4.94	3.17	3,359

Table 2
40 Most Actively Donating Industries

The following table presents the 40 industries with the largest Institutional PAC donations from 1998-2010.

Rank	Industry	Total Donation	Proportion
1	COMMERCIAL BANKS & BANK HOLDING COMPANIES	85,075,893	0.042
2	ATTORNEYS & LAW FIRMS	73,753,969	0.037
3	PHARMACEUTICAL MANUFACTURING	57,131,329	0.028
4	OTHER PHYSICIAN SPECIALISTS	55,595,388	0.028
5	INSURANCE COMPANIES, BROKERS & AGENTS	53,552,071	0.027
6	ACCOUNTANTS	48,972,131	0.024
7	LIFE INSURANCE	46,177,074	0.023
8	TELEPHONE UTILITIES	46,130,608	0.023
9	ELECTRIC POWER UTILITIES	40,544,218	0.020
10	DEFENSE AEROSPACE CONTRACTORS	39,676,284	0.020
11	SECURITY BROKERS & INVESTMENT COMPANIES	38,046,708	0.019
12	GAS & ELECTRIC UTILITIES	32,539,756	0.016
13	EXPRESS DELIVERY SERVICES	30,326,784	0.015
14	RAILROADS	29,872,022	0.015
15	REAL ESTATE AGENTS	28,574,455	0.014
16	HOSPITALS	28,467,001	0.014
17	ACCIDENT & HEALTH INSURANCE	28,120,859	0.014
18	PHYSICIANS	27,884,362	0.014
19	DEFENSE ELECTRONIC CONTRACTORS	27,744,974	0.014
20	CREDIT AGENCIES & FINANCE COMPANIES	26,481,583	0.013
21	LIQUOR WHOLESALERS	24,852,117	0.012
22	CABLE & SATELLITE TV PRODUCTION & DISTRIBUTION	24,435,234	0.012
23	TRIAL LAWYERS & LAW FIRMS	22,766,845	0.011
24	RESTAURANTS & DRINKING ESTABLISHMENTS	22,473,553	0.011
25	TOBACCO & TOBACCO PRODUCTS	22,270,573	0.011
26	DEPARTMENT, VARIETY & CONVENIENCE STORES	21,355,292	0.011
27	AUTO DEALERS, NEW & USED	20,725,900	0.010
28	CREDIT UNIONS	20,688,281	0.010
29	INDUSTRIAL/COMMERCIAL EQUIPMENT & MATERIALS	20,459,876	0.010
30	SUGAR CANE & SUGAR BEETS	19,481,683	0.010
31	ENGINEERING, ARCHITECTURE & CONSTRUCTION MGMT SVCS	18,911,599	0.009
32	REAL ESTATE DEVELOPERS & SUBDIVIDERS	18,846,854	0.009
33	HMOS	18,576,294	0.009
34	RESIDENTIAL CONSTRUCTION	18,029,785	0.009
35	DENTISTS	17,831,471	0.009
36	PUBLIC WORKS, INDUSTRIAL & COMMERCIAL CONSTRUCTION	17,678,592	0.009
37	MAJOR (MULTINATIONAL) OIL & GAS PRODUCERS	17,023,408	0.008
38	MILK & DAIRY PRODUCERS	16,758,888	0.008
39	NURSING HOMES	15,500,982	0.008
40	PETROLEUM REFINING & MARKETING	15,279,398	0.008

Table 3
Close Special Elections 1997-2010

The following table presents the candidates, seats, and outcomes of special elections from 1997 to 2010 which were won by a margin of less than 5 percentage points. Victory margin is the percentage that the candidate won (lost) the election by. D refers to the Democratic Party, R refers to the Republican Party, and C refers to the Conservative Party. All data comes from the Federal Election Commission.

Candidate	Date	State	District	Party	Victory Margin
Bill Redmond	05/13/1997	NM	3	R	0.030
Eric Serna	05/13/1997	NM	3	D	-0.030
Heather Wilson	06/23/1998	NM	1	R	0.050
Phillip Maloof	06/23/1998	NM	1	D	-0.050
David Vitter	05/29/1999	LA	1	R	0.015
David Treen	05/29/1999	LA	1	R	-0.015
Randy Forbes	06/19/2001	VA	4	R	0.042
Louise Lucas	06/19/2001	VA	4	D	-0.042
Randy Neugebauer	06/03/2003	TX	19	R	0.010
Mike Conaway	06/03/2003	TX	19	R	-0.010
Stephanie Herseth	06/01/2004	SD	0	D	0.011
Larry Diedrich	06/01/2004	SD	0	R	-0.011
Jean Schmidt	08/02/2005	OH	2	R	0.033
Paul Hackett	08/02/2005	OH	2	D	-0.033
Brian Bilbray	06/06/2006	CA	50	R	0.046
Francine Busby	06/06/2006	CA	50	D	-0.046
Paul Broun	07/17/2007	GA	10	R	0.008
Jim Whitehead	07/17/2007	GA	10	R	-0.008
Don Cazayoux	05/03/2008	LA	6	D	0.029
Woody Jenkins	05/03/2008	LA	6	R	-0.029
Bill Owens	11/03/2009	NY	23	D	0.024
Douglas Hoffman	11/03/2009	NY	23	C	-0.024
Scott Murhpy	03/31/2009	NY	20	D	0.005
Tim Tedisco	03/31/2009	NY	20	R	-0.005
Scott Brown	01/19/2010	MA	Senate	R	0.048
Martha Coakley	01/19/2010	MA	Senate	D	-0.048

Table 4
Special Election Firm Donor Summary Statistics

Columns (1) through (3) of Panel A of the following table present summary statistics of firms in the years that they gave donations to candidates in the sample of special elections. Column (4) presents the average value of firms which donated only to the losing candidate. Column (5) presents the average difference of firms who donated only to the winning candidate conditioning on the voteshare of the winning candidate using a quadratic spline functional form. Column (6) reports the p-value of the difference reported in column (5) computed using Robust standard errors. All variables are defined in the appendix. Panel B reports the number frequency of firms donating to more than one candidate during the elections in the sample.

	All Firms			Losing vs. Winning Firms		
	Mean	Median	St Dev	Mean	Difference	P Value
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Tobin's Q</i>	1.776	1.462	1.178	1.816	-0.303	(0.5455)
<i>Market Leverage</i>	0.284	0.248	0.216	0.102	0.213	(0.1038)
<i>Book Leverage</i>	0.279	0.263	0.153	0.197	0.097	(0.3566)
<i>Log Assets</i>	10.170	10.246	1.339	10.119	0.295	(0.8071)
<i>Equity Value (Millions)</i>	52,793	17,707	83,008	83,833	-48,388	(0.6090)
<i>Operating Profit</i>	0.137	0.123	0.067	0.178	-0.065	(0.1182)
<i>Cash Flow/Assets</i>	0.092	0.086	0.061	0.108	-0.024	(0.5146)
<i>Investment/Assets</i>	0.043	0.033	0.030	0.036	-0.003	(0.9198)
<i>Contribution</i>	1902.5	1000.00	1773.76	1534.68	196.34	(0.8910)

Table 5
Special Election CAR Regression Discontinuity Results

Panel A of the following table presents estimates of a Regression Discontinuity estimation on (-1,+5) and (-1,+1) Cumulative Abnormal Returns computed using the Fama French Three Factor Model. The estimation is performed using sample of elections which were won or lost by a margin of 5% or less and for the sample of firms which only donated to one candidate in the election. Won is a dummy variable which takes a value of 1 if candidate which the firm donated to won a close election and 0 otherwise. The estimation is performed using a number of polynomial and polynomial spline functional forms, as suggested by Lee (2008). Panel B reports the results of a Regression Discontinuity estimation using the entire sample of firms who donated to candidates in the special elections. *Donated* is a dummy variable which takes a value of 1 if a firm donated to only one candidate in a particular special election and zero if a firm donated to both the winning and losing candidate in a particular election. *Donated*Won* is the interaction of *Donated* and *Won*. P-values clustered at the firm level are reported in parentheses.

Panel A - Winner vs. Loser Results						
	(1)	(2)	(3)	(4)	(5)	
Event Window	(-1,+5)	(-1,+5)	(-1,+5)	(-1,+5)	(-1,+1)	
<i>Won</i>	0.0176*	0.0300**	0.0260*	0.0683***	0.0369**	
	(0.0997)	(0.0160)	(0.0658)	(0.00675)	(0.0159)	
<i>Intercept</i>	-0.00603	-0.0203**	-0.0122	-0.0621***	-0.0491***	
	(0.305)	(0.0336)	(0.158)	(0.0046)	(0.0001)	
Observations	234	234	234	234	234	
R-squared	0.018	0.026	0.021	0.036	0.040	
Functional Form	Linear	Linear Spline	Quadratic	Quadratic Spline	Quadratic Spline	
Panel B - Winner vs. Loser in Comparison with Hedger Results						
	(1)	(2)	(3)	(4)	(5)	(6)
Event Window	(-1,+5)	(-1,+5)	(-1,+5)	(-1,+5)	(-1,+5)	(-1,+1)
<i>Donated</i>	-0.0193	-0.0188	-0.0307**	-0.0179	-0.0934**	-0.0789***
	(0.107)	(0.293)	(0.0375)	(0.318)	(0.0146)	(0.0001)
<i>Donated * Won</i>	0.0142	0.0300**	0.0255*	0.0292**	0.0683***	0.0369**
	(0.178)	(0.0163)	(0.0683)	(0.0299)	(0.0060)	(0.0164)
<i>Intercept</i>	0.0142	-0.0015	0.0175*	-0.0032	0.0313	0.0298*
	(0.131)	(0.920)	(0.0705)	(0.849)	(0.315)	(0.0633)
Observations	258	258	258	258	258	258
R-squared	0.015	0.028	0.020	0.028	0.043	0.051
Functional Form	Linear	Linear Spline	Quadratic	Partial Quadratic Spline	Full Quadratic Spline	Full Quadratic Spline

Table 6
Special Election Regression Discontinuity Placebo Test

The following table presents estimates of a Regression Discontinuity estimation on (-1,+5) and (-1,+1) Cumulative Abnormal Returns computed using the Fama French Three Factor Model. The estimation is performed using all special elections which were won or lost by a margin of more than 5% looking at the sample of firms which only donated to one candidate *Won* is a dummy variable which takes a value of 1 if candidate which the firm donated to won a close election and 0 otherwise. The estimation is performed using a number of polynomial and polynomial spline functional forms, as suggested by Lee (2008). P-values clustered at the firm level are reported in parentheses.

Regression Discontinuity Placebo Test Results				
	(1)	(2)	(3)	(4)
Event Window	(-1,+5)	(-1,+5)	(-1,+5)	(-1,+1)
<i>Won</i>	-0.0099 (0.151)	-0.0187 (0.133)	-0.0056 (0.796)	0.0000 (0.998)
<i>Intercept</i>	0.0086* (0.0910)	0.0138* (0.0699)	0.0074 (0.721)	0.0074 (0.600)
Observations	1,091	1,091	1,091	1,091
R-squared	0.002	0.004	0.009	0.013
Functional Form	Linear	Quadratic	Quadratic Spline	Quadratic Spline

Table 7
General Election Firm Connection Summary Statistics

Panel A of the following table presents summary statistics for the firms in the sample. Panel B presents summary statistics for the firm direct and indirect connections to candidates in close general elections held from 1998 to 2010. Details and definitions of the variables can be found in the text and Appendix A.

Panel A - Firm Summary Statistics						
Variable	Mean	Median	Std. Dev.	Max	Min	Number
<i>Tobin's Q</i>	1.68	1.29	1.20	15.92	0.43	3,757
<i>Market Leverage</i>	0.33	0.29	0.24	1.00	0	4,272
<i>Book Leverage</i>	0.29	0.26	0.21	3.68	0	4,274
<i>Log Sales</i>	8.43	8.47	1.57	13.04	-0.04	4,290
<i>Log Total Assets</i>	8.98	8.97	1.81	15.07	2.64	4,290
<i>Operating Profitability</i>	0.12	0.11	0.09	0.86	-0.90	4,233
<i>Investment / Assets</i>	0.05	0.03	0.05	0.61	-0.37	2,390
Panel B - Political Connection Summary Statistics						
Variable	Mean	Median	Std. Dev.	Max	Min	Number
<i>Total P</i>	0.40	0	2.37	15	-10	4,135
<i>Won P</i>	2.91	2	3.21	27	0	4,135
<i>Lost P</i>	2.51	2	2.66	18	0	4,135
<i>Incumbent Won P</i>	1.93	1	2.51	23	0	4,135
<i>Incumbent Lost P</i>	1.81	1	2.08	16	0	4,135
<i>Challenger Won P</i>	0.98	0	1.42	10	0	4,135
<i>Challenger Lost P</i>	0.70	0	1.19	15	0	4,135
<i>Democrat Won P</i>	0.98	0	1.83	21	0	4,135
<i>Democrat Lost P</i>	0.66	0	1.39	17	0	4,135
<i>Republican Won P</i>	1.89	1	2.34	18	0	4,135
<i>Republican Lost P</i>	1.85	1	2.36	16	0	4,135
<i>Amount Total P</i>	926.70	0	9,635	89,000	-48,500	4,135
<i>Amount Won P</i>	8,472.59	3,250	14,626	206,000	0	4,135
<i>Amount Lost P</i>	7,545.90	3,000	12,216	123,500	0	4,135
<i>Indirect Total P</i>	1.40	1	18.99	118	-157	3,134
<i>Indirect Won P</i>	53.88	21	87.60	913	0	3,134
<i>Indirect Lost P</i>	52.48	21	82.77	795	0	3,134
<i>Indirect Amount Total P</i>	20,140.89	9,777	135,100	643,883	-1,121,987	3,134
<i>Indirect Amount Won P</i>	325,360.92	131,843	512,656	4,593,377	0	3,134
<i>Indirect Amount Lost P</i>	305,220.03	125,000	469,317	4,175,175	0	3,134

Table 8
General Election CARs Regressions - Full Sample

The following table presents regression estimates of various measures of political connections on Cumulative Abnormal Returns for firms which donated to candidates in close general Congressional elections from 1998-2010. CARs are computed using the Fama French 3 factor value weighted model over the (-1,+1) event window. All regressions include industry and year effects. All connection variables are defined in the text and in Appendix A. P-values clustered at the firm level are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Total P</i>	0.0007** (0.0131)					
<i>Won P</i>		0.0007** (0.0143)				
<i>Lost P</i>		-0.0008** (0.0252)				
<i>Incumbent Won P</i>			0.0006* (0.0852)			
<i>Incumbent Lost P</i>			-0.0013*** (0.0038)			
<i>Challenger Won P</i>			0.0011* (0.0584)			
<i>Challenger Lost P</i>			0.0004 (0.526)			
<i>Democrat Won P</i>				0.0016*** (0.0013)		
<i>Democrat Lost P</i>				-0.0015** (0.0143)		
<i>Republican Won P</i>				0.0002 (0.596)		
<i>Republican Lost P</i>				-0.0005 (0.272)		
<i>Indirect Won P</i>					0.0001*** (0.0023)	
<i>Indirect Lost P</i>					-0.0001*** (0.0016)	
<i>Amount Won P</i>						9.08e-08 (0.134)
<i>Amount Lost P</i>						-1.34e-07* (0.0817)
Observations	3,761	3,761	3,761	3,761	2,810	3,761
R-squared	0.084	0.084	0.085	0.085	0.094	0.083

Table 9
General Election CARs - Most Actively Donating Industries

The following table presents regression estimates of various measures of political connections on Cumulative Abnormal Returns for firms which donated to candidates in close general Congressional elections from 1998-2010 in the sample from the 10 industries which have the largest percentage of donations to all elections. CARs are computed using the Fama French 3 factor value weighted model over the (-1,+1) event window. All regressions include industry and year fixed effects. All connection variables are defined in the text and in Appendix A. P-values clustered at the firm level are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Total P</i>	0.0017*** (0.0002)					
<i>Won P</i>		0.0017*** (0.0002)				
<i>Lost P</i>		-0.0016*** (0.0028)				
<i>Incumbent Won P</i>			0.0011** (0.0340)			
<i>Incumbent Lost P</i>			-0.0017** (0.0164)			
<i>Challenger Won P</i>			0.0029*** (0.0003)			
<i>Challenger Lost P</i>			-0.0014 (0.127)			
<i>Democrat Won P</i>				0.0027*** (0.0006)		
<i>Democrat Lost P</i>				-0.0018* (0.0580)		
<i>Republican Won P</i>				0.0010* (0.0547)		
<i>Republican Lost P</i>				-0.0015** (0.0174)		
<i>Indirect Won P</i>					0.0002*** (0.0074)	
<i>Indirect Lost P</i>					-0.0002** (0.0115)	
<i>Amount Won P</i>						3.14e-07*** (0.0020)
<i>Amount Lost P</i>						-3.32e-07*** (0.0099)
Observations	1,505	1,505	1,505	1,505	1,139	1,505
R-squared	0.070	0.070	0.072	0.072	0.068	0.067

Table 10
Political Party Advertising Expenditures

The following table presents regression estimates of Leadership PAC contributions to candidates in close general elections on political party media expenditures to the same candidates. Specifications (2) and (3) include year fixed effects. P-values with robust standard errors are reported in parentheses.

	(1)	(2)	(3)
<i>LPAC Contributions</i>	9.903*** (0.000)	9.189*** (0.000)	6.956*** (0.000)
<i>Senate</i>			1,741,445*** (0.000)
<i>Incumbent</i>			-614,944*** (0.000)
<i>Won</i>			173,777 (0.237)
Observations	366	366	366
R-squared	0.2709	0.3255	0.4666

Table 11
General Election CARs - Robustness Tests

The following table presents regression estimates of various measures of political connections on Cumulative Abnormal Returns for firms which donated to candidates in close general Congressional elections from 1998-2010 in the sample from the 10 industries which have the largest percentage of donations to all elections. Specifications (1)-(4) present estimates of models in which the political connection variables do not include politicians located in the same state as the donating firm and include year and industry fixed effects. Specifications (5)-(8) present estimates of models in which the connection variables include all politicians irrespective of state, but include industry interacted with year fixed effects. CARs are computed using the Fama French 3 factor value weighted model over the (-1,+1) event window. All connection variables are defined in the text and in Appendix A. P-values clustered at the firm level are reported in parentheses.

	Out of State Connections Only				Industry/Year Interactions Included			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Total P</i>	0.0014*** (0.0015)				0.0014*** (0.0016)			
<i>Won P</i>		0.0014*** (0.0012)				0.0014*** (0.0016)		
<i>Lost P</i>		-0.0011** (0.0443)				-0.0015*** (0.0053)		
<i>Incumbent Won P</i>			0.0005 (0.344)				0.0012** (0.0302)	
<i>Incumbent Lost P</i>			-0.0007 (0.318)				-0.0015** (0.0334)	
<i>Challenger Won P</i>			0.0036*** (0.0000)				0.0019** (0.0214)	
<i>Challenger Lost P</i>			-0.0019** (0.0457)				-0.0015 (0.111)	
<i>Democrat Won P</i>				0.0021*** (0.0082)				0.0025*** (0.0010)
<i>Democrat Lost P</i>				-0.0001 (0.369)				-0.0016* (0.0855)
<i>Republican Won P</i>				0.0001* (0.0774)				0.0007 (0.184)
<i>Republican Lost P</i>				-0.0010 (0.104)				-0.0014** (0.0226)
Observations	1,376	1,376	1,376	1,376	1,505	1,505	1,505	1,505
R-squared	0.040	0.041	0.046	0.042	0.297	0.297	0.297	0.299

Table 12

General Election Congressional Committee CARs - Most Actively Donating Industries

The following table presents regression estimates of various measures of political connections on Cumulative Abnormal Returns for firms which donated to candidates sitting on different congressional committees in close general Congressional elections from 1998-2010 in the sample from the 10 industries which have the largest percentage of donations to all elections. Panel A presents results from Senate Committees, while Panel B presents results from House Committees. CARs are computed using the Fama French 3 factor value weighted model over the (-1,+1) event window. All regressions include industry and year fixed effects. P-values clustered at the firm level are reported in parentheses.

Panel A - Senate Committee Results							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Senate</i>	0.0022***						
	(0.0015)						
<i>House</i>	0.0013**						
	(0.0102)						
<i>Energy</i>		0.0016*					
		(0.0503)					
<i>Commerce</i>			0.0014				
			(0.344)				
<i>Banking</i>				0.0048***			
				(0.0006)			
<i>Agriculture</i>					0.0063***		
					(0.0003)		
<i>Finance</i>						0.0052**	
						(0.0425)	
<i>Armed Services</i>							0.0045**
							(0.0163)
Observations	1,505	1,505	1,505	1,505	1,505	1,505	1,505
R-squared	0.070	0.062	0.061	0.067	0.070	0.064	0.065
Panel B - House Committee Results							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Transportation</i>	0.0025**						
	(0.0115)						
<i>Financial Services</i>		0.0023*					
		(0.0693)					
<i>Agriculture</i>			0.0013				
			(0.216)				
<i>Small Business</i>				0.0044***			
				(0.0001)			
<i>Armed Services</i>					0.0035***		
					(0.0084)		
<i>Ways and Means</i>						0.0032**	
						(0.0141)	
<i>Appropriations</i>							0.0037**
							(0.0395)
Observations	1,505	1,505	1,505	1,505	1,505	1,505	1,505
R-squared	0.064	0.063	0.061	0.067	0.064	0.063	0.063

Table 13
One Year Forward Change in Sales Regressions

The following table presents regression estimates of various measures of political connections on the one year forward change in sales (in millions) for firms which donated to candidates in close general Congressional elections from 1998-2010. All regressions include firm and year fixed effects. All regressions include lagged changes in Tobin's Q, leverage, size, and profitability, coefficients are not reported to conserve space. All variables are defined in Appendix A. P-values clustered at the firm level are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Total P</i>	300.2*** (0.0098)						
<i>Won P</i>		263.6** (0.0229)					
<i>Lost P</i>		-372.0** (0.0210)					
<i>Incumbent Won P</i>			402.0*** (0.0025)				
<i>Incumbent Lost P</i>			-775.2** (0.0100)				
<i>Challenger Won P</i>			9.106 (0.972)				
<i>Challenger Lost P</i>			443.5 (0.303)				
<i>Republican Won P</i>				365.7** (0.0271)			
<i>Republican Lost P</i>				-406.3** (0.0200)			
<i>Democrat Won P</i>				74.20 (0.704)			
<i>Democrat Lost P</i>				-255.1 (0.216)			
<i>Senate Won P</i>					304.7 (0.178)		
<i>Senate Lost P</i>					-470.9* (0.0997)		
<i>House Won P</i>					238.7* (0.0653)		
<i>House Lost P</i>					-315.6* (0.0634)		
<i>Appropriations Won P</i>						544.5 (0.228)	
<i>Appropriations Lost P</i>						-1,915*** (0.0075)	
<i>Indirect Won P</i>							18.18 (0.156)
<i>Indirect Lost P</i>							-17.96 (0.187)
Observations	3,252	3,252	3,252	3,252	3,252	3,252	2,462
R-squared	0.042	0.043	0.051	0.043	0.043	0.043	0.050

Table 14
Lobbying and Employment of Former Government Staffers

Panel A of the following table presents summary statistics for lobbying and employment of former staffer data. *Employ* is a binary variable which takes the value of 1 if a firm employs a former government employee in the current time period and 0 otherwise. *Lobby* is a binary variable which takes the value of 1 if a firm spent money lobbying the federal government in the current time period and 0 otherwise. *Number of Employees* is the number of former government employees a firm employs in the current time period. *LobbyExpense* is the amount of money that a firm spent in the current time period lobbying the federal government. The summary statistics for *Number of Employees* and *LobbyExpense* are for non-zero values. Panel B presents regression estimates the total amount of campaign contributions firm PACs gave to members of a congressional committee on the amount the firm spent lobbying about a policy area under the jurisdiction of the committee. Specification (1) is run on the full sample of observations. Specification (2) is run on the subsample of positive observations. All regressions include year fixed effects. P-values with robust standard errors are reported in parentheses. Panel C presents regression estimates of *Employ* on various measures of firm lobbying. All regressions include year fixed effects. P-values with robust standard errors are reported in parentheses.

Panel A - Lobbying and Employment of Former Staffer Summary Statistics			
	Mean	St. Dev.	N
<i>Employ</i>	0.328	0.470	1,928
<i>Lobby</i>	0.666	0.472	1,928
<i>Number of Employees</i>	2.34	2.29	633
<i>LobbyExpense</i> (Mil)	3.69	6.13	1,284

Panel B - Lobbying Policy and Congressional Committee Contributions		
	(1)	(2)
<i>Congressional Contribution</i>	14.37*** (0.000)	16.69*** (0.000)
Observations	56,222	12,780
R-squared	0.118	0.1432

Panel C - Likelihood of Lobbying and Employing Former Staffers			
Dep. Variable	(1)	(2)	(3)
	<i>Lobby</i>	$\text{Log}(1 + \text{Lob. Amount})$	$\text{Lob. Amount} / \text{Assets}$
<i>Employ</i>	-0.0836*** (0.000)	-1.202*** (0.000)	-0.0006*** (0.000)
Observations	1,928	1,928	1,928
R-squared	0.0069	0.007	0.0114

Table 15
Lobbying and Employment of Former Government Staffers

The following table presents regression estimates of direct and indirect connections interacted with binary variables to indicate lobbying activity or employment of a former government employee on Cumulative Abnormal Returns for firms which donated to candidates in close general Congressional elections from 1998-2010 in the sample from the 10 industries which have the largest percentage of donations to all elections. All regressions include industry and year fixed effects. P-values clustered at the firm level are reported in parentheses.

	(1)	(2)	(3)	(4)
<i>Total P</i>	0.0021** (0.044)	0.0007 (0.217)		
<i>Total P × Lobby</i>	-0.0005 (0.630)			
<i>Total P × Employ</i>		0.0017** (0.040)		
<i>Indirect Total P</i>			-0.00004 (0.692)	-0.00004 (0.750)
<i>Indirect Total P × Lobby</i>			0.00028** (0.026)	
<i>Indirect Total P × Employ</i>				0.00014 (0.299)
Obs.	1,711	1,711	1,317	1,317
R-squared	0.0465	0.0494	0.0408	0.0355