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DO CEOS AFFECT EMPLOYEES' POLITICAL CHOICES?*

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ABSTRACT

We analyze whether CEOs influence their employees' political choices whether this influence has implications for firm value. We find that employees donate three times more money to CEO-supported political candidates than to other candidates. This relation also holds around CEO departures, including plausibly exogenous departures due to retirement or death. Equity returns are significantly higher when CEO-supported candidates win elections than when employee-supported candidates win. Further, CEO influence is strongest in firms with the largest potential benefits from political participation and firms that explicitly advocate for political candidates. Our results suggest that CEOs are a political force that benefits shareholders.

JEL classification codes: D72, P48, G30

Keywords: campaign contributions, elections, voting, CEOs, political activism, PACs, political candidates, voter turnout

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A large literature examines interactions between firms and politicians and argues that participation in the political process is valuable to firms. Firms can invest in political capital by establishing direct connections with legislators, for example through employment of current or former politicians (Faccio (2006), Goldman, Rocholl, and So (2009), and Duchin and Sosyura (2012)), by spending money on lobbying (Bertrand, Bombardini, and Trebbi (2014) and Borisov, Goldman, and Gupta (2016)), and by financing candidates' political campaigns through corporate political action committees, known as PACs (Stratmann (1992), Cooper, Gulen, and Ovtchinnikov (2010), and Akey (2015)). These activities may create value for firms' shareholders because of subsidies, preferential allocation of government contracts, less strict regulation, and lighter taxation.[1]

Yet another channel through which firms can influence politics is campaign contributions made by their employees. In fact, political contributions made by individuals far exceed those made by corporate PACs. For example, Ansolabehere, de Figueiredo, and Snyder (2003) show that during the 1999–2000 election cycle candidates in congressional elections raised over three times more money directly from individuals than they did from PACs. This implies that labor force, at least in principle, may be a large source of firms' political influence. Further, anecdotal and survey evidence suggests that CEOs attempt to influence which candidates their employees support. Based on a survey of 513 U.S. executives, Hertel-Fernandez (2016) reports that 46% of executive say their company attempts to involve employees in politics. Companies such as Pfizer and Koch Industries, for example, send educational materials to employees about their firms'

[1] The positive effect of political activism on firm value is documented in Fisman (2001), Johnson and Mitton (2003), Faccio (2006), Faccio, Masulis, and McConnell (2006), Claessens, Feijen, and Laeven (2008), Ferguson and Voth (2008), Goldman, Rocholl, and So (2009), Cooper, Gulen, and Ovtchinnikov (2010), Chaney, Faccio, and Parsley (2011), Duchin and Sosyura (2012), Amore and Bennedsen (2013), Correia (2014), Tahoun (2014), Akey (2015), Borisov, Goldman, and Gupta (2016), Brogaard, Denes, and Duchin (2016), Stratmann, and Verret (2015), Huang and Brown (2016), and Acemoglu, Johnson, Kermani, Kwak, and Mitton (2016). In contrast, Aggarwal, Meschke, and Wang (2012) find evidence that corporate donations to political candidates are negatively correlated with returns and contend that donations are symptomatic of agency problems. Coates (2012) argues that corporate political contributions are motivated at least in part by the personal ambitions of firms' CEOs.

preferred political choices and nudge employees to participate in political meetings, write letters and emails to politicians, donate, campaign, and vote in particular ways.[2]

In this paper, we study whether firms can systematically influence their employees' political choices and whether this influence has implications for firm value. Our primary focus is on campaign contributions, which, unlike individual votes, have the advantage of being publicly observable. Using a large sample of S&P 1,500 firms between 1999 and 2014, we find that employee donations to political candidates seeking federal office strongly respond to how their firms' CEOs donate. For example, Figure 1 shows that employees of firms whose CEOs contributed to only one of the two presidential candidates in the 2012 election (Barack Obama or Mitt Romney) contributed substantially more to the candidate supported by their CEO than to his opponent. After we control for common determinants of political contributions and account for firm, candidate, and election cycle fixed effects, we estimate that in federal elections employees direct approximately three times more of their campaign contributions to political candidates supported by their firm's CEO than to other candidates.

We perform a wide range tests to establish the extent to which CEOs have a causal effect on the political preferences of their employees. In particular, the impact of CEOs is robust to the inclusion of employee fixed effects. Hence, the relation between CEO and employee contributions cannot be explained by time-invariant characteristics of employees. Further, the relation between CEO and employee contributions holds around CEO turnovers, including turnovers caused by death or natural retirement. Thus changes in CEOs' political orientation that are plausibly exogenous to the firms' political environment lead to changes in employees' behavior. We also

[2] See "Nine CEOs pushing workers to vote for Romney," *The Huffington Post*, October 28, 2012; "CEO to workers: you'll likely be fired if Obama is reelected," *CNBC*, October 10, 2012; and "The new U.S. office politics: funding your boss's political causes," *Reuters*, May 11, 2015.

show that CEO influence is strongest in firms in which CEOs explicitly advocate for their preferred political candidates. This is further evidence that our results cannot be fully explained by common factors in CEO and employee contributions or reverse causality.[3]

Overall, our evidence indicates that CEOs are a political force, which has potentially important implications for firm value and employee welfare. To study if CEOs are motivated by their firms' interests, we analyze cumulative abnormal equity returns (CARs) around federal elections. First, we find that firms experience significantly higher equity returns if CEO-supported candidates win elections than if CEO-supported candidates lose elections — it therefore appears that CEOs support candidates that are expected to benefit their firm. Second, and perhaps more important for our analysis, equity returns are higher around elections won by CEO-supported candidates than around elections won by candidates supported by the employees but not by the CEO. These results (which also hold around close elections) indicate that CEOs, on average, donate to political candidates who are more beneficial to the firm than the candidates that employees would support on their own. Thus, the ability of CEOs to direct political contributions of their employees toward CEO-supported candidates may indeed generate firm value benefits. In another set of tests, we find that CEO influence on employees is strongest in firms with the largest potential benefits from political participation, further suggesting that CEOs exert their political influence to act in the interest of shareholders.

[3] Further, we explicitly show that political ideology, popularity of certain political candidates, firm-wide political orientation, and common geographic factors cannot explain away the relation between CEO and employee contributions. We also perform a formal test proposed by Altonji, Elder, and Taber (2005) and Oster (2017) to assess the degree to which the omitted variable bias or selection on unobservables can explain the observed positive relation between employee and CEO contributions. We find that the share of variation explained by unobservable variables needs to be one and a half to five times as large as the share of variation explained by observable variables in order to reduce the coefficient of interest to zero, which seems unlikely given that our regressions include many common determinants of campaign contributions as well as a large number of fixed effects.

Note, however, that the economic and political interests of the firm's shareholders are not necessarily aligned with those of the firm's employees. Thus, even if CEOs advise employees on political options most beneficial to the firm, following this advice may not always be welfare-improving for employees. If employees are able to process information efficiently, they should themselves be able to make political choices that take into account both their personal interests and the interests of the firm. If, however, employees are not efficient at processing politically relevant information, then, following the CEO's advice, they may choose political candidates that are beneficial to the firm at the expense of their own interests.

To investigate further, we study the patterns of political donations within households by identifying all instances in our sample in which people with the same last name living at the same address donate to competing political candidates (i.e., candidates running for the same office in the same election). Since only one candidate may win an election for a given office, donating to two (or more) competing candidates implies that the money spent on campaign contributions to at least one of those candidates represents a net monetary loss for the household. Of course, a household may donate to competing political candidates for reasons unrelated to CEO influence; for instance, it may be that political views of one spouse are not aligned with political views of the other spouse. Strikingly, however, we find that, for the same set of households, the likelihood of donating to competing political candidates almost doubles when their CEOs also donate to conflicting political candidates. This evidence indicates that CEO influence may lead to greater political disagreement within households. To the extent that this disagreement results in a net monetary loss for a household, CEO influence may be welfare-decreasing for employees.

This paper's main contribution is to shed new light on firms' participation in the political process and on the extent to which this participation is driven by firm value considerations. Our

findings indicate that the firm as a whole is a political actor and that firms' participation in the political process is not limited to corporate PACs, lobbying, or direct connections with politicians. Further, our evidence that employees' political choices are at least partially shaped by their CEOs implies that CEOs' influence extends beyond firm financial and operational decisions. To the best of our knowledge, the only other work that studies the role of managers in engaging their employees in politics is Hertel-Fernandez (2016, 2017), who conducts surveys of firms and workers and shows that employees who report political requests from their employer also report increased participation in politics around the 2014 election. Our paper differs from this line of work in several important respects. First, we use non-survey data and study a different outcome, as most of our analysis applies to campaign contributions. Further, we investigate firm value implications of CEOs' political influence as well as potential mechanisms behind this influence. Finally, we use a large sample of firms and employees over a relatively long time period, which increases the power of our tests and the generalizability of our findings.

The remainder of the paper is organized as follows. Section I describes data sources as well as the institutional framework of campaign contributions in the United States. Section II presents the results on the impact of CEOs on employee campaign contributions, including the analysis of CEO departures. Section III investigates the firm value implications of CEO influence and the extent to which this influence is consistent with the interests of employees. Section IV concludes.

I. Institutional Background and Data

A. Campaign Contributions in the United States: A Brief Overview

U.S. federal law explicitly prohibits corporations from using their treasury funds to make direct contributions to candidates in federal elections. In order to make campaign contributions, a corporation must establish a political action committee (PAC), which may solicit contributions from the corporation's employees but must not accept contributions from individuals unaffiliated with the firm. Corporations are not allowed to contribute directly to PACs (including their own), but may pay for their own PAC's start-up, administrative, and fundraising expenses.

Whereas direct campaign contributions from corporations to candidates are prohibited, the law explicitly allows "communications by a corporation to its stockholders and executive or administrative personnel and their families or by a labor organization to its members and their families on any subject," including election-related matters.[4] The ability of corporations to advocate for or against political candidates was greatly expanded after the 2010 Supreme Court decision in *Citizens United v. FEC*. This decision allowed corporations to spend unlimited funds, including funds from their treasuries, on independent political expenditures. Such expenditures can be used to expressly advocate for the election or defeat of a candidate as long as they are not coordinated with any candidate. While the *Citizens United* decision allowed election-related communications by corporations to both employees and non-employees, the corporations' ability to communicate with employees precedes this decision.[5]

Unlike corporations, individuals are allowed to make campaign contributions directly to political candidates. However, federal law restricts the amount that an individual can contribute to a candidate seeking election to federal office (House, Senate, or the presidency). In the 2014 election cycle, the limit on individual contributions was $2,600 to each candidate per election. Candidates, in turn, are required to itemize all individual contributions in excess of $200 and report

[4] 52 U.S.C. §30118 (b) (2) (A).
[5] Our results hold both before and after 2010.

the amount and date of the contribution, as well as the contributing individual's name, employer, occupation, and address. Contributions totaling less than $200 do not have to be itemized; therefore the identities of most individuals who contribute less than $200 are impossible to track.[6] Such contributions, however, represent a relatively small share of political giving: for example, in 2010 only 21% of contributions made by individuals were unitemized.[7] The FEC makes contributions data publicly available on its website (the individual contributions files are updated weekly on Sunday).[8] The data on individual campaign contributions form the basis for our subsequent analysis. The FEC dataset is organized by election cycle (e.g., all contributions made in 1999–2000 are recorded in the file corresponding to election cycle 2000) and contains over 18 million individual contributions made during our sample period.

B. Data on CEO and Employee Political Contributions

To obtain the identities of CEOs, we use the BoardEx database. We, however, do not rely on this dataset to identify firm employees; instead, we obtain *all* political contributions made by employees of firms in our sample from the FEC, regardless of whether these employees are covered by BoardEx.[9] We identify all years in which BoardEx provides the name of the CEO of

[6] Candidates may choose to voluntarily itemize contributions below $200; however, such cases are rare (in our sample we have only seven contributions below $200).
[7] Center for Responsible Politics.
[8] The FEC assigns a unique identification number to each candidate running for federal office, and this identification number remains unchanged as long as the candidate runs for the same office. A different identification number is assigned when the candidate runs for a different federal office. Thus the FEC data allow us to reliably track the same political candidate across election cycles.
[9] By construction, our sample includes all employees whose political contributions are recorded by the Federal Election Commission (FEC), regardless of their role in the firm. Thus our results should be interpreted as applying to an average employee who makes political contributions (since our sample is necessarily limited to politically active employees).

an S&P 1,500 firm (31,454 firm-years, 2,508 firms) and then merge all such firms with the FEC individual contributions data.[10]

The FEC data do not share a common firm identifier with BoardEx. As noted previously, however, the FEC reports the amount of each individual contribution as well as the contributing individual's name, employer, and occupation.[11] We use the name of the employer reported in the FEC data to match firms in BoardEx with firms in the FEC data through a "fuzzy merge" using a bigram string comparator score of the firm name as reported in each data set.[12]

To measure CEOs' and employees' political preferences, we obtain their individual campaign contributions. First, we match the names of CEOs of BoardEx firms with the names of individuals in the FEC data. We then attribute contributions to the firm's CEO if the employer name in the FEC dataset matches a firm name in BoardEx and the name of the person in the FEC dataset matches the name of the firm's CEO. We attribute contributions to the firm's employees if the employer name in the FEC dataset matches a firm name in BoardEx and the name of the person in the FEC dataset does not match the name of the firm's CEO. Thus we retain all employees of a BoardEx firm who made political contributions recorded by the FEC, regardless of employees' coverage by BoardEx. Contributions in our sample come from various types of employees that include both top and middle management but also span non-managerial occupations. Apart from the CEO, the top 10 self-reported occupations in our sample are, in descending order: Executive (5.80% of observations), Attorney/Lawyer (3.86%), Engineer (3.58%), Vice President (3.10%), Banker (2.54%), Manager (1.90%), President (1.88%), Software Engineer (1.61%), Financial

[10] Full details of sample construction provided in Appendix A.1 and A.2.
[11] Some contributors (13.7% of all individual contributions over our sample period) do not report the name of their employer, either because they are unemployed or for some other reason. We show in Appendix A.3 that even if all these contributors are actually employed and omit the name of employer for strategic reasons, the presence of such contributions is unlikely to affect our results to a significant degree.
[12] A bigram string comparator computes the fraction of consecutive character matches between two strings. The details of this merge are provided in the appendix.

Advisor (1.55%), and Sales/Marketing (1.48%). This list indicates that the top and middle managers have a greater propensity to make political contributions than rank and file employees, which is not surprising given that managers are likely to be wealthier.[13]

Special attention needs to be paid to political candidates to which neither the CEO nor the employees contribute in a given election cycle. A CEO's decision not to contribute to a candidate may in itself be informative about his/her political preferences, and employees may follow the CEO's lead by also not contributing to this candidate. However, there may also be some cases when the absence of contributions indicates that the candidate was not considered viable. We follow a conservative approach and drop all candidate-firm combinations for which there is no election cycle when either the firm's CEO or employees contributed to the candidate.[14] We do retain cases when a firm's CEO or employees switch their contributions between different candidates running for the same office in different election cycles. As an illustration, consider the case when candidate A and candidate B compete for the same office in election cycle 1 and election cycle 2. If the firm's CEO or employees contribute to candidate A in election cycle 1 but then switch to contributing to candidate B in election cycle 2, we retain both candidate A and candidate B in both election cycles.

We merge our sample of BoardEx firms and political contributions with Compustat and drop all firms with headquarters outside the United States, which leaves us with 23,765 firm-year observations for 2,287 unique firms. In the final step, we drop observations with missing data on control variables required for our baseline specification, and winsorize all continuous variables at 1%. We aggregate data at the election cycle level by retaining the value of firm control variables

[13] In unreported results, we have split our sample into managerial and non-managerial employees based on their occupation and verified that the impact of CEOs applies to both of types of employees.
[14] We obtain *stronger* results if we retain all candidate-firm combinations in the sample.

in the first year of the election cycle. Our final sample contains 232,448 firm-candidate-cycle observations (12,467 firm-cycles) for 2,181 unique firms and 4,606 unique candidates over eight election cycles from 1999 to 2014.

II. CEO Support and Employee Contributions to Political Candidates

A. Summary Statistics on CEO and Employee Contributions

In our sample, the total amount contributed by CEOs and employees to all political candidates is approximately $317 million, out of which $286 million (or 90%) are contributed by employees. Notably, there is a partisan divide in employee and CEO contributions: while 59% of CEOs' political contributions are directed to Republican candidates, employees' contributions are almost evenly split between Republicans and Democrats (see Figure 2).

In a given election cycle, CEOs contribute, on average, $1,758 to slightly more than one political candidate. The total amount that all the firm's employees (excluding the CEO) contribute in a given election cycle is $14,619, on average, and is allocated across approximately nine candidates (Panel A of Table I). Because there are more employees than CEOs, contributions by employees are on average more frequent than contributions by CEOs: the former donate 83.8% of the time in our sample while the latter donate 38.6% of the time (this number is similar to the 44.3% of S&P 500 CEOs making contributions to candidates reported in Fremeth, Richter, and Schaufele (2013)).

On a per candidate basis, the average CEO contribution is $1,544 and the contribution from all employees is $1,885 (Panel B). Because our sample includes all candidates to which either the CEO or the employees contribute, we also calculate the average CEO and employee contribution

across all such candidates, which amount to $94 and $784, respectively.[15] These variables are right skewed, which is typical for political contributions (see, e.g., Duchin and Sosyura (2012), Ovtchinnikov and Pantaleoni (2012), and Lee, Lee, and Nagarajan (2014)).

Panel C of Table I presents summary statistics for firm-level control variables. The firms in our sample are large (average value of assets is $10.8 billion) and profitable (average ROA of 4.1%), and they have CEOs who are politically connected (with an average of 25 political connections). To identify political connections, we count the number of individuals with a political background in the BoardEx database who share a common connection with the CEO. Common connections between two individuals in BoardEx include past or current working relationships, memberships in the same clubs and associations, or overlapping periods of study at the same educational institutions. We classify individuals as having a political background if they have current or past work experience in a government organization or have ever held elected office.

B. Baseline Results

Graphical evidence presented in Figure 1 suggests a positive correlation between CEO and employee political contributions. To examine this association further, we estimate the following panel regression (our baseline) that relates employee political contributions to those of a firm's CEO:

$$C_{ijt}^{employees} = \alpha_i + \delta_j + \gamma_t + \beta D_{ijt}^{CEO} + \eta' X_{ijt} + \varepsilon_{ijt}, \quad (1)$$

where i indexes firms, j indexes candidates, t indexes election cycles, $C_{ijt}^{employees}$ refers to the total amount of campaign contributions by the employees of firm i made to candidate j in election

[15] In total, we have 4,970 unique political candidates in our sample, of which 4,090 are candidates for the House, 806 are candidates for the Senate, and 74 are candidates for the President.

cycle t, D_{ijt}^{CEO} is an indicator variable equal to one if the CEO of firm i makes at least one campaign contribution to candidate j in election cycle t, and X_{ijt} are control variables.[16] Thus our baseline model absorbs all observed and unobserved time-invariant heterogeneity across firms, candidates, and time. Because observations may be correlated across the same firm or across the same candidate in different election cycles, we double-cluster standard errors by firm and candidate in all our specifications (Petersen (2009) and Thompson (2011)).

Table II presents the estimation results. In model 1, which we refer to as the baseline, we regress total employee contributions on the CEO contributions indicator, firm-level controls, as well as firm, candidate, and election cycle fixed effects. The inclusion of firm fixed effects accounts for any time-invariant factors common to a firm, such as the industry the firm operates in, the general level of political participation within the firm, or labor force demographics. Candidate fixed effects ensure that our results are not merely an artifact of higher quality candidates drawing greater support from both CEOs and employees. Finally, election cycle fixed effects absorb variation due to secular trends in general economic and political conditions.

We find that CEO support of political candidates positively affects employee contributions to the same candidates, and the effect appears to be economically large relative to the average contribution made by employees. Based on model 1 (the baseline), a candidate supported by the CEO receives $1,468 more in campaign contributions from the firm's employees than a candidate not supported by the CEO. This amount is almost double the unconditional mean of employee contributions ($784), which implies that CEO-supported candidates raise approximately three times more funds from the firm's employees than candidates not supported by the CEO.

[16] Since our baseline specification includes a large number of fixed effects, we estimate it using OLS to avoid the well-known bias in nonlinear models with fixed effects (Greene (2004)). However, our results are robust to using the Tobit estimation (these results are reported in Appendix A.4). The appendix also shows that our results are robust to replacing the indicator of CEO support with the actual amount contributed by the CEO.

Is $1,468 in additional contributions sufficient to affect political outcomes in the firm's favor? Prior literature on political contributions shows that even relatively moderate amounts of campaign contributions have large positive effects on firm value (Cooper, Gulen, and Ovtchinnikov (2010) and Akey (2015)). More relevant for this study, however, is not whether employee contributions can influence political outcomes but whether CEO influence leads to substantial changes in the behavior of individual employees, and an increase of $1,468 does appear to be considerable for employees who on average donate $784. Another potential benchmark to which CEO influence can be compared is the impact of paid political mobilizers on voter turnout. For example, Gerber and Green (2000) analyze the effectiveness of different mobilization strategies in a field experiment and conclude that personal contact has the largest effect on prospective voters; personal contact increased voter turnout by 8.7% in the experiment. Compared to this benchmark, the magnitude of CEO influence we document is substantial (we are unaware of any study that investigates the impact of personal contact on political contributions). Finally, changes in employee contributions may be symptomatic of broader changes in their political participation.[17]

That employees and CEOs tend to contribute to political candidates in a coordinated manner indicates, at a minimum, that the firm as a whole should be viewed as a political actor. However, this prima facie evidence does not necessarily imply that CEOs have an independent effect on employees' campaign contributions. In particular, coordination among CEOs and employees may arise either because their political interests are aligned or because CEOs actively

[17] In addition to making campaign contributions and voting, employees may participate in the political process by volunteering their time to political campaigns, attending rallies and political meetings, or writing letters and emails to politicians. For example, in April 2015 Pfizer's employees sent more than 8,000 emails to politicians about healthcare and patent legislation favorable to Pfizer. "The new U.S. office politics: funding your boss's political causes," *Reuters*, May 11, 2015.

influence employees' political choices. To investigate, we perform a range of tests to establish a link between the political preferences of CEOs and the political behavior of their employees.

We start by saturating our baseline model with fixed effects that flexibly account for firm, candidate, and election-level factors that may jointly determine the political preferences of CEOs and their employees. First, in column 2 of Table II, we add firm-cycle fixed effects to absorb any firm-wide changes in political orientation over time. Time-series variation in firms' political orientation may arise, for example, as a result of firms becoming more (or less) politically active during some election cycles. The estimated effect of CEOs on their employees remains largely intact after the inclusion of firm-cycle fixed effects, which suggests that firm-wide changes in political orientation cannot explain the relation between CEO and employee contributions.[18]

Next, we account for political candidates' strength. In our baseline specification we have partially accounted for variation in quality across political candidates with the inclusion of candidate fixed effects. These fixed effects, however, do not absorb variation in candidate strength over time. We therefore include candidate-cycle fixed effects in column 3 of Table II to flexibly account for time-varying candidate quality. Our results remain unchanged, making it unlikely that unobserved candidate strength can explain the relation between CEO and employee contributions.

An even more stringent specification, which we report in column 4 of Table II, includes electoral race fixed effects and thus compares employee and CEO contributions across candidates that run in the same electoral race (e.g., candidates that run for the Senate seat in Alabama in 2014). By comparing candidates that run in the same race, this specification absorbs any variation attributed to the importance a particular race may have for the firm. It may be, for example, that some elections are more consequential for the firm than others, and, realizing this, both employees

[18] Note that the addition of firm-cycle fixed effects does not allow us to include firm-level control variables in the same specification.

and CEOs contribute to candidates from those elections. However, because our results continue to hold after the inclusion of electoral race fixed effects, this explanation seems unlikely.

In column 5 of Table II, we estimate a regression on the sample of contributions made by individual employees (rather than aggregating contributions by firm), which enables us to include employee fixed effects. The results show that the impact of CEOs on employee contributions remains significant, both statistically and economically. While the mean employee contribution, when averaged across all candidates, is $11, this contribution goes up by $57 if a candidate is supported by the CEO. Thus for politically active employees (i.e., those contributing more than once to political candidates during our sample period),[19] the effect of CEO's political preferences translates into an approximately sixfold increase in employee political donations. Further, the inclusion of employee fixed effects implies that the relation between CEO and employee contributions cannot be explained by time-invariant political preferences of employees.

Two additional sets of tests also suggest that CEOs have an independent effect on the political preferences of their employees. First, we find that CEOs who directly communicate with their employees on political matters appear to be more successful at influencing employee contributions. Second, we find that shifts in CEOs' political preferences due to CEO turnover lead to changes in employees' contributions. We discuss these results in turn.

C. Changes in Employee Contributions in Response to CEOs' Political Advocacy

In this section, we explore the impact of CEOs' political advocacy on employee contributions. If employees would donate to the same set of political candidates regardless of CEO influence, there should be little reason to expect that CEOs who explicitly advocate for political candidates have a

[19] An employee who makes a single contribution would be entirely subsumed by the associated fixed effect.

stronger effect on their employees (in fact, one might expect the opposite if CEOs whose political views are not perfectly aligned with those of their employees are more likely to attempt to change employees' preferences). Thus, the pattern of employee contributions in response to CEO advocacy may help to assess the extent to which CEOs have an independent effect on employees.

Much of the communication between CEOs and company employees is unobservable to a researcher because it takes place through internal communication channels, such as email, intranet, posters, banners, company newsletters, network messages, and team meetings. However, in some cases the incidence of such communications has to be reported to the FEC. When a firm spends more than $2,000 per election on express advocacy for the election or defeat of a political candidate for federal office, the firm is required, under U.S. federal law, to report the amount of incurred communication costs to the FEC. We therefore rely on this piece of regulation and identify all cases in which firms in our sample report communication costs (approximately 1% of observations), which likely singles out those firms that are most active in promoting their political views to employees.[20]

To see whether employee contributions respond more strongly to CEO influence when the firm directly communicates its electoral preferences to employees, in column 6 of Table II we show the results of a regression of employee contributions to a political candidate on the CEO support indicator, the indicator variable for a firm having reported communication costs, and an interaction term between these two variables. The estimated coefficient on the interaction term indicates that employee campaign contributions respond more strongly to the CEO's contributions in firms that explicitly advocate for political candidates. In fact, contributions to CEO-supported

[20] Indeed, many firms that communicate with employees on election matters do not report such communication costs (presumably because they do not cross the reporting threshold). For example, Wynn Resorts did not report communication costs in 2012, even though the company did send election guidance to its employees in that year.

candidates increase approximately fivefold for firms that report communication costs. These results also help us to rule out a reverse causality explanation, i.e., that CEOs who observe the political preferences of their employees try to contribute to the political candidates that their employees would approve of. If CEOs were responding to employee preferences (and not the other way around), there would be little reason to expect a larger impact of CEO contributions in firms that explicitly advocate for certain political candidates.

D. Case Study of CEO Advocacy: Murray Energy

One firm that routinely communicates with employees on political matters is Murray Energy, whose CEO, Robert E. Murray, has been a major donor to the Republican Party. He has hosted fundraising events for Republican candidates and has repeatedly sent letters to his employees urging them to contribute to and vote for certain candidates.[21] Although Murray Energy is perhaps not a representative firm, it is a rare example that allows us to directly observe the timing and nature of communication between the CEO and employees.

For the 2012 election cycle, we are able to identify two instances when Robert E. Murray explicitly expressed his political preferences to employees. On September 29, 2011, he hosted a fundraiser for Texas governor Rick Perry. In a letter advertising the event, Murray wrote, *"This is likely the most vital election for America in our lifetimes, and we ask you to support Governor Rick Perry at this time."*[22] On May 3, 2012, Murray hosted another fundraiser, this time for Mitt Romney.[23]

[21] Federal Election Commission MUR Case #6661.
[22] "Perry raising with coal exec Murray," *Politico*, September 16, 2011.
[23] Sources: "McEntee: Mine victims invisible as Romney campaigns with Bob Murray," *The Salt Lake Tribune*, May 8, 2012; "Romney raises money in Wheeling visit," *The Herald-Star*, May 4, 2012.

In Figure 3 we plot weekly contributions made in the 2012 election cycle by Murray Energy employees to Rick Perry (solid orange bar), Mitt Romney (solid red bars), other candidates supported by Robert Murray (solid green bars), and candidates not supported by Robert Murray (gray bars with horizontal stripes). We also mark the dates of known CEO-sponsored events for Rick Perry and Mitt Romney by arrows. The figure shows that the contributions to CEO-supported candidates spike almost immediately after he explicitly advocates for those candidates. For example, no Murray Energy employee had contributed to Rick Perry before the CEO-sponsored fundraiser on September 29, 2011, immediately after which employees donated close to $100,000 to the candidate. In fact, 95.5% of all contributions raised by Rick Perry and Mitt Romney from Murray Energy employees were received within one week after the CEO explicitly advocated for these candidates.

One might argue, however, that spikes in employee contributions after CEO-sponsored events or announcements do not necessarily mean that employees are responding to CEO advocacy: it may be that employees would have contributed to the candidate anyway and simply waited for a convenient date to make their contributions. Two pieces of evidence help to rule out this explanation. First, the dates of CEO announcements and fundraising events are not known far in advance and depend crucially on the political climate: e.g., it could be that the employees' preferred candidate drops out of the race because of low support before a CEO-sponsored event can even take place. Thus employees who are politically active and care about the electoral prospects of their preferred candidates have little reason to wait until CEO announcements.[24] Second, Figure 3 shows no discernible pattern in employee contributions to candidates not supported by the CEO. The evidence in Figure 3 is therefore consistent with the idea that at least

[24] Indeed, waiting to contribute could prove consequential for Murray Energy's employees who supported Rick Perry in the 2012 presidential race, as Perry eventually had to drop out owing to a lack of electoral support.

in some cases CEOs do have a substantial impact on how (and when) their employees contribute to political candidates.[25]

E. Changes in Political Contributions Around CEO Turnover

We now turn to the dynamics of employee contributions around CEO turnovers. In general, CEO turnovers may be triggered by many factors, such as poor firm performance or disagreement between the CEO and the Board of Directors about the firm's strategic direction. However, it is unlikely that shifts in the political landscape are the primary reason for CEO turnover, especially if this turnover is caused by natural retirement or death.[26] Figure 4 provides initial evidence that CEO turnovers and their timing are plausibly exogenous to the political environment. This figure plots the distribution of turnovers across different quarters of the election cycle and shows that the timing of turnovers does not appear to be related to the timing of elections.[27] CEO turnovers are rather uniformly distributed throughout the election cycle, and there is no evidence that they are more likely to occur around elections, when changes in the political environment are likely to be most pronounced.

Important for our purposes, political preferences of an incoming CEO may differ from those of the outgoing one, even if the firm's political and economic environment does not change.

[25] This evidence, however, is silent on whether employees at Murray Energy were coerced to make campaign contributions or whether Robert E. Murray is simply an effective communicator. For example, a former Murray Energy employee filed a lawsuit in 2014 claiming that she was fired for not making campaign contributions to the CEO's preferred political candidates (see, e.g., "Former foreman sues Murray Energy over firing," *Charleston Gazette-Mail*, September 9, 2014). The FEC (MUR Case #6661), in a split 3–3 decision, decided not to pursue an investigation against Robert E. Murray.

[26] CEO turnovers may also be associated with simultaneous changes in the composition of the firm's workforce (e.g., downsizing, mergers, or opening of new plants), which can also alter its political orientation. We address this issue in some of our specifications by restricting the sample of employee contributions only to those employees who contribute under both the outgoing CEO and the incoming CEO.

[27] Note that there are eight quarters in a given election cycle, and since we denote the quarter of the election by 0, the horizontal axis in Figure 5 goes from –3 to +4.

First, there may be genuine disagreement between different CEOs about the set of political candidates most beneficial to the firm's success. Second, the set of such candidates may be CEO-specific because different CEOs may have different political connections or because they have different information about the candidates. In our sample, incoming CEOs do indeed appear to have different political preferences from the CEOs they replace: on average, out of all candidates to which an incoming CEO donates, only 16.1% overlap with the candidates to which the outgoing CEO donated.

We identify CEO turnovers from the BoardEx database using the start and end dates of CEO tenure. We exclude turnovers in which there is a gap between the date of departure of an outgoing CEO and the date of arrival of an incoming CEO, turnovers in which the incoming CEO is employed by a firm for one election cycle or less, turnovers where neither the outgoing CEO nor the incoming CEO contribute to any political candidates, as well as turnovers for which we have missing control variables. Our final sample of turnovers consists of 1,023 events; the details of sample construction as well as sensitivity tests are provided in Appendix A.2. To avoid any shifts in the composition of candidates, our regressions include only those candidates that run for office both before and after turnover.

Figure 5 displays the dynamics of employee contributions around CEO turnovers. We plot the average amounts of political donations in a given election cycle that employees make to the candidates supported by the outgoing CEOs (the dashed line) and to the candidates supported by the incoming CEOs (the solid line). Prior to the turnover, the candidates supported by the outgoing CEO receive consistently more political contributions from employees than the candidates supported by the incoming CEO, but this pattern reverses sharply after the turnover. Important, employee contributions to the candidates supported by the outgoing and the incoming CEO move

in parallel up to the election cycle of the turnover. This evidence indicates that CEO turnovers are unlikely to be caused by changes in employees' political views, and therefore the differences in political preferences between the incoming and outgoing CEOs are plausibly exogenous to the political preferences of employees.

More formally, Table III reports the results of panel regressions that investigate the effect of changes in CEOs political preferences around turnovers on employee contributions. These regressions include indicator variables for political candidates supported by the outgoing and incoming CEOs, an indicator variable for election cycles that follow a turnover, and their interactions. Model 1 is estimated on the full sample of turnovers and employees. It shows that prior to the turnover, the candidates supported by the outgoing CEO receive more campaign contributions from the firm's employees than the candidates supported by the incoming CEO ($911 versus $330). Following the turnover, however, employees increase their donations to the candidates supported by the incoming CEO by $1,322 ($1,322 = $1,333 – $11) and decrease their donations to candidates supported by the outgoing CEO by $413 (–$413 = –$402 – $11). In model 2, we restrict the sample of CEO turnovers to those turnovers that resulted from CEO death or natural retirement, which are therefore least likely to be related to politics. Specifically, we choose turnover events in which the departing CEO dies or is 65 years or older at the time of the turnover (we have 302 such events, of which 14 are caused by death) and find that our results remain qualitatively and quantitatively unchanged.

The effects observed in model 1 and model 2 may be due to both changes in how individual employees contribute as well as changes in the composition of contributing employees in response to CEO turnover. To investigate further, we re-estimate regressions from models 1 and 2 on a subsample of employees who contribute at least once both before and after the CEO turnover,

thereby focusing on changes in contributions that are not caused by compositional changes. These results, reported in models 3 and 4, show a similar pattern (i.e., around the date of CEO turnover employees shift their support from the candidates supported by the outgoing CEO to the candidates supported by the incoming CEO). The magnitudes, however, are reduced by about one-third in this subsample of employees, CEOs affect both the composition of contributing employees and the set of candidates to which the same employees contribute.

III. Firm Value Implications of CEOs' Political Influence

Our evidence so far indicates that CEOs influence employees' campaign contributions and therefore are a political force. The implications of CEO influence for employees and shareholders depend both on whether CEOs promote their own political agenda or act in the interests of their firms, and on whether the interests of the firm coincide with the interests of its employees.

A. CEO Influence and the Interests of Shareholders

To investigate the firm value implications of CEO influence on their employees' political choices, we analyze cumulative abnormal returns (CARs) around elections and report the results in Table IV. Panel A compares the CARs of firms whose CEOs donate to the winning candidates to the CARs of firms whose CEOs donate to the losing candidates. We find that, for each event window around elections, firms experience significantly higher equity returns when the CEO-supported candidate wins than when the CEO-supported candidate loses. The effect is also economically sizeable, between 0.5% (in the one-day event window) to 0.9% (by the seventh day after the election). These results indicate that CEOs strategically choose which candidates to support, i.e.,

they are more likely to donate to those candidates whose elections generate substantial firm value benefits.

However, the finding that CEOs, on average, donate in a manner consistent with firm value maximization does not necessarily imply that CEOs' impact on their employees' behavior benefits shareholders: it may be, for example, that employees also donate to candidates beneficial to the firm, even when they are not influenced by the CEO. To investigate, in Panel B we compare the CARs around elections in which CEO-supported (but not employee-supported) candidates win to CARs around elections in which employee-supported (but not CEO-supported) candidates win. We find consistent evidence that CEO-supported candidates generate higher firm value benefits than candidates supported by employees only.

To the extent that electoral outcomes are predictable, these results should be biased against finding significant differences across elections (since expected electoral outcomes should be incorporated into stock prices ex ante). It may also be that CEOs are more likely than employees to donate to candidates in electoral races in which their contribution can make the largest difference (i.e., to candidates in close electoral races). To investigate, in Panel C we perform the same comparison as in Panel B, but restrict the sample to elections with a margin of victory of 5% or lower. We continue to find that CEO-supported candidates generate higher firm value benefits than candidates supported by employees only also in this subsample of close elections.

We conduct several additional tests to analyze firm value benefits of CEOs' political influence. To the extent that CEOs are motivated by their firms' interests, their influence on employees' political choices should be strongest in firms with the largest potential benefits from political participation, and we find evidence consistent with this view. Prior literature documents that firms can engage in political activism through lobbying or contributions made by their

corporate PACs and shows that political engagement may be beneficial to shareholders (Cooper, Gulen, and Ovtchinnikov (2010), Claessens, Feijen, and Laeven (2008), Brogaard, Denes, and Duchin (2016), Akey (2015), and Borisov, Goldman, and Gupta (2016)). Further, as argued by Akey and Lewellen (2017), investment in political capital has a higher expected return for firms exposed to significant policy risk, perhaps because such firms operate in industries subject to greater regulation. We therefore investigate whether such firms are also more successful in influencing their employees to contribute to certain political candidates.

We identify politically active and regulated firms in three different ways. First, we create an indicator variable equal to one for firms that have corporate PACs. Second, we define another indicator variable equal to one for firms that operate in industries with heavy lobbying expenditures. To identify such industries, we select all industries that are, in a given election cycle, on the Center for Responsible Politics list of top 20 industries with the highest total lobbying expenses. Finally, we create an indicator variable for firms that operate in heavily regulated industries. We define an industry as heavily regulated if, in a given election cycle, it is among the top 20 industries ranked by the sum of all federal regulations. The data on federal regulations are provided by the Mercatus Center at George Mason University (Al-Ubaydli and McLaughlin (2017)). Columns 1 to 3 of Table V report the results. Consistent with the idea that CEO influence benefits shareholders, we observe a higher sensitivity of employee contributions to CEO contributions in firms that have corporate PACs and that belong to most lobbying-intensive or heavily regulated industries.

Firm-specific benefits from political participation may also be high if the firm and its employees donate to politicians with direct jurisdiction over the firm, because such politicians are in a position to promulgate regulations that may have a significant impact on a firm's performance

and the economic livelihood of its employees. For each firm in our sample, we identify House members and Senators who sit on committees with jurisdiction over a firm's industry by using data on committee assignments from Charles Stewart's Congressional Data Page and the correspondence between committees and their industry jurisdiction identified in Ovtchinnikov and Pantaleoni (2012).[28] We then create an indicator variable equal to one if a given candidate has jurisdiction over the firm's industry and interact this variable with CEO support. The results in column 4 of Table V indicate that the sensitivity of employee contributions is indeed stronger for politicians that have jurisdiction over the firm.

Finally, we investigate whether politically connected CEOs are more effective at influencing their employees. In column 5, we add to our baseline specification the total number of a CEO's political connections as well as an interaction term between CEO support of a given candidate and the total number of the CEO's political connections. Politically connected CEOs indeed appear to exert greater influence on campaign contributions of their employees.[29]

B. CEO Influence and the Interests of Employees

Our results thus far suggest that CEOs' political influence, on average, is beneficial for firm shareholders. However, these results do not necessarily imply that CEO influence is consistent with the interests of individual employees. For example, Wal-Mart is known for opposing a

[28] Charles Stewart has generously provided committee assignment data on his website at http://web.mit.edu/17.251/www/data_page.html. The data for House committee assignments are available for all election cycles in our sample (Stewart and Woon (2016)). The data for Senate committee assignments are available through the 112th Congress (Stewart and Woon (2011)). We manually collected Senate committee assignments for the 113th Congress (the last election cycle in our sample).

[29] Firm-specific benefits of CEO influence may also depend on economic conditions, and prior literature suggests that firms in general have a greater incentive and propensity to engage in political activism at times of financial distress and poor business conditions (Acemoglu, Johnson, Kermani, Kwak, and Mitton (2016), Ovtchinnikov and Pantaleoni (2012), and Duchin and Sosyura (2012)). Consistent with this idea, we find (in unreported results) that CEOs have a stronger impact on employee contributions when the economy is in recession.

minimum wage increase, even though a substantial share of its employees might benefit from such an increase (at least in the short run).

To investigate the implications of CEO influence for employee welfare, we examine political contributions within households. To fix ideas, consider an election with two competing candidates (X and Y) and a two-member household (Bob and Mary). Bob works for Firm A which would benefit from the election of Candidate X but not from the election of Candidate Y, while Mary works for Firm B which would benefit from the election of Candidate Y but not from the election of Candidate X. The prior probabilities of Candidate X and Candidate Y winning the election are p and $1-p$, respectively

Assume that if Candidate X is elected, then Firm A would receive benefits (such as more lenient regulation or access to government contracts) and that it would pass some of these benefits onto Bob (in the form of a higher salary, higher job security, better promotion prospects, etc.). Assume first that there is no disagreement between Bob and Mary about the expected monetary value of benefits accruing to Bob and denote this monetary value by B. Similarly, Mary expects to gain amount M from Firm B if Candidate Y is elected, and there is no disagreement between Bob and Mary about the value of M. Bob and Mary can affect election outcomes by making campaign contributions to political candidates. They can each contribute C dollars or not contribute at all. If neither Bob nor Mary contribute to any candidates, then Bob and Mary's beliefs are that the candidates' probabilities of winning are not affected; the same happens if Bob and Mary both contribute, but to conflicting candidates (i.e., one of them contributes to Candidate X whereas the other one contributes to Candidate Y). If only one member of the household contributes to a candidate, then that candidate's likelihood of winning (according to Bob and Mary's beliefs) increases by δ and the other candidate's likelihood of winning decreases by δ.

Finally, if Bob and Mary both contribute to the same candidate, then that candidate's likelihood of winning increases by 2δ and the other candidate's likelihood of winning decreases by 2δ.

Define the total expected payoff for the household as the sum of expected payoffs to Bob and Mary minus the sum of their political contributions. Then, it is easy to see that the household's expected payoff from contributing to conflicting candidates, $pB + (1-p)M - 2C$, is strictly lower than the expected payoff from not contributing at all, $pB + (1-p)M$. Thus, it is suboptimal for the household to contribute to both of the conflicting political candidates. In fact, it can be shown that if $B > M + C/\delta$, then both Bob and Mary find it optimal to contribute to Candidate X, if $B < M - C/\delta$, then both Bob and Mary contribute to candidate Y, and in the intermediate region, when $M + C/\delta \leq B \leq M + C/\delta$, Bob and Mary choose to make no contributions to political candidates.[30] Graphically, this is shown in Panel A of Figure 6. The horizontal axis represents the value of B (benefits accruing to Bob if Candidate X is elected). Two points, $B = M - C/\delta$ and $B = M + C/\delta$, divide this axis into three regions: both Bob and Mary contribute to Candidate Y to the left of $B = M - C/\delta$, both Bob and Mary contribute to Candidate Y to the right of $B = M + C/\delta$, and neither Bob nor Mary makes any political contributions if the value of B lies between these two points.

In this simple framework, CEOs can influence household members' personal beliefs by advocating for political candidates. Bob's CEO (who advocates for Candidate X) will try to lower Bob's estimate of M relative to B, while Mary's CEO will try to do the opposite. Thus, if CEOs' attempts are successful, then Bob and Mary may no longer agree on the value of M relative to B. Denote Bob's CEO-induced perceived value of M by M_B and Mary's CEO-induced perceived

[30] It can also be shown that in this simple framework it is never optimal for only one member of the household to make political contributions.

value of M by M_M, with $M_B < M < M_M$. This case is presented in Panel B of Figure 6. It is clear that Bob's beliefs about what is optimal for the household now differ from Mary's beliefs. In fact, for the values of B between $B = M_B + C/\delta$ and $B = M_M - C/\delta$ (depicted by the shaded area in Panel B and denoted "conflict region"), Bob and Mary have opposite (i.e., conflicting) beliefs about the candidate they should contribute to. Since both Bob and Mary's beliefs cannot be correct at the same time, contributing to conflicting political candidates, in our simple framework, cannot be optimal for the household as a whole. In this case, within-household disagreement induced by CEOs lowers household welfare. Of course, at least in principle, the information provided by CEOs can actually reduce within-household political disagreement, in which case it will increase household welfare in our framework. Whether CEO influence increases or decreases political disagreement is an empirical question, which we examine next.

We start by identifying, within our sample, all instances in which people with the same last name donate to conflicting political candidates (i.e., to candidates who run for the same political office in the same election). We then collect the addresses of such people and use these addresses to identify households.[31] For each household that donates to conflicting candidates at least once in our sample, we collect all contributions made by the members of this household during our entire sample period. Our final sample consists of 398 unique households (for a total of 1,524 household-election cycle observations) that donate to conflicting candidates at least once during our sample period. For this set of households, we have their donations in all election cycles in which they made political contributions, both when they donated to conflicting political candidates and when they donated only to non-conflicting political candidates.

[31] A household is defined as all people who have the same last name and live at the same address. The FEC requires all federal political candidates to collect addresses of their contributors but does not make this information available in digital form. Instead, the FEC personnel scans the original versions of reports filed by candidates, which are then made available online in the pdf format. We manually obtain the addresses of contributors from these scans.

The results are reported in Table VI, where we calculate the likelihood that members of the household contribute to conflicting political candidates, depending on whether their CEOs contribute to conflicting candidates or only to non-conflicting candidates. In the first row of Table VI, we do not restrict the party affiliation of conflicting candidates (e.g., two Republicans running for the same office in the same election would be considered conflicting candidates). In this case, we find that 49.1% of households whose CEOs donate to conflicting candidates also donate to conflicting candidates themselves; this share is 27.8% among households whose CEOs donate only to non-conflicting candidates. One may argue that a household may have had to shift its support from one conflicting candidate to another after the results of a primary election, i.e., after a single candidate representing each party in the general election has been chosen. To exclude such cases, in the second row of Table VI we use a narrower definition of conflicting candidates: i.e., we define conflicting candidates as candidates from different parties that run in the same election (in this case, two Republicans running for the same office in the same election would not be considered conflicting candidates, but a Republican and a Democrat would). Using this narrower definition, we continue to find that households whose CEOs donate to conflicting candidates are substantially more likely to donate to conflicting candidates themselves, compared to households whose CEOs donate only to non-conflicting candidates (31.0% versus 10.1%). Thus, our results indicate that CEO influence increases political disagreement within households and may therefore be welfare-decreasing for employees.

V. Conclusion

We analyze whether CEOs influence their employees' political choices whether this influence has implications for firm value. We find that employees contribute almost three times more to political

candidates supported by their firm's CEO than to candidates not supported by the CEO, and this effect persists around CEO turnovers, including plausibly exogenous turnovers caused by death or natural retirement. We also find that CEOs exert greater influence on employee contributions when they explicitly advocate for political candidates, suggesting a direct link between CEOs' political preferences and employees' campaign contributions.

Our results further show that CEOs' political influence, on average, increases firm value. Equity returns around electoral wins of CEO-supported candidates are higher than equity returns around electoral wins of candidates supported by the employees (but not by the CEO). These results also hold around close elections. Furthermore, we find that CEO influence is strongest among politically connected CEOs, in firms that have their own corporate PACs, in firms operating in heavily regulated industries, as well as when CEO-supported candidates have direct jurisdiction over the firm. These results suggest that firms with the greatest potential benefits from political activism are more likely to try to influence their employees' political choices.

At the same time, CEO influence is not necessarily aligned with the interests of individual employees: we show that households are more likely to make political contributions resulting in a net monetary loss when members of those households are employed by firms whose CEOs donate to conflicting political candidates (i.e., candidates running for the same political office in the same election cycle).

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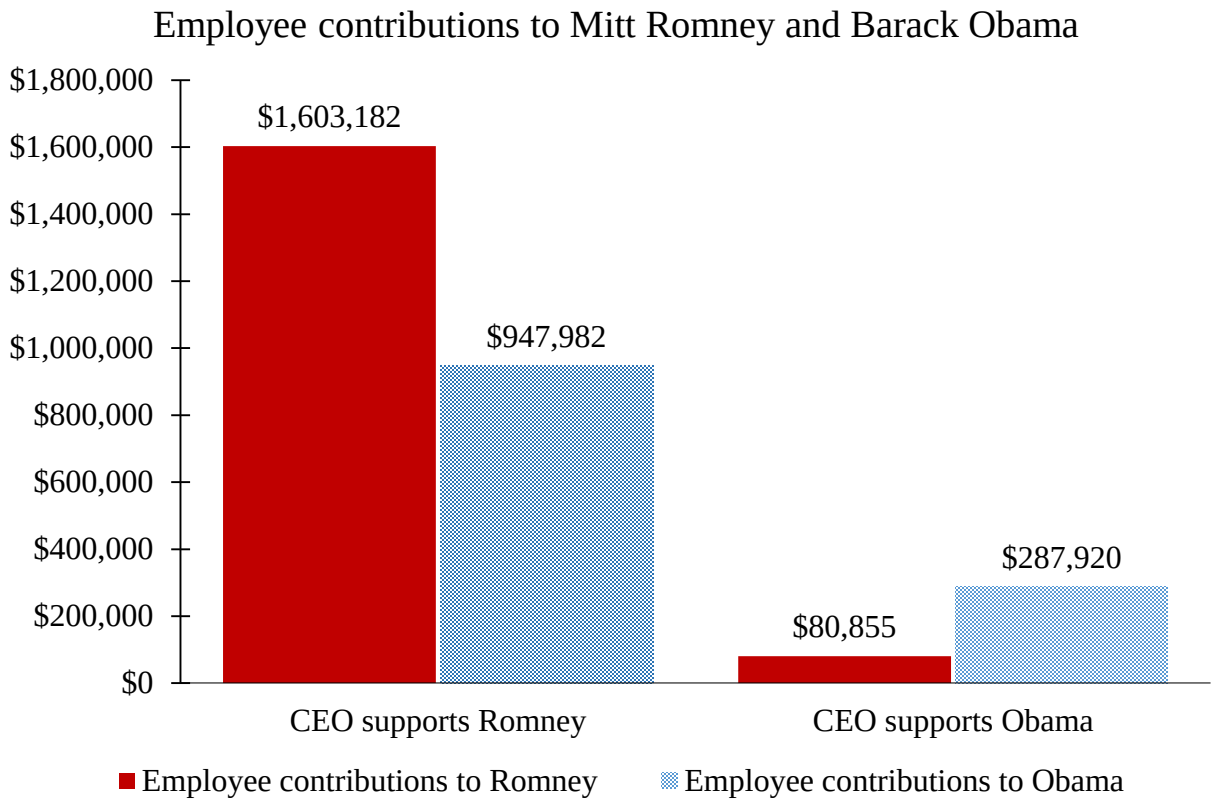


Figure 1. CEO support and employee contributions in the 2012 presidential election

This figure plots the total amount contributed by employees of our sample firms to Mitt Romney (solid red bars) and Barack Obama (shaded blue bars) depending on whether the CEO contributes only to Romney or only to Obama (firms whose CEOs contribute to both or to none of the candidates are excluded). The graph includes 175 CEOs who contribute only to Romney and 23 CEOs who contribute only to Obama.

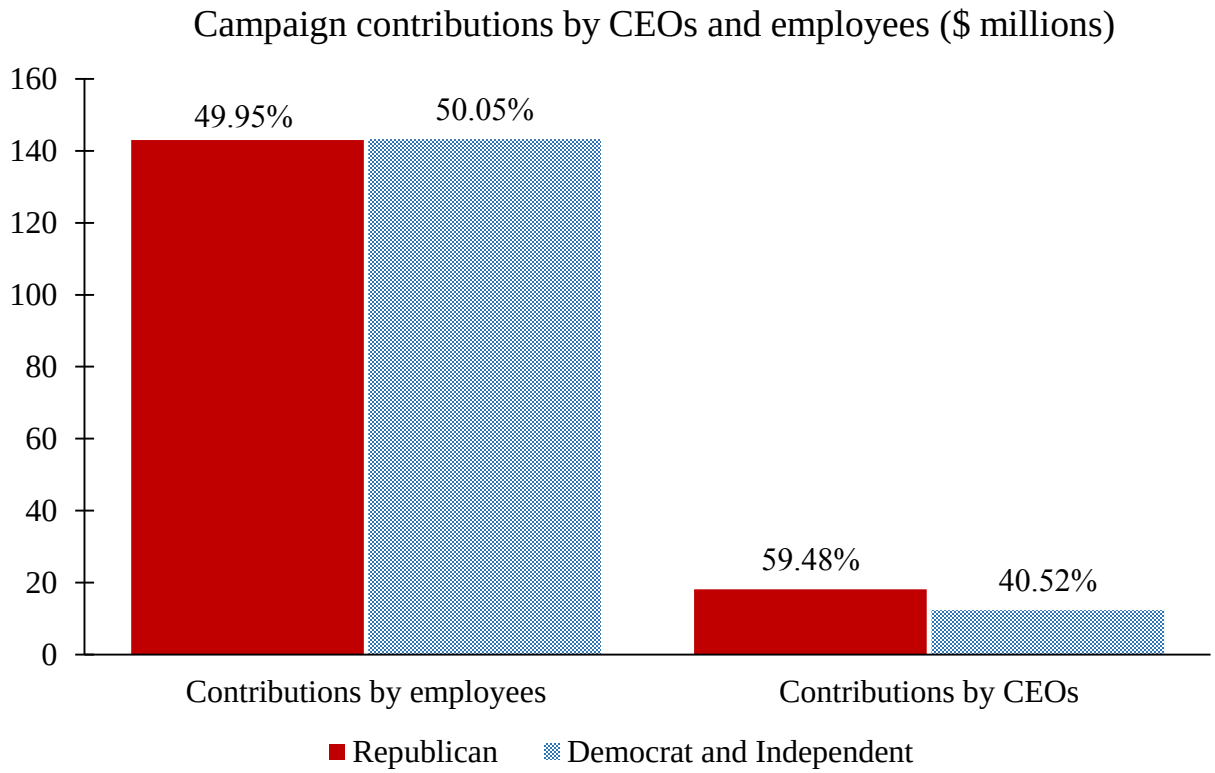


Figure 2. Total employee and CEO contributions

This figure plots the total amount contributed by employees and CEOs between 1999 and 2014, split by party of the candidates receiving contributions: solid red bars for Republicans and shaded blue bars for Democrats and Independents. The total amount (in millions of USD) is indicated on the left axis; the percentages above the bars indicate the share of contributions received by candidates from a given party.

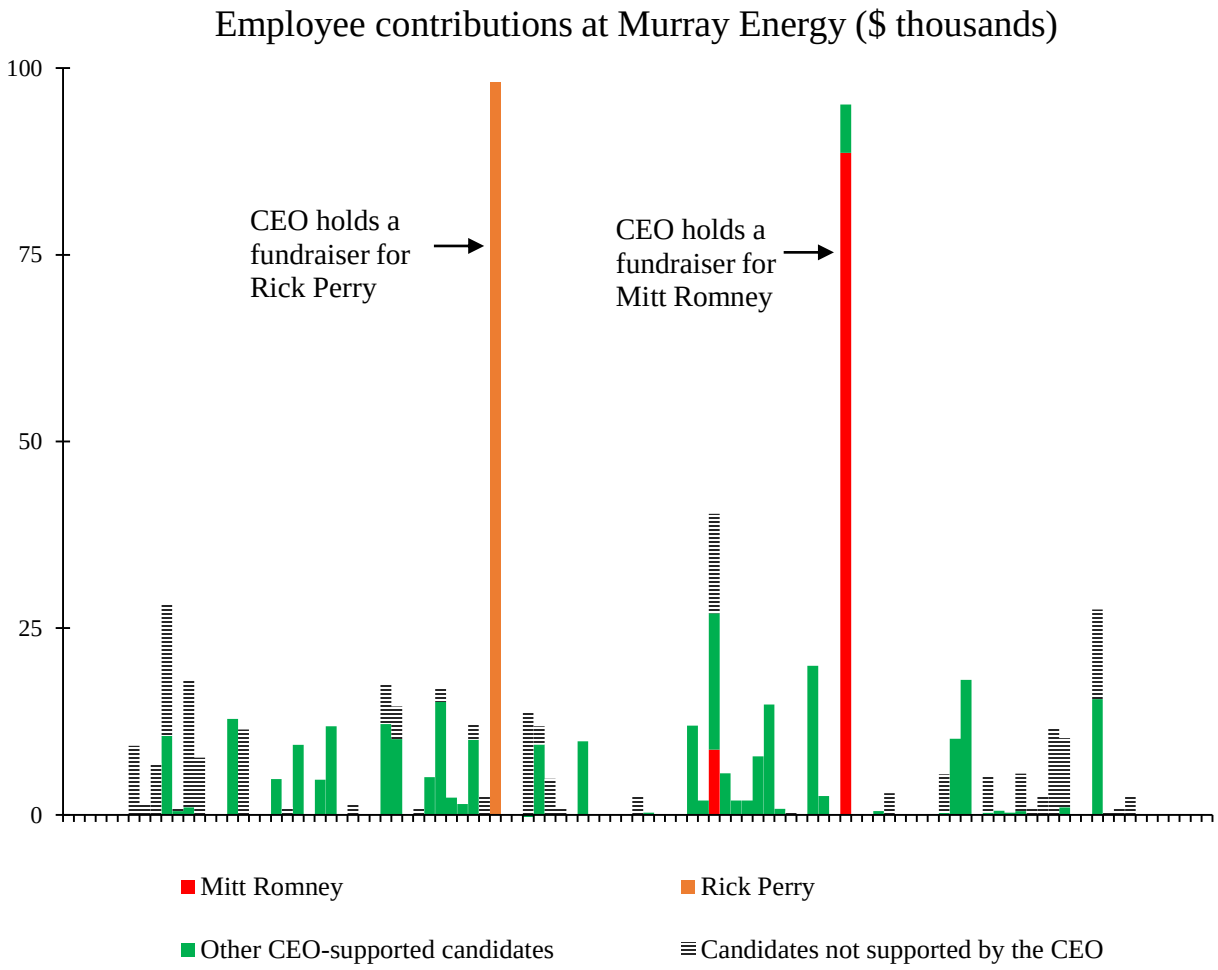


Figure 3. Campaign contributions by employees of Murray Energy

This figure plots weekly amounts (in thousands of USD) contributed in the 2012 election cycle by Murray Energy's employees to Rick Perry (solid orange bar), Mitt Romney (solid red bars), other candidates supported by Robert Murray (solid green bars), and candidates not supported by Robert Murray (gray bars with horizontal stripes). The dates on which Murray Energy's CEO hosted campaign fundraisers for political candidates (September 29, 2011 for Rick Perry and May 3, 2012 for Mitt Romney) are marked by arrows.

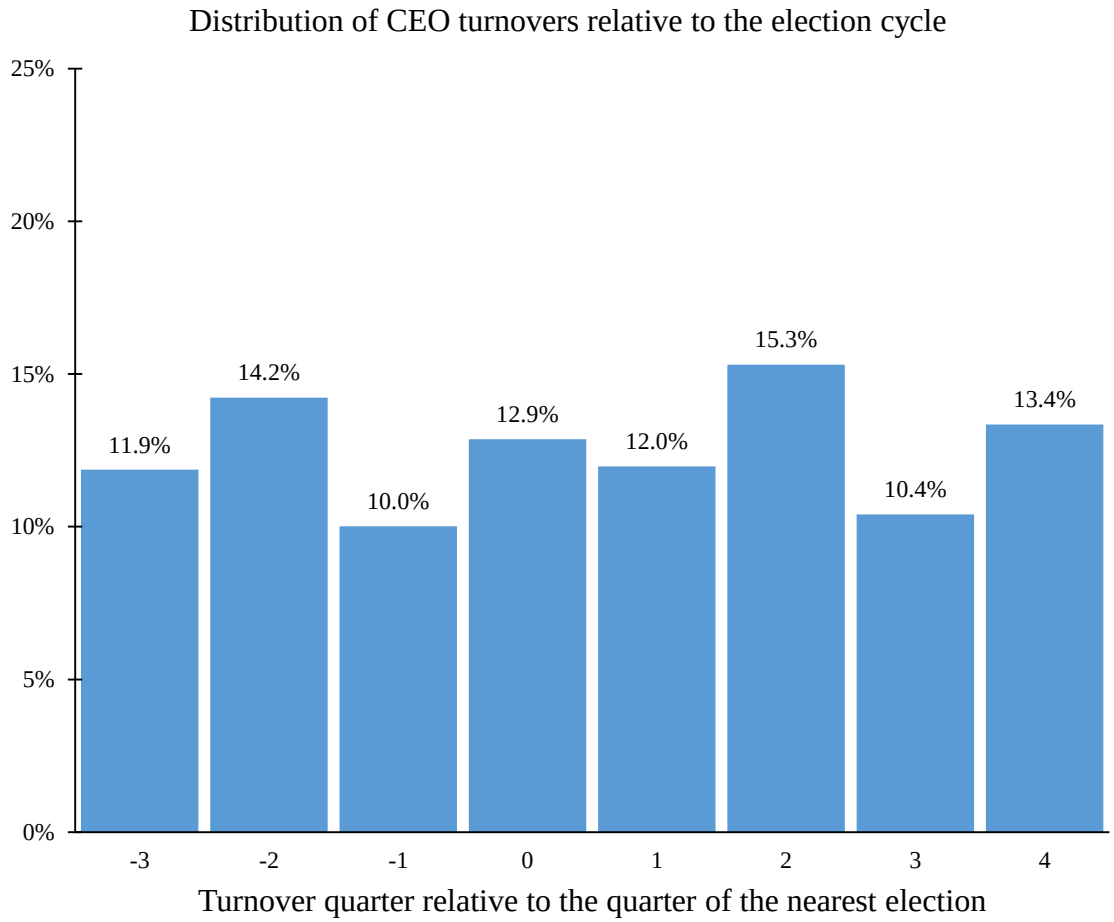


Figure 4. Distribution of CEO turnovers relative to the election cycle

This figure plots the distribution of CEO turnovers relative to the election cycle. Each bar represents the share of turnovers that occurred in a given quarter relative to the quarter of the nearest election; quarter 0 indicates the quarter when a federal election took place (i.e., the fourth quarter of an even-numbered year).

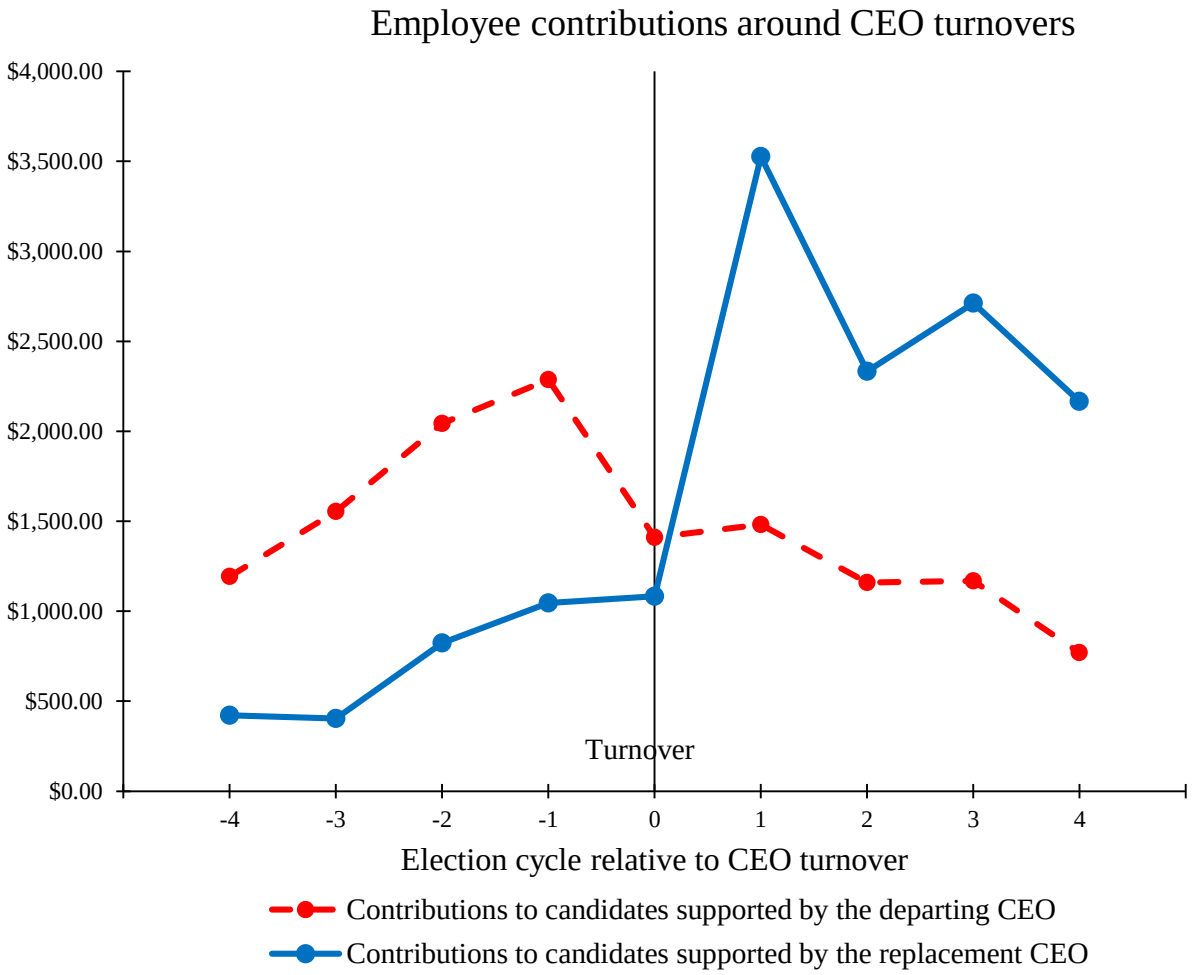


Figure 5. Employee contributions around CEO turnovers

This figure plots employee contributions four quarters election cycles before and four election cycles after a turnover. The dashed red line plots the average amount, per candidate, contributed by employees to the candidates supported by the outgoing CEO; the solid blue line plots the average amount, per candidate, contributed by employees to the candidates supported by the incoming CEO. The amounts (in USD) are indicated on the left axis. The vertical line indicates the turnover cycle.

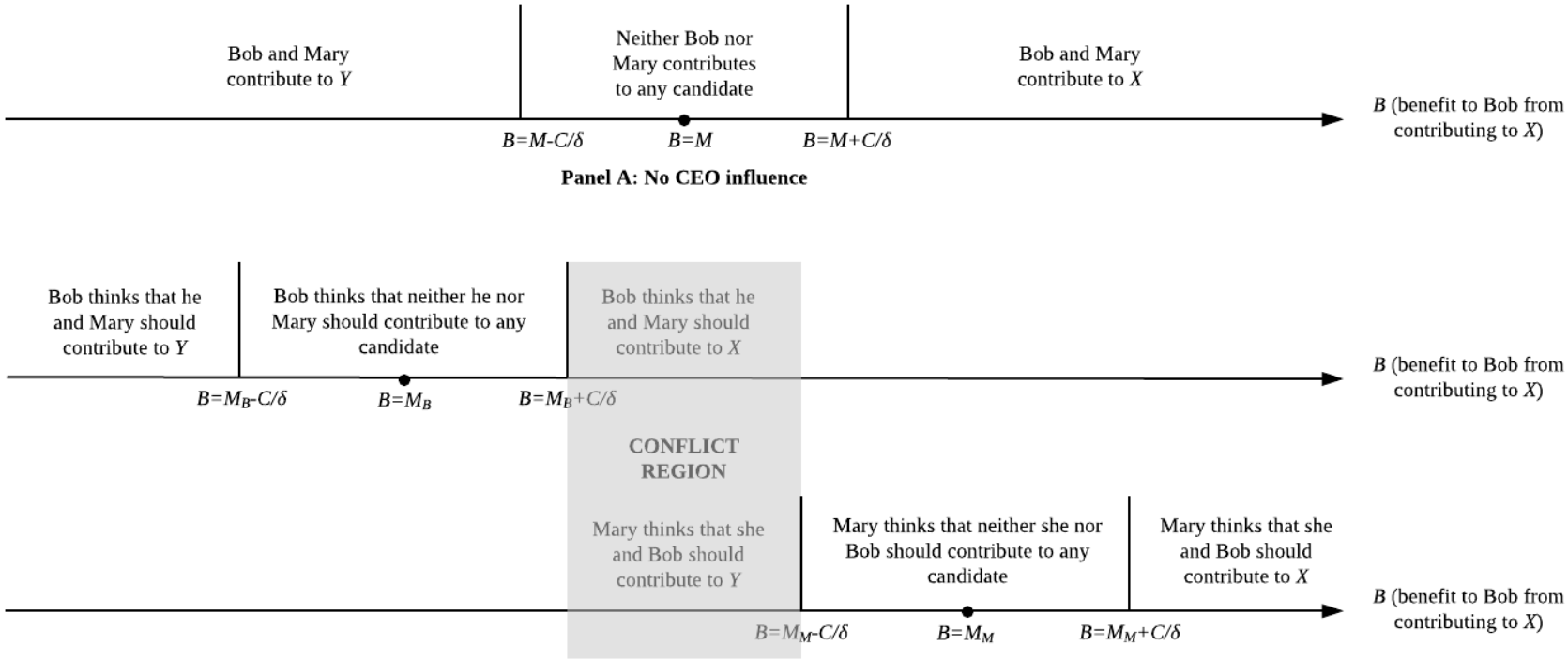


Figure 6. Contributions by members of the same household

This figure describes which political candidates a two-member household contributes to in an election in which two candidates compete for the same office. Panel A is constructed for the case in which there is no disagreement between household members about the benefits of electing a particular candidate. Panel B is constructed for the case in which CEO influence results in a disagreement between household members about the benefits of electing a particular candidate. The details are provided in the text.

Table I
Summary Statistics on CEO and Employee Contributions

This table reports summary statistics for our sample. The sample includes S&P 1,500 firms covered by BoardEx between 1999 and 2014. Data on individual campaign contributions are from the FEC individual contributions files, and data on firm-level control variables are from Compustat. Panel A reports statistics on campaign contributions by employees and CEOs at the firm-cycle level. Panel B reports statistics on campaign contributions at the firm-candidate-cycle level. Panel C reports statistics on firm control variables at the firm-cycle level.

	N	Mean	25th Pctl.	Median	75th Pctl.	Std. Dev.
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Firm-Wide Campaign Contributions (Firm-Cycle Level)						
Total amount contributed by the CEO to all candidates ($)	12,467	1,757.66	0.00	0.00	2,000.00	3,955.77
Total amount contributed by employees to all candidates ($)	12,467	14,618.84	500.00	3,500.00	13,100.00	38,348.63
Number of candidates receiving contributions from the CEO	12,467	1.26	0.00	0.00	1.00	2.57
Number of candidates receiving contributions from employees	12,467	8.53	1.00	3.00	9.00	18.41
CEO contributed to at least one candidate indicator	12,467	0.386	0.000	0.000	1.000	0.487
Employees contributed to at least one candidate indicator	12,467	0.838	1.000	1.000	1.000	0.369
Panel B: Campaign Contributions and Candidate Characteristics (Firm-Candidate-Cycle Level)						
CEO contributions — contributing CEOs only ($)	14,188	1,544.45	1,000.00	1,250.00	2,400.00	766.33
CEO contributions — all CEOs ($)	232,448	94.27	0.00	0.00	0.00	415.39
CEO support indicator	232,448	0.061	0.000	0.000	0.000	0.239
Employee contributions — contributing employees only ($)	96,699	1,884.75	500.00	1,000.00	2,000.00	2,701.66
Employee contributions — all employees ($)	232,448	784.06	0.00	0.00	500.00	1,974.69
Panel C: Firm Control Variables (Firm-Cycle Level)						
Assets ($ millions)	12,467	10,757.07	565.21	1,780.60	6,109.70	33,618.34
Tobin's Q	12,467	1.97	1.15	1.50	2.22	1.34
ROA	12,467	0.041	0.012	0.043	0.082	0.082
CAPEX	12,467	0.045	0.013	0.031	0.060	0.047
R&D	12,467	0.025	0.000	0.000	0.028	0.046
Number of CEO's political connections	12,467	25.17	4.00	14.00	33.00	31.46

Table II
Baseline Results

This table reports the results of panel regressions of employee contributions on the CEO support indicator. The data are at the firm-candidate-cycle level in all columns except for column (5). In column (5), the data are at the individual employee-candidate-cycle level. The sample includes S&P 1,500 firms covered by BoardEx between 1999 and 2014. Data on individual campaign contributions are from the FEC individual contributions files, and data on firm-level controls are from Compustat. The dependent variable is the amount contributed by firm employees to a candidate in an election cycle. Regressions include fixed effects and firm-level control variables as indicated. Standard errors clustered by firm and candidate are reported in parentheses below the coefficients.

	Employee Contributions					
	(1)	(2)	(3)	(4)	(5)	(6)
CEO Support Indicator	1468.003***	1618.111***	1261.559***	1308.723***	57.080***	1453.838***
	(100.268)	(106.382)	(93.207)	(95.351)	(6.817)	(96.467)
Explicit Political Advocacy Indicator	-	-	-	-	-	-153.887
	-	-	-	-	-	(277.500)
Explicit Advocacy x CEO Support	-	-	-	-	-	6130.653**
	-	-	-	-	-	(2,710.857)
Firm Size	138.623***	-	129.671***	132.895***	0.953	138.198***
	(20.664)	-	(20.915)	(21.194)	(1.140)	(20.643)
Tobin's Q	40.955***	-	38.116***	38.867***	1.802***	39.906***
	(14.687)	-	(13.636)	(13.697)	(0.550)	(14.678)
ROA	49.581	-	41.234	53.685	4.055	49.524
	(98.322)	-	(102.246)	(101.679)	(7.410)	(98.164)
CAPEX	408.273	-	332.005	380.626	17.383	434.781
	(345.636)	-	(346.415)	(345.568)	(22.110)	(344.600)
R&D	418.572	-	469.338	460.158	-43.318	435.341
	(485.024)	-	(470.460)	(481.932)	(33.600)	(485.831)
Observations	232,448	232,448	232,448	232,448	22,450,509	232,448
R-squared	0.199	0.232	0.239	0.230	0.073	0.200
Firm Fixed Effects	Yes	-	Yes	Yes	Yes	Yes
Candidate Fixed Effects	Yes	Yes	-	Yes	Yes	Yes
Election Cycle Fixed Effects	Yes	-	-	-	Yes	Yes
Firm-Cycle Fixed Effects	-	Yes	-	-	-	-
Candidate-Cycle Fixed Effects	-	-	Yes	-	-	-
Electoral Race Fixed Effects	-	-	-	Yes	-	-
Employee Fixed Effects	-	-	-	-	Yes	-

**p<0.1, **p<0.05, ***p<0.01*

Table III
CEO and Employee Contributions Around CEO Turnovers

This table reports the results of regressions of employee contributions on CEO contributions around CEO turnovers. The data are at the firm-candidate-cycle level. The sample includes S&P 1,500 firms covered by BoardEx between 1999 and 2014. Data on individual campaign contributions are from the FEC individual contributions files, and data on firm-level control variables are from Compustat. The samples of turnovers and employees are indicated in column titles. Regressions include fixed effects and firm-level control variables as indicated. Standard errors clustered by firm and candidate are reported in parentheses below the coefficients.

	Employee Contributions			
CEO Turnover Sample:	All turnovers	Outgoing CEO dies or is 65 or older	All turnovers	Outgoing CEO dies or is 65 or older
Employee Sample:	All employees	All employees	Employees who contribute before and after turnover	Employees who contribute before and after turnover
	(1)	(2)	(3)	(4)
CEO Support Indicator (Incoming CEO)	330.048***	515.682***	212.661***	302.400***
	(64.219)	(111.542)	(53.442)	(82.887)
CEO Support Indicator (Outgoing CEO)	911.177***	869.578***	486.896***	471.695***
	(80.473)	(138.706)	(57.375)	(85.982)
Post-Turnover Indicator	-10.841	43.311	5.897	43.160
	(29.439)	(59.006)	(26.721)	(33.575)
Post-Turnover x Incoming CEO	1333.427***	1219.656***	897.145***	818.373***
	(131.893)	(195.028)	(131.233)	(185.233)
Post-Turnover x Outgoing CEO	-401.746***	-296.365**	-184.894***	-175.199**
	(80.822)	(127.225)	(53.802)	(85.385)
Observations	70,985	24,550	64,542	22,451
R-squared	0.168	0.183	0.096	0.138
Firm Control Variables	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Candidate Fixed Effects	Yes	Yes	Yes	Yes
Election Cycle Fixed Effects	Yes	Yes	Yes	Yes

**p<0.1, **p<0.05, ***p<0.01*

Table IV
Equity Returns Around Elections

This table reports cumulative abnormal returns (CARs) around elections. Day 0 is the day of the election. Panel A compares CARs of firms whose CEO (but not employees) donated to the winning candidate to CARs of firms whose CEO (but not employees) donated to the losing candidate. Panel B compares CARs of firms whose CEO (but not employees) donated to the winning candidate to CARs of firms whose employees (but not the CEO) donated to the winning candidate. Panel C is restricted to close elections (i.e., elections with a margin of victory of 5% or less) and compares CARs of firms whose CEO (but not employees) donated to the winning candidate to CARs of firms whose employees (but not the CEO) donated to the winning candidate.

Panel A: CARs Around Elections in which CEO Candidates Win vs. Elections in which CEO Candidates Lose

	CEO-supported candidate wins election	*N*	CEO-supported candidate loses election	*N*	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Event Window (-1,+1)	0.005	809	0.000	555	1.69*
Event Window (-1,+3)	0.008	809	-0.002	555	2.39**
Event Window (-1,+5)	0.007	809	-0.001	555	1.70*
Event Window (-1,+7)	0.009	809	0.001	555	1.62

**p<0.1, **p<0.05, ***p<0.01*

Panel B: CARs Around Elections in which CEO Candidates Win vs. Elections in which Employee Candidates Win

	CEO-supported candidate wins election	*N*	Employee-supported candidate wins election	*N*	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Event Window (-1,+1)	0.005	809	0.001	6,228	2.07**
Event Window (-1,+3)	0.008	809	-0.001	6,228	3.71***
Event Window (-1,+5)	0.007	809	-0.001	6,228	2.98***
Event Window (-1,+7)	0.009	809	0.001	6,228	2.58***

**p<0.1, **p<0.05, ***p<0.01*

Panel C: CARs Around Elections in which CEO Candidates Win vs. Elections in which Employee Candidates Win (Close Elections Only)

	CEO-supported candidate wins election	*N*	Employee-supported candidate wins election	*N*	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Event Window (-1,+1)	0.004	54	-0.004	132	2.00**
Event Window (-1,+3)	0.008	54	-0.003	132	1.71*
Event Window (-1,+5)	0.011	54	-0.001	132	1.67*
Event Window (-1,+7)	0.014	54	0.005	132	1.09

**p<0.1, **p<0.05, ***p<0.01*

Table V

Firm-Specific Benefits from Political Participation and CEO Influence on Employee Contributions

This table reports the results of regressions of employee contributions on CEO support indicator interacted with firm characteristics and economic conditions. The data are at the firm-candidate-cycle level. The sample includes S&P 1,500 firms covered by BoardEx between 1999 and 2014. Data on individual campaign contributions are from the FEC individual contributions files, and data on firm-level control variables are from Compustat. The dependent variable in all specifications is the total amount contributed by firm employees to a candidate in an election cycle. Regressions include fixed effects and firm-level control variables as indicated. Standard errors clustered by firm and candidate are reported in parentheses below the coefficients.

	Employee Contributions				
	(1)	(2)	(3)	(4)	(5)
CEO Support Indicator	529.698***	1171.225***	1225.309***	1342.744***	990.390***
	(82.299)	(109.773)	(104.099)	(95.172)	(88.905)
PAC	-102.214***	-	-	-	-
	(37.058)	-	-	-	-
PAC x CEO Support	1777.885***	-	-	-	-
	(164.608)	-	-	-	-
Lobbying Industry	-	0.580	-	-	-
	-	(81.106)	-	-	-
Lobbying Industry x CEO Support	-	656.366***	-	-	-
	-	(165.610)	-	-	-
Regulated Industry	-	-	-71.799	-	-
	-	-	(50.371)	-	-
Regulated Industry x CEO Support	-	-	560.278***	-	-
	-	-	(180.365)	-	-
Candidate Jurisdiction over Firm	-	-	-	65.578**	-
	-	-	-	(30.149)	-
Candidate Jurisdiction x CEO Support	-	-	-	979.788***	-
	-	-	-	(187.270)	-
Number of CEO's Political Connections	-	-	-	-	-0.620*
	-	-	-	-	(0.358)
Political Connections x CEO Support	-	-	-	-	13.682***
	-	-	-	-	(2.576)
Observations	232,448	232,448	232,448	232,448	232,448
R-squared	0.209	0.201	0.200	0.201	0.203
Firm Control Variables	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
Candidate Fixed Effects	Yes	Yes	Yes	Yes	Yes
Election Cycle Fixed Effects	Yes	Yes	Yes	Yes	Yes

**p<0.1, **p<0.05, ***p<0.01*

Table VI
CEO Contributions and Political Conflict Within Households

This table reports the share of households that contribute to conflicting political candidates (i.e., to candidates who run for the same office in the same election). The data are at the household-cycle level. The sample includes 1,524 observations for 398 unique households making political contributions between 1999 and 2014 (see text for details). The sample is split into households whose CEOs contribute to conflicting political candidates and households whose CEOs contribute only to non-conflicting political candidates. In the first row, all candidates running for the same office in the same election are regarded as conflicting political candidates, irrespective of their party affiliation. In the second row, only candidates from opposing parties running for the same office in the same election are regarded as conflicting political candidates.

	CEOs contribute to conflicting candidates	*N*	CEOs contribute only to non-conflicting candidates	*N*	*t*-stat
	(1)	(2)	(3)	(4)	(5)
Share of households that contribute to conflicting candidates, regardless of party	0.491	161	0.278	1,363	5.62***
Share of households that contribute to conflicting candidates from opposing parties	0.310	84	0.101	1,440	5.96***

**p<0.1, **p<0.05, ***p<0.01*

Internet Appendix: Sample Construction and Robustness

A.1. Merge between BoardEx and FEC Data

We identify all years in which BoardEx provides the name of the CEO of an S&P 1,500 firm (31,454 firm-years, 2,508 firms). Since the FEC data do not share a common firm identifier with BoardEx, we use the name of the employer reported in the FEC data to match firms in BoardEx with firms in the FEC through a "fuzzy merge" using a bigram string comparator score of the firm name as reported in each data set. A bigram string comparator computes the fraction of consecutive character matches between two strings. We implement this fuzzy merge using the Stata ado file reclink. For each potential fuzzy match, Stata provides a similarity score; a higher score implies a greater degree of similarity between the matched terms, with 1 indicating a perfect match. We use this score to select matches for manual review and choose the similarity score of 0.8 as the threshold because we find no matches with a similarity score between 0.7 and 0.8. There is a wide range of matches with scores above 0.8, some of which are very close (e.g., Occidential Petroleuim is matched with Occidental Petroleum) and some of which are not (e.g., Sotheby's International Realty is matched with Services Corp International). We perform a manual review of all matches with a similarity score above 0.8 (13,609 combinations of firm names in the two datasets) to ensure accuracy. Using this procedure, we are able to identify 2,345 matches between the names of BoardEx firms and employer names in the FEC data.

Next, we obtain individual campaign contributions of CEOs and employees of BoardEx firms matched into the FEC dataset. To do so, we first match the names of CEOs of BoardEx firms with the names of individuals in the FEC data by using a procedure similar to the one we used to match firms in the two datasets. As before, some matches are very close (e.g., Martin L. Orlowsky is matched with Martin Orlowsky), while some are not (e.g., Charles E. Royse is matched with John Royse). Therefore, we manually review 15,556 potential matches with a similarity score above 0.8 to ensure accuracy.

We attribute contributions to the firm's CEO if the employer name in the FEC dataset matches a firm name in BoardEx and the name of the person in the FEC dataset matches the name of the firm's CEO during that CEO's tenure. Since our goal is to study the contributions made by all employees, we do not match the names of people in BoardEx other than the CEO to the names of people in the FEC data. We thus attribute contributions to the firm's employees if the employer

name in the FEC dataset matches a firm name in BoardEx and the name of the person in the FEC dataset does not match the name of the firm's CEO. This procedure retains all employees of a BoardEx firm who made political contributions recorded by the FEC, regardless of employees' coverage in BoardEx.

A CEO's decision not to contribute to a candidate may itself be informative about his/her political preferences, and employees may follow the CEO's lead by also not contributing to this candidate. However, there may also be some cases when the absence of contributions indicates that the candidate was not considered viable. We follow a conservative approach and drop all candidate-firm combinations for which there is no election cycle when either the firm's CEO or employees contributed to the candidate. We do retain cases when a firm's CEO or employees switch their contributions between different candidates running for the same office in different election cycles. As an illustration, consider the case when candidate A and candidate B compete for the same office in election cycle 1 and election cycle 2. If the firm's CEO or employees contribute to candidate A in election cycle 1 but then switch to contributing to candidate B in election cycle 2, we retain both candidate A and candidate B in both election cycles.

We merge our sample of BoardEx firms and political contributions with Compustat and drop all firms with headquarters outside the United States, which leaves us with 23,765 firm-year observations for 2,287 unique firms. In the final step, we drop observations with missing data on control variables required for our baseline specification, and winsorize all continuous variables at 1%. We aggregate data at the election cycle level by retaining the value of firm control variables in the first year of the election cycle. Our final sample contains 232,448 firm-candidate-cycle observations (12,467 firm-cycles) for 2,181 unique firms and 4,606 unique candidates over eight election cycles from 1999 to 2014.

A.2. Sample of CEO Turnovers

We use the dates of employment provided by BoardEx to identify start and end dates of CEO tenure at our sample firms. In 32 cases there is a gap between the date of an outgoing CEO's departure and the incoming CEO's arrival. Since we cannot identify the CEO who immediately replaces the departing CEO in such cases, we remove these turnovers from our analysis. Because our sample of campaign contributions runs from the 2000 election cycle to the 2014 election cycle, we only consider turnovers that take place between the 2002 and 2012 election cycles. In total, we

have 2,240 such turnovers. We use biographical information provided by BoardEx, which includes the dates of birth and death (if any), to calculate the age of outgoing CEOs at the time of their departure and to identify departures caused by death. Assuming that CEOs over 65 years old depart due to retirement, 533 turnovers are caused by retirement and 38 turnovers are caused by death.

For each turnover in our sample, we drop from the analysis the election cycle in which the turnover takes place because the impact of the outgoing and incoming CEOs cannot be cleanly separated during these times. This step also removes 277 turnovers in which the outgoing or the incoming CEO stays in the firm only in the cycle of the turnover. In the next step, we drop 437 turnovers due to missing control variables in our baseline specification.

Since our focus is on the impact of CEO changes on employee contributions, we next identify the turnovers in which either the incoming or the outgoing CEO (or both) make at least one campaign contribution during their tenure, excluding the cycle of the turnover itself. This step drops 484 turnovers in which neither the incoming CEO nor the outgoing CEO makes any campaign contributions—since CEOs make no contributions around such turnovers, retaining them in the sample would attribute any lack of changes in employee contributions to lack of changes in CEO preferences. As a robustness check, we re-estimate our turnover regressions on the sample that includes turnovers in which neither the incoming CEO nor the outgoing CEO make any campaign contributions; the results (reported in column 1 of Table A1) are similar to the ones reported in the main text.

To avoid changes in the composition of political candidates, we retain only those candidates who run for office both before and after the turnover. This step drops 19 turnovers. Our final sample of turnovers therefore consists of 1,023 turnover events, of which 288 are caused by retirement and 14 are caused by death. For robustness, we also re-estimate our turnover regressions without restricting the sample of political candidates and find that our results continue to hold (we report them in column 2 of Table A1). As a final robustness check, we re-estimate our turnover regressions during the time period limited to one election cycle before and one election cycle after the turnover, since political preferences are less likely to change during a shorter time period. The results (reported in column 3 of Table A1) continue to show that after turnover employees shift their preferences from the candidates supported by the outgoing CEO to the candidates supported by the incoming CEO.

A.3. Sensitivity of the Analysis to the Omission of Employer Name

Some individual contributions in the FEC data do not contain the name of the employer (13.7% of contributions), and hence they cannot be matched to any firm in our sample. It seems likely that most of these contributions are made by retired, unemployed, or self-employed individuals who rightfully should not be part of our sample. Alternatively, some contributors may simply forget to report their employer's name or omit it for some other random reason, such as changing the place of employment during the year. If such random reasons explain why people do not report the name of their employer, then our results would not be affected by the exclusion of such individuals from the sample. However, it is also possible that some individuals omit their employer's name because they do not wish to support the political candidates favored by their CEOs, which may potentially introduce a bias into our results.

To assess the degree to which the sample selection bias induced by such strategic misreporting may affect our results, we assume that all 13.7% of individuals who do not report their employer are in fact employees of some firms but that, unlike other (i.e., reporting) employees, they do not contribute more money to CEO-supported political candidates. We then consider two hypothetical scenarios. In the first scenario, we assume that non-reporting employees favor CEO-supported candidates no more and no less than other candidates; instead, such employees spread their contributions evenly among *all* political candidates. In this first scenario, the inclusion of non-reporting employees into our analysis would reduce the coefficient on the CEO support indicator in our baseline regression by 13.7%. To see more precisely how our estimates would be affected, note that we run the following regression:

$$C_{ij}^{employees} = \alpha + \beta D_{ij}^{CEO} + \varepsilon_{ij}, \tag{A.1}$$

where D_{ij}^{CEO} is an indicator variable equal to one if the CEO of firm i supports candidate j. Recall also that the average value of the dependent variable is approximately 800 and that, on average, 6% of candidates are supported by a firm's CEO. In the sample where the employer name is reported (86.3% of all observations), the observed regression coefficients are, approximately, $\alpha = 710$ and $\beta = 1500$. If we run a regression on the full (hypothetical) sample, the OLS estimates will minimize the sum of squares:

$$\min_{\alpha,\beta} 0.863(0.06(710 + 1500 - \alpha - \beta)^2 + 0.94(710 - \alpha)^2) \quad \text{(A.2)}$$
$$+0.137(0.06(800 - \alpha - \beta)^2 + 0.94(800-\alpha)^2).$$

The OLS estimates will be $\alpha = 722$ and $\beta = 1295$, i.e., the coefficient of interest will be reduced by (1500-1295)/1500=13.7%.

In the second scenario, we assume that all non-reporting individuals contribute the least possible amount to CEO-supported candidates (which is zero as contributions cannot be negative) and distribute their donations evenly among the remaining 94% of candidates. Given the sample average contribution of 800, the candidates not supported by the CEO receive 800/0.94=851 from non-reporting employees under this scenario. OLS estimates solve:

$$\min_{\alpha,\beta} 0.863(0.06(710 + 1500 - \alpha - \beta)^2 + 0.94(710 - \alpha)^2) \quad \text{(A.3)}$$
$$+0.137(0.06(0 - \alpha - \beta)^2 + 0.94(851-\alpha)^2),$$

which yields $\alpha = 729$ and $\beta = 1178$. Thus, even under this extreme scenario, the coefficient on the CEO support indicator would not go down to zero and would be reduced by only 21.5%. Overall, it appears unlikely that the omission of the employer's name can significantly bias our results.

A.4. Robustness to Different Specifications of the Baseline Results

Table A1 presents the results of several robustness tests of our baseline specification. For ease of comparison with the main text, the first column of Table A2 reports our baseline specification. In column 2 of Table A2, we replace our main explanatory variable (CEO support indicator) with the amount that the CEO contributed to a given candidate. The effect of CEO contributions remains statistically and economically significant and implies that a one-standard deviation increase in the amount contributed by the CEO increases the amount of employee contributions by 52% relative to its mean.

Given that the amount of contributions is naturally left-censored at 0, in column 3 we also show that our results are robust to using Tobit estimation instead of OLS. The coefficient of interest

remains statistically significant, and its magnitude increases somewhat relative to the baseline. Note that, because of the well-known bias in nonlinear models with fixed effects (Greene (2004)), the Tobit model reported in column 3 does not include fixed effects.

We also investigate the robustness of our results to alternative sample construction methods. Recall that our main sample contains all candidates to which either the firm's CEO or its employees contribute at any point between 1999 and 2014 and thus includes observations for which a candidate running for office does not receive any contributions from the firm's CEO or employees in a given election cycle (as long as this candidate receives such contributions in another election cycle). In the first robustness test of sample construction (reported in column 4 of Table A2), we exclude all firm-cycle observations where the CEO does not contribute to any political candidates. This test thus excludes all cases in which the CEO does not intend to influence employees' contributions as well as cases in which the CEO may intend to prevent employees from contributing to any federal candidates. We find that in this subsample the effect of CEO contributions remains both economically and statistically significant, with the magnitude similar to that in the baseline. Finally, in column 4 of Table A2, we exclude all observations in which neither employees nor the CEO contribute to a candidate and find that campaign contributions by the CEO continue to have a statistically and economically significant effect on campaign contributions by employees. Perhaps unsurprisingly, the coefficient decreases somewhat relative to the baseline, consistent with the idea that employees' decision whether to support the candidate or not is also related to CEOs' political preferences.

A.5. The Impact of Common Factors on CEO and Employee Contributions

Since CEOs and employees are, at least to some extent, subject to common economic and geographic forces, their political preferences may be correlated. We investigate the impact of such common factors in Table A3.

The positive association between CEO and employee contributions may also be related to political candidates' strength. As Snyder (1990) shows, if all political candidates can supply the same number of favors in exchange for campaign contributions, then the total amount of contributions received by a candidate should be directly proportional to his or her probability of

winning the election.[33] Further, ample research documents that more powerful politicians, such as committee chairs, party leaders, and politicians serving on important committees, receive significantly more campaign contributions (e.g., Grier and Munger (1991), Romer and Snyder (1994), Milyo (1997), and Kroszner and Stratmann (1998)).

We have shown that our results are robust to the inclusion of candidate or candidate-cycle fixed effects, which can flexibly account for time-varying candidate quality. Further evidence is presented in model 1 of Panel A in Table A3, where we explicitly control for the candidate's observable characteristics, such as party and incumbency status, as well as for the contemporaneous contributions made to the candidate by individuals who are not employed by the firm. The latter proxy for the aggregate level of support to a candidate in a given election cycle that is not attributable to the firm's employees.[34] Perhaps not surprisingly, the level of employee contributions is positively related to the aggregate amount of campaign contributions a candidate receives. Nevertheless, the effect of CEO contributions remains positive and significant in this specification as well, with a magnitude similar to the baseline.

Next, we explore whether our results are driven by common geographic factors that can simultaneously affect CEO and employee contributions. Faccio (2006) shows that the prevalence of political connections is related to the local regulatory environment, and Kim, Pantzalis, and Park (2012) find that firms located in states whose politicians are aligned with the ruling (presidential) party outperform those located in other states. Further, Ovtchinnikov and Pantaleoni (2012) show that political contributions are related to geographic concentration of industries as individuals who live in congressional districts with industry clusters are more likely to contribute to politicians with jurisdiction over the industry.

To investigate whether our results can be attributed to geographic factors, we first add state-cycle fixed effects to our baseline specification to flexibly account for time-varying economic and political factors that affect all firms in the same state and find that our results remain unchanged (the results are reported in column 2 of Table A3). We then examine the relation between political contributions of CEOs and employees who reside in different locations.

[33] Snyder (1990) also provides the evidence that contributions made by special interest groups fit this theoretical prediction. Contributions made by individuals, however, have a different pattern as individuals contribute too much to "losers" and too little to "winners" relative to the model.

[34] In particular, for all candidate-firm-cycle observations, we calculate the amount (in $ millions) that the candidate receives from individuals not employed by the firm in that election cycle.

Specifically, we compute campaign contributions from employees who live in a different zip code, or a different state, from that of the CEO. We then use these contributions as dependent variables in models 3 and 4 of Table A3. We find that our results remain qualitatively the same. For example, in model 3 (which excludes contributions of employees that live in the same zip code as the CEO), the mean of the dependent variable is $758, and in model 4 (which excludes contributions of employees that live in the same state as the CEO) the mean is $573. Therefore, employees living outside the CEO's zip code donate 2.7 times more to CEO-supported candidates, whereas employees living outside the CEO's state donate 1.5 times more to CEO-supported candidates. Overall, it appears that our findings are unlikely to be explained by geographic factors.

To further assess the degree to which omitted unobservable factors can possibly explain away the observed positive relation between employee and CEO contributions, we perform a formal test advocated by Altonji, Elder, and Taber (2005) and further developed by Oster (2017).[35] Specifically, the test computes the share of variation that unobservable variables need to explain (relative to included control variables) in order to reduce the effect of interest to zero. This share is denoted by δ. A value of δ equal to 2, for example, indicates that unobservables need to be twice as important as observables in order for the omitted variable bias to explain away the results and reduce the coefficient of interest to zero.

The implementation of the Oster (2017) test requires specifying the value of R_{max}, which denotes the R-squared from a hypothetical regression that includes both observed and unobserved controls. Based on experimental evidence, Oster (2017) suggests reporting the value of δ with $R_{max} = 1.3\tilde{R}$, where $\tilde{R}$ is the R-squared from the regression that includes all observed controls. In Panel B of Table A3, we report the value of δ for even more stringent specifications, with $R_{max} = 2\tilde{R}$ and $R_{max} = 1$. The values of δ reported in Panel C indicate that the unobservables need to be one and a half to five times as important as the observables to produce an effect of zero, which seems unlikely given that our regression includes many common determinants of campaign contributions as well as a large number of fixed effects.

[35] We perform the test in Stata by using the psacalc command provided by Oster (2017).

Table A1
Robustness of CEO Turnover Results in Alternative Samples

This table reports the results of regressions of employee contributions on CEO contributions around CEO turnovers. The data are at the firm-candidate-cycle level. The sample includes S&P 1,500 firms covered by BoardEx between 1999 and 2014. Data on individual campaign contributions are from the FEC individual contributions files, and data on firm-level control variables are from Compustat. Samples are described in column titles (see appendix text for details). The dependent variable in all columns is the total amount contributed by firm employees to a candidate in an election cycle. Regressions include fixed effects and firm-level control variables as indicated. Standard errors clustered by firm and candidate are reported in parentheses below the coefficients.

	Employee Contributions		
Turnover Sample:	Retain turnovers even if neither the outgoing nor the incoming CEO makes campaign contributions	Retain political candidates even if they run for office only before or only after the turnover	Limit the sample to one election cycle before and one election cycle after the turnover
	(1)	(2)	(3)
CEO Support Indicator (Incoming CEO)	345.307***	353.961***	456.683***
	(66.362)	(67.952)	(91.314)
CEO Support Indicator (Outgoing CEO)	894.635***	889.834***	1020.049***
	(86.508)	(85.336)	(93.846)
Post-Turnover	-50.523***	-65.576***	-48.696
	(17.554)	(19.882)	(32.948)
Post-Turnover x Incoming CEO	1050.837***	1050.835***	1613.695***
	(105.769)	(106.601)	(173.558)
Post-Turnover x Outgoing CEO	-349.282***	-333.439***	-454.906***
	(81.456)	(82.718)	(102.208)
Observations	158,206	134,002	32,944
R-squared	0.204	0.210	0.220
Firm Control Variables	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes
Candidate Fixed Effects	Yes	Yes	Yes
Election Cycle Fixed Effects	Yes	Yes	Yes

**p<0.1, **p<0.05, ***p<0.01*

Table A2
Robustness of the Baseline Results to Alternative Specifications

This table reports the results of panel regressions of employee contributions on the CEO support indicator and the amount of CEO campaign contributions. The data are at the firm-candidate-cycle level. The sample includes S&P 1,500 firms covered by BoardEx between 1999 and 2014. Data on individual campaign contributions are from the FEC individual contributions files, and data on firm-level control variables are from Compustat. The dependent variable in all columns is the total amount contributed by firm employees to a candidate in an election cycle. Samples and estimation methods are shown in column titles. Regressions include fixed effects and firm-level control variables as indicated. Standard errors clustered by firm and candidate are reported in parentheses below the coefficients.

	Employee Contributions				
Sample:	Full	Full	Full	Exclude firm-years in which CEOs do not contribute to any candidates	Exclude candidates to which neither CEOs nor employees contribute
Estimation:	OLS	OLS	Tobit	OLS	OLS
	(1)	(2)	(3)	(4)	(5)
CEO Support Indicator	1468.003***	-	2221.152***	1568.197***	877.184***
	(100.268)	-	(188.165)	(102.452)	(107.073)
Amount Contributed by the CEO	-	0.979***	-	-	-
	-	(0.061)	-	-	-
Firm Size	138.623***	135.267***	231.946***	154.670***	157.371***
	(20.664)	(20.765)	(19.739)	(31.274)	(38.349)
Tobin's Q	40.955***	40.011***	45.066	55.115**	54.577**
	(14.687)	(14.426)	(27.913)	(23.344)	(26.196)
ROA	49.581	52.545	1238.530***	235.879	224.069
	(98.322)	(97.592)	(390.004)	(146.774)	(182.462)
CAPEX	408.273	331.494	-87.442	776.339	77.587
	(345.636)	(340.781)	(585.884)	(487.420)	(712.278)
R&D	418.572	363.152	1458.075*	258.347	594.867
	(485.024)	(473.044)	(864.363)	(876.914)	(1,251.247)
Observations	232,448	232,448	232,448	125,882	104,306
R-squared/Pseudo R-squared	0.199	0.209	0.003	0.227	0.222
Firm Fixed Effects	Yes	Yes	-	Yes	Yes
Candidate Fixed Effects	Yes	Yes	-	Yes	Yes
Election Cycle Fixed Effects	Yes	Yes	-	Yes	Yes

**p<0.1, **p<0.05, ***p<0.01*

Table A3
The Impact of Common Factors on CEO and Employee Contributions

Panel A of this table reports the results of panel regressions of employee contributions on the CEO support indicator, accounting for candidate strength and common geographic factors in CEO and employee contributions. The data are at the firm-candidate-cycle level. The sample includes S&P 1,500 firms covered by BoardEx between 1999 and 2014. Data on individual campaign contributions are from the FEC individual contributions files, and data on firm-level controls are from Compustat. The samples of employees are indicated in the column titles. Panel B reports the results of Oster (2017) tests for the amount of variation in unobservables relative to observables needed to bring the estimated effect on CEO support to zero. Regressions include fixed effects and firm-level control variables as indicated. Standard errors clustered by firm and candidate are reported in parentheses below the coefficients.

Panel A: Specifications that Account for Candidate Strength and Common Geographic Factors in CEO and Employee Contributions

	Employee Contributions			
Sample:	All employees	All employees	Employees living outside CEO zip code	Employees living outside CEO state
	(1)	(2)	(3)	(4)
CEO Support Indicator	1398.677***	1469.937***	1302.135***	271.316***
	(95.752)	(100.603)	(95.592)	(58.816)
Amount Contributed by Non-Employees	28.893***	-	-	-
	(3.412)	-	-	-
Incumbent Indicator	2.578	-	-	-
	(41.378)	-	-	-
Republican Indicator	-128.628	-	-	-
	(376.103)	-	-	-
Observations	232,448	232,448	232,448	232,448
R-squared	0.229	0.201	0.196	0.180
Firm Control Variables	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Candidate Fixed Effects	Yes	Yes	Yes	Yes
Election Cycle Fixed Effects	Yes	Yes	Yes	-
State-Cycle Fixed Effects	-	Yes	-	-

**p<0.1, **p<0.05, ***p<0.01*

Panel B: Testing for the Amount of Variation in Unobservables (Oster (2017))

	$R_{max} = 2\tilde{R}$	$R_{max} = 1$
	(1)	(2)
δ	5.57	1.52