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Individual political contributions and firm performance

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ABSTRACT

We present evidence that individuals make political contributions strategically by targeting politicians with power to affect their economic well-being. Individuals in Congressional districts with greater industry clustering choose to support politicians with jurisdiction over the industry. Importantly, individual political contributions are associated with improvements in operating performance of firms in industry clusters. The relation between contributions and firm performance is strongest for poorly performing firms, firms closer to financial distress, and for contributions in close elections. The results imply that individual political contributions are valuable to firms, especially during bad economic times.

1. Introduction

A growing body of research finds that firms establish specific connections with politicians. These connections are often broken into explicit connections that arise when a politician joins the firm or its board of directors (or vice versa) and into implicit connections that arise when a firm makes political contributions to the candidate's (re)election campaign (Masters and Keim, 1985; Zardkoohi, 1985; Grier, Munger, and Roberts, 1994; Kroszner and Stratmann, 1998, 2005; Faccio, 2006; Goldman, Rocholl, and So, 2009; Cooper, Gulen, and Ovtchinnikov, 2010). Researchers also document that political connections are valuable (Fisman, 2001; Faccio, 2006; Faccio and Parsley, 2009; Goldman, Rocholl, and So, 2009; Cooper, Gulen, and Ovtchinnikov, 2010; for example). Some papers find that political connections destroy value (see Aggarwal, Meschke, and Wang (2009), for example)[1].

Many firms are impacted by government policy, so the desire to establish connections with politicians may seem logical. These firms do not operate in a vacuum, however, so any government decision that significantly impacts them is also likely to impact the surrounding community. If this is true, it is not unreasonable to argue that different firm stakeholders would also have a vested interest in the political process and should try to affect government decisions on behalf of the firm. If successful, these efforts, in turn, should have a positive impact on the firm.

Consider the April 2010 British Petroleum oil spill in the Gulf of Mexico, for example. The spill led to a temporary government moratorium on deepwater drilling, which, in turn, has had a significantly negative impact on the surrounding communities that support the oil drilling industry. According to industry experts, every job on an oil rig translates into four or more jobs to service and support it. These include people manufacturing the equipment, delivering it to the platform, and feeding the rig crews (Adams, 2010).[2] Adams (2010), citing data from the Louisiana

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[1] Some papers find that political connections destroy value. See Aggarwal, Meschke, and Wang (2009), for example.

[2] Adams, R., 2010. The Gulf oil spill: drill ban hits service firms. The Wall Street Journal, July 22.

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Mid-Continent Oil and Gas Association, reports further that the moratorium decision erased at least $165 million in monthly wages from businesses that support the oil drilling industry. In response to the government's decision, close to 11,000 people took it to the streets in protests arguing that the moratorium decision could damage the region even more than the oil spill itself.

This example illustrates that individuals understand their economic dependency on nearby firms and exercise their right to lobby the government. In addition to organized protests, individuals may also exercise the power of their votes (as they did in the November 2010 midterm election) and the power of their wallet. The latter tactic may be especially effective if the goal is to reach non-local politicians (something that cannot be accomplished with votes) and if the costs of organized protests relative to the expected benefits are high.

The purpose of this paper is twofold. First, we empirically investigate whether individuals in fact use the power of their wallet and make political contributions strategically with their economic interests in mind. We should certainly expect individuals to pursue a variety of motives when making political contributions, such as ideological, partisan, access-seeking, or identity-based (Francia, Green, Herrnson, Powell, and Wilcox, 2003). We ask whether individuals are also strategic, specifically whether they have their economic livelihood in mind when deciding which politician to support. The answer in the affirmative leads to our second and main research question of what effect, if any, individual political contribution efforts have on the performance of the nearby firms. The position that we take in this paper, therefore, is that individual political contributions are, at least in part, an investment in political capital.

Numerous papers report evidence consistent with the view that contributions represent an investment in political capital. Incumbent politicians who are party leaders, committee chairs, or members of powerful committees raise more money (Grier and Munger, 1991; Romer and Snyder, 1994; Milyo, 1997). Snyder (1992) shows that political contributions are persistent and argues that it is consistent with the view that contributors establish long-term investment relationships with politicians. Conversely, politicians who change committees or retire experience a drop in the financial support from previous contributors (Romer and Snyder, 1994; Kroszner and Stratmann, 1998). A parallel line of research analyzes political contributor characteristics and finds that variables that capture the severity of the free-rider problem faced by the contributor and variables that capture the closeness of the relationship between the contributor and the government help determine the contributor's propensity to participate in the political process (Masters and Keim, 1985; Zardkoohi, 1985; Grier, Munger, and Roberts, 1994). Finally, several papers report evidence that politicians trade favors, such as policy decisions, for contributions. Stratmann (2002), for example, finds that politicians are willing to switch their votes based on political contributions received. Consistent with this view, Stratmann (1998) finds that political contributions cluster in time around relevant Congressional votes. The prospect that politicians exchange favors for votes is also present in Prat (2002), Coate (2004), and Ashworth (2006).

Fig. 1 hints that individuals are in fact strategic and contribute in times when their economic livelihood is at stake. Panels A and B show total political contributions made by Microsoft and by residents in Microsoft's Congressional district during the firm's antitrust litigation with the Department of Justice. That Microsoft's political contributions increase significantly during the antitrust litigation is not surprising considering the impact that a negative verdict would have had on the firm. What is perhaps more surprising but consistent with our argument, is the significant increase in contributions from individuals in Microsoft's district over the same time period. The spikes in individual contributions around important decision dates are quite evident in Panel B. Individuals, on average, contribute twice as much during each month of the trial period compared to any other period. This translates into $4.4 million in total individual political contributions during the trial period compared to $2.8 million during all other months combined. Thus, there is a visibly disproportionate political participation from individuals residing close to Microsoft during the firm's antitrust trial.

Our methodology builds on this example. We use the geographic clustering of industries in the U.S. to identify Congressional districts (CDs) in which individuals are especially economically dependent on the nearby firms. We then identify all Congressional committees in the House of Representatives and the Senate that have jurisdictional authority over the local industry clusters. Politicians serving on these committees are identified as "economically relevant" for individuals residing in the "economically dependent" Congressional districts. Our strategy, therefore, is to match politicians with Congressional districts based on the power of politicians to affect the economic livelihood of individuals in the district.

We first analyze whether individuals in economically dependent CDs have a greater tendency to make political contributions to economically relevant politicians. We estimate a series of CD and politician fixed effects regressions and document a significantly higher propensity of economically dependent CDs to make political contributions to economically relevant politicians. In particular, we estimate logit, Poisson, and Tobit regressions and find that political contributions are more likely, more frequent, and of higher amount when made from economically dependent CDs to economically relevant politicians. We measure the extent to which a CD is economically dependent with the number of firms under the politician's jurisdiction, the total assets of these firms, and the total employees of these firms, and find that all three measures are positively and statistically significantly related to the CD contribution intensity. To get a sense for the economic significance of the effect, we sort all CDs in deciles based on the average number of firms under the politician's jurisdiction, the average total assets of these firms, and the average total employees of these firms and define the most and least economically dependent CDs as those in the top and bottom deciles of each sort, respectively. Depending on the economic dependence measure used, the most economically dependent CDs contribute between $152.9 million and $172.3 million to all economically relevant politicians over our sample period. In contrast, the least economically

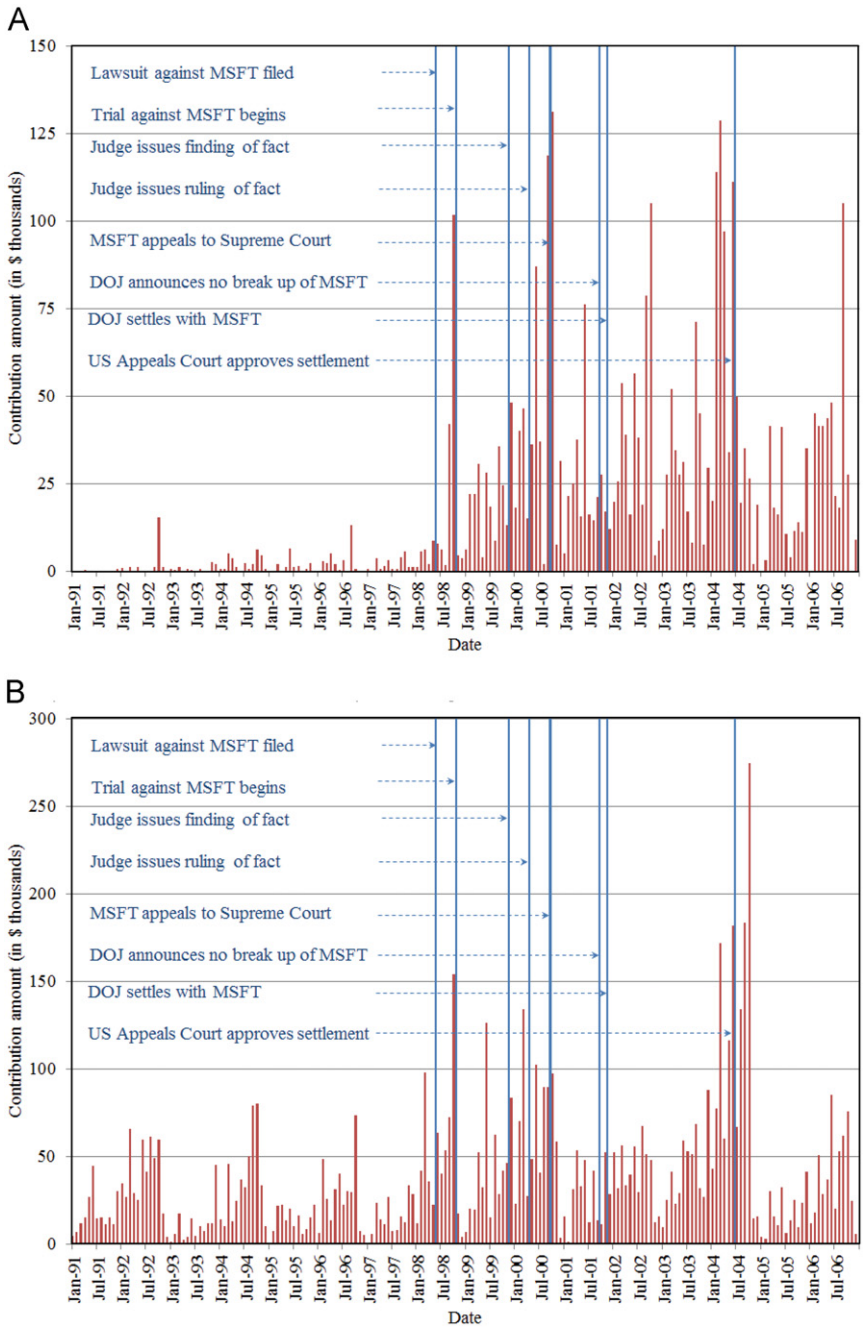

Fig. 1. Political contributions from the Microsoft Political Action Committee and from individuals in Microsoft's Congressional district, 1991–2006. The data are from the FEC detailed contributions files for the period 1991–2006. Panel A presents monthly contribution totals to all political candidates made by the Microsoft Political Action Committee (PAC). Panel B presents monthly contribution totals to all political candidates made by individuals residing in Microsoft's Congressional district. Vertical bars represent dates of important decisions in the Department of Justice's antitrust lawsuit against Microsoft.

dependent CDs contribute between $69.9 million and $84.9 million to those politicians. Thus, compared to the least economically dependent CDs, the most economically dependent CDs contribute twice as much to economically relevant politicians. We confirm that these results are robust across different methodologies and in different subsamples.

Given this evidence, we next proceed to our main hypothesis and analyze operating performance of firms located in economically dependent CDs. If individuals derive their economic livelihood from nearby firms and, therefore, make political contributions on behalf of these firms and if politicians do exchange policy favors for contributions, we expect a positive relation between political contributions from economically dependent CDs to economically relevant politicians and firm performance. To pin down the effect, we proceed in three steps.

We start by documenting a strong positive relation between political contributions from economically dependent CDs to economically relevant politicians and future operating performance of firms located in economically dependent CDs. We then attempt to tackle reverse causality by identifying situations when the relation between political contributions and firm performance should be stronger under our explanation but absent or of the reverse sign under the reverse causality explanation. Finally, we set the bar significantly higher and look for an exogenous shock to the CD economic dependence status. We then analyze whether and how individual political contributions adjust to this shock.

In the first step of our analysis, we estimate a series of regressions that relate changes in individual political contributions to future changes in firm operating performance. We obtain operating performance data for all firms located in economically dependent and other CDs and show that future performance changes are positively and significantly related to changes in the frequency and the amount of political contributions made from economically dependent CDs to economically relevant politicians. Interestingly, future performance changes are unrelated to changes in contributions made to politicians who are not economically relevant. We obtain these results in regressions of industry-adjusted Return on Assets (ROA) changes and market-to-book changes after controlling for other determinants of future performance.

The regression results allow us to comment on correlations but not causality. Reverse causality is a serious issue in our regressions. It may well be the case that political contributions are a form of a normal consumption good, so individuals make more political contributions when firms and nearby residents are doing well. To tackle this issue, we perform two additional tests. First, we carry out a number of subsample analyses. We look for subsamples when the relation between political contributions and firm performance should be stronger under our hypothesis but absent or of the reverse sign under the reverse causality explanation. We find that the positive relation between political contributions to economically relevant politicians and firm performance is stronger for poorly performing firms and firms closer to financial distress. This evidence is consistent with our hypothesis since the incentive to lobby government officials and the expected payoffs from this activity are highest during bad economic times. Note that under the reverse causality explanation, we expect that it is the well-performing firms that exhibit the strongest relation between political contributions and firm performance. Instead, we find the opposite. We also find that the positive relation between political contributions to economically relevant politicians and firm performance is strongest when contributions are made in close (re)election races. We again interpret this evidence as consistent with our hypothesis as the marginal dollar of contributions matters more to a politician in a close race against a strong opponent. Hence, politicians in close races should be more willing to trade favors for contributions. It is difficult to interpret this result under the reverse causality explanation, which would require that individuals residing nearby to well-performing firms are for some reason compelled to contribute more to politicians but only in close races.

Our second test focuses on an exogenous shock to the CD economic dependence status and on the impact of this shock on individual political contribution practices. We consider mergers and spinoffs that involve firms that operate in different industries and in different locations. Such restructurings change the set of economically relevant politicians for individuals residing in the bidder (or the parent) and the target (or the subsidiary) CD, so it is natural to ask whether individuals alter their contribution practices in response. We find evidence consistent with this assertion. In the merger sample, individuals increase their support of newly economically relevant politicians from before to after the merger. The largest increase in contributions comes from target CDs to politicians who are economically relevant to bidder firms. In contrast, the results for the spinoff sample show a notable decline in contributions from parent and subsidiary CDs to subsidiary and parent economically relevant politicians from before to after the spinoff. These results indicate that individuals strategically change their contribution practices and target politicians who become more economically relevant as a result of a merger or a spinoff.

Overall, the results in this paper suggest that individuals make political contributions strategically, with their economic livelihood in mind. Importantly, these contributions are valuable to firms in the sense that they are related to firm performance. The results in this paper are important for several reasons. First, we provide an important contribution to the literature on political connections. We show that not only firms establish political connections to gain access to politicians, but also individuals whose economic livelihood is dependent on politicians make contributions strategically with their economic interests in mind. In turn, these contributions are valuable to firms. One question that we do not comment on in this paper is how precisely political contributions generate value. We rely on previous literature and assume that political contributions matter because politicians care about reelection and need campaign financing to win. Thus, politicians are willing to trade favorable decisions for political contributions. Numerous papers present evidence consistent with this view, but inferences are often difficult because of endogeneity and other methodological concerns (see Ansolabehere et al. (2003) and Stratmann (2005) for excellent reviews). The results in this paper imply that contributors get value from their contributions, which is suggestive of quid pro quo arrangements between contributors and politicians.

Our second contribution is to the literature on geographic location and firm decision making. Numerous papers report evidence that geography matters for firm behavior (Gaspar and Massa, 2007; Becker, Cronqvist, and Fahlenbrach, 2011; Becker, Ivkovic, and Weisbenner, 2011; Francis, Hasan, John, and Waismann, 2007; Hilary and Hui, 2009; John, Knyazeva, and Knyazeva, 2011, to name a few). Kim, Pantzalis, and Park (2011) is a noteworthy study that analyzes a political dimension to geography and its impact on firms. The results in our paper also demonstrate that geography matters to firms. The channel that we identify here stems from the economic dependency of individuals on nearby firms. Because of this dependency, individuals make political contribution decisions that benefit firms and the contributing

individuals. So, unlike prior hypotheses that are mostly built around the view that geographic characteristics influence firm decision making, our hypothesis runs in the opposite direction. It is firm characteristics that affect the surrounding public's decisions. These decisions, in turn, have positive spillover effects on the nearby firms.

The rest of the paper is organized as follows. Section 2 describes our data sources and variable construction. Section 3 presents evidence that individuals strategically choose to contribute money to economically relevant politicians. Section 4 presents evidence that contributions to economically relevant politicians are associated with improvements in future firm performance. Section 5 concludes.

2. Data sources and variable construction

2.1. Data

Our sample consists of all individual hard-money political contributions to candidates for Congress for the period January 1991–December 2008. We obtain contributions data from the Federal Election Commission's (FEC) detailed individual contributions file which contains all individual contributions in excess of $200. The file includes information on (i) the name, address, and occupation/employment of the contributing individual, (ii) the identity of the receiving candidate and/or committee, and (iii) the date and the amount of the individual contribution. The original data set includes 9,314,217 contributions from individuals over our sample period. After deleting individual contributions to non-candidate committees (i.e., contributions to corporate and non-corporate political action committees (PACs) and contributions to national party committees), we are left with 4,874,994 contributions made to 8,302 unique political candidates running for office from all Congressional Districts (CDs). We merge this file with the FEC candidate summary file to obtain information on (i) the candidate's sought-after office, (ii) the incumbency status, (iii) the candidate's party affiliation, (iv) the CD that the candidate represents, and (v) the election outcome. For all elected officials, we further obtain data on their committee assignments and their party rankings on each serving committee. These data are from Charles Stewart's Congressional Data Page.[3]

We first assign all individual contributions to their respective CDs using zip code data as follows. The Census Bureau provides cartographic CD boundary files for every election cycle starting with the 103rd Congress (January 1993–January 1995). The size and shape of each CD are established by each state, and are based on the population data provided decennially by the Census Bureau. In our sample, the CDs for the 103rd Congress were the first to reflect the redistricting based on the 1990 Census. The CDs for the 108th Congress (January 2003–January 2005) were the first to reflect the redistricting based on the 2000 Census. In addition to decennial redistricting, several other intra-decennial redistricting decisions were made over our sample period, so we obtain CD boundaries data for every election cycle in our sample.[4] The Census Bureau also provides cartographic zip code boundary files, but unlike the CD boundary data, the zip code boundary data are available only for 2000. We assume that zip codes remain fixed for the duration of our sample, an assumption that biases us against finding any results, and use a geographic information system (GIS) to calculate the latitude and longitude of the geographic center of each CD and each zip code in the U.S. Zip codes are assigned to a CD if their geographic center falls within the CD boundary. Further details of this procedure are described in Appendix A.

Fig. 2 maps individual contribution totals by CD over our sample period. Two results stand out. First, there appears significant heterogeneity in political contributions across CDs. Contribution totals range from $905,069 for the 31st district in Texas (a strip in central Texas from north Austin to Stephenville) to $101.5 million for the 14th district in New York (Manhattan east side, Roosevelt Island, and neighborhoods of Astoria, Long Island City, and Sunnyside in Queens). Second, political contributions cluster in small geographic areas. The ten CDs with the highest contributions are New York's 14th district ($101.5 million), District of Columbia (DC) ($93.1 million), New York's 8th district ($57.5 million), Virginia's 8th district ($56.8 million), Maryland's 8th district ($49.9 million), Connecticut's 4th district ($41.5 million), California's 29th district ($36.6 million), Illinois's 10th district ($34.9 million), Illinois's 7th district ($32.2 million), and Georgia's 5th district ($30.3 million). Both of the New York districts are located in New York City, both Illinois districts are in Chicago, and the DC, Virginia, and Maryland districts are in close proximity to Washington, DC. Thus, three small areas of the country that represent less than 2% of all Congressional districts and population, account for 11.7% of all individual contributions which amount to almost half a billion dollars ($425.9 million). Similar evidence of the campaign finance clustering in a small number of wealthy, highly educated CDs is reported in Gimpel, Lee, and Pearson-Merkowitz (2008).

Table 1 provides a complementary account of CD political contribution patterns. CDs, on average, contribute $875,356 per election cycle which is spread across just over 100 candidates. The $8,417 average contribution per candidate per election cycle represents a significantly higher contribution amount than the amount contributed by corporations (Cooper, Gulen, and Ovtchinnikov (2010). It is well known that individuals are the largest donor group (Theilmann and Wilhite, 1989; Ansolabehere, de Figueiredo, and Snyder, 2003; Cooper et al., 2010). We similarly find that individuals finance the majority of candidates' campaigns, contributing, on average, 63.95% of total campaign funds. Obviously, individuals have a variety of motivations when making political contributions, including ideological, partisan, access-driven, or identity-based (Francia, Green, Herrnson, Powell, and Wilcox, 2003; Mansbridge, 2003).

[3] We thank Charles Stewart III for generously providing these data on his Web site http://web.mit.edu/17.251/www/data_page.html.

[4] In the 104th Congress, six states were redistricted: Georgia, Louisiana, Maine, Minnesota, South Carolina, and Virginia. In the 105th Congress, five states were redistricted: Florida, Georgia, Kentucky, Louisiana, and Texas. In the 106th Congress, three states were redistricted: New York, North Carolina, and Virginia.

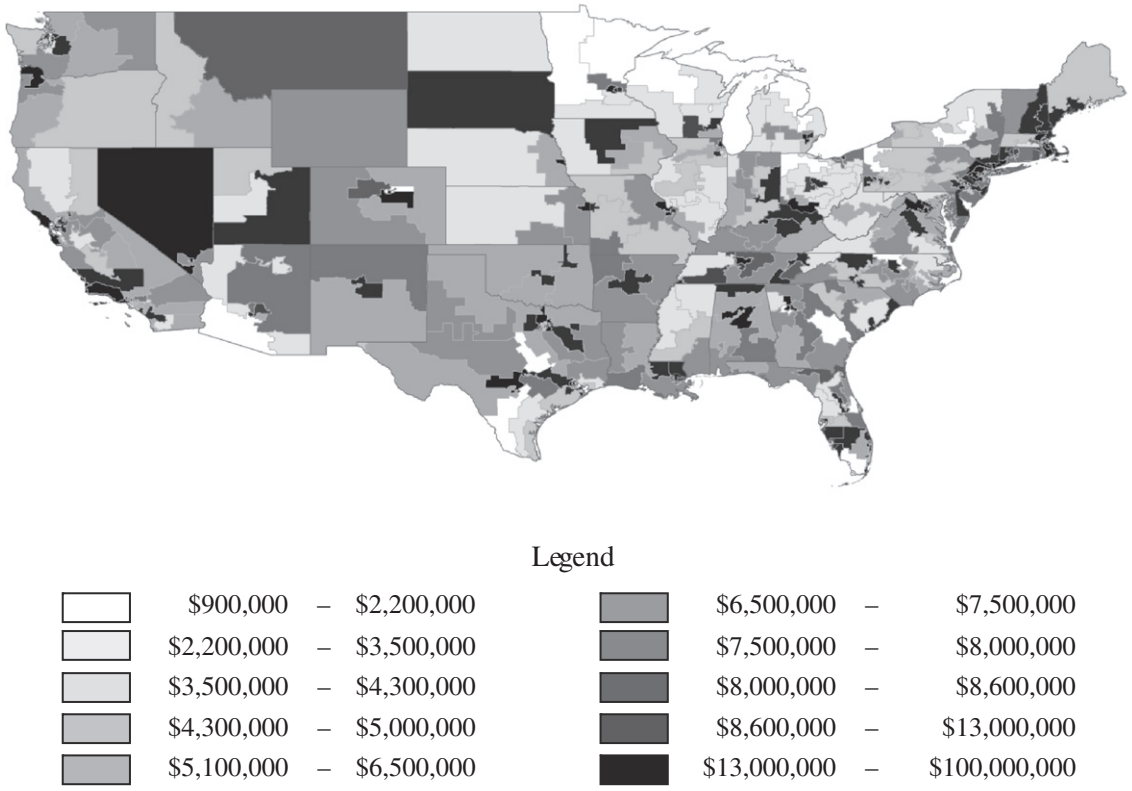

Fig. 2. Contribution totals by CD, 1991–2008. The data are from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The sample includes 4,874,994 contributions to 8,302 unique political candidates. We assign individual contributions to their Congressional Districts (CD) using the zip code data. The methodology for assigning contributions to their CDs is described in Section 2 and Appendix A. The figure plots total contribution amounts by each CD for our sample period, 1991–2008.

Table 1
Congressional district contribution characteristics, 1991–2008.

The data are from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The sample includes 4,874,994 contributions to 8,302 unique political candidates. We assign individual contributions to their Congressional Districts (CD) using the zip code data. The methodology for assigning contributions to their CDs is described in Section 2 and Appendix A. The table reports CD contribution characteristics per CD per election cycle. All contribution amounts are in 12/2008 dollars.

	Amount of contributions per election cycle						Number of supported candidates per election cycle					
Variable	Mean	Min	25th Per	Median	75th Per	Max	Mean	Min	25th Per	Median	75th Per	Max
Total contributions	$875,356	4,573	300,657	528,640	969,925	19,610,903	104	4	52	79	125	883
Congressional committees												
Appropriations	63,541	197	5,335	17,841	57,186	1,929,710	6	1	3	4	8	26
Small business	54,445	197	4,289	13,561	48,057	2,070,840	5	0	2	4	6	18
Armed services	54,201	911	4,023	13,706	50,499	3,300,991	5	0	2	4	6	21
Banking	54,047	552	3,575	12,502	44,944	3,406,934	4	0	2	3	6	19
Judiciary	53,765	142	3,422	11,944	42,188	3,646,303	4	0	2	3	5	17
Commerce	48,984	117	3,976	12,082	40,419	2,084,462	5	1	2	4	6	21
Foreign relations	48,541	259	3,472	11,019	40,020	1,431,820	4	0	2	3	6	19
Budget	47,307	361	3,740	12,420	40,941	2,042,063	4	0	2	4	6	21
Environment	45,815	371	2,910	9,706	33,884	2,854,661	4	1	2	3	5	18
Labor	42,474	142	3,311	10,179	33,278	2,379,084	4	0	2	3	5	19

In this paper, we investigate whether individuals also pursue strategic economic motives.

Most of our analysis below focuses on politicians who serve on Congressional committees with jurisdictions over firms in different industries, so it is instructive to examine CD contributions to various committees. Ranked by the average contribution amount, the top ten Congressional committees, all in the Senate, are Appropriations; Small Business; Armed Services; Banking, Housing, and Urban Affairs; Judiciary; Commerce, Science, and Transportation;

>Foreign Relations; Budget; Environment and Public Works; and Labor and Human Resources.[5] The average contribution totals range from $42,474 for the Labor and Human Resources committee to $63,541 for the Appropriations committee, with CDs supporting, on average, four to six members of each committee. Committee rankings based on our contribution totals are related to the rankings of powerful committees in Edwards and Stewart (2006). Six out of ten committees that receive the most money from CDs are also on the Edwards and Stewart (2006) list of powerful committees and the correlation between the two rankings is 0.462. It is also noteworthy that four out of six Senate committees that have clear industry jurisdictions and are defined below are on the list of the top ten recipients of CD contributions.

2.2. Hypotheses and variable construction

If individuals pursue economic motives when making political contributions, they should contribute money to politicians who are in a position to affect their economic well-being. Prior research finds that politicians who are most capable of influencing policy outcomes, such as senior members of Congress, majority party leaders, and ranking members of important committees, receive more political contributions (Jacobson, 1980; Grier and Munger, 1991; Romer and Snyder, 1994; Ansolabehere and Snyder, 1999). We build on this reasoning further. Our analysis derives from the geographic clustering of different industries (Glenn and Glaeser, 1997; Porter, 2000; Enright, 2003), which themselves fall into jurisdictions of different Congressional committees. Examples of industry clusters include the insurance industry in Connecticut, and the high tech industry in the Silicon Valley. We assert that individuals residing in such locations are economically affected by Congressional committees that oversee these industry clusters. Therefore, our first hypothesis is that these individuals are more likely to contribute to members of Congressional committees with jurisdiction over local industries. Thus, our testing strategy involves the identification of "economically dependent" CDs and matching them with "economically relevant" politicians.

We first identify Congressional committees with clear industry jurisdictions. These committees are the Agriculture, Nutrition, and Forestry (Senate (S)), Agriculture (House (H)), Armed Services (S), Armed Services/National Security (H), Banking, Housing, and Urban Affairs (S), Financial Services (H), Commerce, Science, and Transportation (S), Energy and Commerce (H), Energy and Natural Resources (S), Resources/Natural Resources (H), Environment and Public Works (S), Merchant Marine and Fisheries (H), and Transportation and Infrastructure (H). Table B1 in Appendix B summarizes industry jurisdictions of each committee in our study. Industry jurisdictions are from committee Web sites and are supplemented with data on committee jurisdictions from the Center for Responsive Politics. We also obtain the firm headquarters location data from Compustat and match the zip code of firms' headquarters to CDs using the methodology above.[6] Equipped with the Congressional jurisdiction data and the headquarters data, we compute four different measures of the CD economic dependence. First, we define CD i as economically dependent on politician j if the CD contains at least one firm that operates in an industry that falls under the jurisdiction of the committee that politician j sits on:

$$EDD_{ijt} = \begin{cases} 1 & \text{if CD}_i \text{ contains at least one firm in jurisdiction of politician}_j \\ 0 & \text{otherwise.} \end{cases} \tag{1}$$

To build on the concept of the geographic industry clustering further, we calculate three other measures of the CD economic dependence. We calculate the total number of firms that are located in a given CD and that operate in the jurisdiction of a given politician's Congressional committee:

$$EDD_{ijt}^{Firms} = \sum_{n=1}^{N} I_{nt}, \tag{2}$$

where I_{nt} is an indicator variable set to one if firm n is headquartered in CD i and operates in the jurisdiction of politician j and zero otherwise. We also calculate the total assets and the total employees of the above firms:

$$EDD_{ijt}^{Assets} = \sum_{n=1}^{N} I_{nt} \times Assets_{nt} \tag{3}$$

$$EDD_{ijt}^{Employees} = \sum_{n=1}^{N} I_{nt} \times Employees_{nt}, \tag{4}$$

where *Assets* and *Employees* are the firm total assets [at] and the total employees [emp] from Compustat and the rest of the variables are as defined above.[7]

[5] The Labor and Human Resources committee is renamed into Health, Education, Labor, and Pensions committee starting in the 107th Congress.

[6] The methodology of identifying a firm location by the location of its headquarters is standard in the literature. One limitation with our data is that we only know the current location of firms in our sample. Firms very infrequently relocate their headquarters (Pirinsky and Wang, 2006), however, so any resulting measurement error is likely to be quite small. Moreover, unless it is systematically related to our dependent variables, the measurement error that does exist actually biases us against finding any results. Ivkovic and Wesibenner (2005), Hilary and Hui (2009), and Seasholes and Zhu (2010), among others, similarly use Compustat data to identify firm locations.

[7] A couple of examples may help fix ideas. New York's 8th Congressional district is home to the headquarters of ten insurance companies in 2008. The combined assets of these companies amount to $106 billion. The companies employ 75,000 employees. We define New York's 8th district as economically dependent on politicians who serve on the House Financial Services and the Senate Banking, Housing, and Urban Affairs committees (Table B1). As reported above, the district contributed $57.7 million to politicians over our sample period. Members of the House Financial Services and of the Senate Banking, Housing, and Urban Affairs committees received $2.8 million (4.9%) and $6.9 million (12.1%) of that money, respectively. Similarly, 41 oil companies are headquartered in Texas' 7th district, with combined assets and employees of $327 billion and 240,000, respectively. We define Texas' 7th district as economically dependent on politicians who serve on the House Energy and Commerce, and Natural Resources committees as well as the Senate Commerce, Science, and Transportation, Energy and Natural Resources, and Environment and Public Works committees. The district contributed $28.2 million over our sample period, of which $5.11 million (18.12%) went to members of the above committees.

We find below that individuals residing in economically dependent CDs indeed contribute significantly more money to politicians on Congressional committees with jurisdiction over local industries. This result gives rise to our second and main hypothesis. If individuals contribute more money to economically relevant politicians, and if politicians are willing to trade policy favors for contributions, there should be a positive relation between individual political contributions to economically relevant politicians and firm performance.

To test this hypothesis, we aggregate at the firm level the number and the amount of individual political contributions to economically relevant politicians:

$$EDDC_{it}^{Freq} = \sum_{j=1}^{J} Contribution_{jt} \quad (5)$$

$$EDDC_{it}^{Amt} = \sum_{j=1}^{J} Amount_{jt,} \quad (6)$$

where $Contribution_{jt}$ is the total number of contributions that politician j receives from the firm's CD and $Amount_{jt}$ is the total amount of contributions that politician j received from the firm's CD. The descriptions of all political contribution variables are provided in Table B2 in Appendix B.

Table 2 presents the descriptive statistics for contributions to economically relevant politicians. In Panel A, individuals, on average, make 42 political contributions per year to economically relevant politicians, with the average total amount contributed of $36,299. Both statistics are significantly right-skewed, with medians equal to zero. We also calculate the frequency and the amount of political contributions to politicians who are not economically relevant, C^{Freq} and C^{Amt}, and report the results in the bottom rows of Panel A. Contributions to non-economically relevant politicians appear substantially larger but this is to be expected since they are calculated at the CD, not at the firm, level. In fact, a typical CD has 11.34 firms in our sample, so the intensity of contributions to economically relevant politicians is similar to that of contributions to other politicians.

In Panel B, we present correlations of political contributions with firm characteristics used as control variables in

Table 2
Political contributions descriptive statistics, 1991–2008.

The data are from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The sample includes 4,874,994 contributions to 8,302 unique political candidates. We assign individual contributions to their Congressional Districts (CD) using the zip code data. The methodology for assigning contributions to their CDs is described in Section 2 and Appendix A. We calculate the total number and the total amount of political contributions to economically relevant politicians, $EDDC^{Freq}$ and $EDDC^{Amt}$, as follows:

$$EDDC_{it}^{Freq} = \sum_{j=1}^{J} Contribution_{jt}$$

$$EDDC_{it}^{Amt} = \sum_{j=1}^{J} Amount_{jt,}$$

where $Contribution_{jt}$ is the total number of political contributions that economically relevant politician j receives from individuals who reside in the firm's CD and $Amount_{jt}$ is the total amount of contributions that economically relevant politician j received from individuals who reside in the firm's CD. Economically relevant politicians are defined in Section 2. We calculate analogously the frequency and the amount of political contributions to politicians who are not economically relevant, C^{Freq} and C^{Amt}. Panel A reports the descriptive statistics for our political contribution measures. Panel B reports correlations of our political contribution measures with firm characteristics used as control variables in performance regressions in Tables 5 through 7. [a], [b], [c], Indicates significance at the 1%, 5%, and 10% level, respectively.

Panel A: Descriptive statistics

Variable	Mean	Std. dev.	Min	25th Per	Median	75th Per	Max
$EDDC^{Freq}$	42	117	0	0	0	24	3,051
$EDDC^{Amt}$ ($)	36,299	107,174	0	0	0	20,008	3,951,702
C^{Freq}	670	928	0	144	365	838	9,562
C^{Amt} ($)	543,011	803,240	0	110,303	285,578	649,911	7,683,324

Panel B: Correlations

Variable	$EDDC^{Freq}$	$EDDC^{Amt}$	C^{Freq}	C^{Amt}
$EDDC^{Freq}$	1			
$EDDC^{Amt}$	0.9767[a]	1		
C^{Freq}	0.2558[a]	0.2496[a]	1	
C^{Amt}	0.2562[a]	0.2617[a]	0.9776[a]	1
$CorpEDDC^{Freq}$	0.0981[a]	0.0930[a]	0.0252[a]	0.0255[a]
$CorpEDDC^{Amt}$	0.0953[a]	0.0916[a]	0.0259[a]	0.0270[a]
Q	−0.0436[a]	−0.0420[a]	0.0279[a]	0.0329[a]
$Size$	0.0271[a]	0.0308[a]	0.0360[a]	0.0423[a]
ROA	0.0011	0.0047	−0.0654[a]	−0.0568[a]
$CAPX$	0.1020[a]	0.0971[a]	0.0040	0.0010
RD/A	−0.0883[a]	−0.0878[a]	0.0360[a]	0.0273[a]

the performance regressions below. Contributions to economically relevant politicians are significantly positively correlated with firm size and capital expenditures and negatively correlated with market-to-book and R&D expenditures. Two additional control variables that we consider in all our performance regressions are the frequency and the amount of *corporate* political contributions to economically relevant politicians, $CorpEDDC^{Freq}$ and $CorpEDDC^{Amt}$. Cooper et al. (2010) report that close to 10% of U.S. firms make political contributions. Corporate political contributions are also related to future firm performance, so in our tests, it is important to disentangle the effects of individual contributions from those of corporate contributions. $CorpEDDC^{Freq}$ and $CorpEDDC^{Amt}$ are defined by summing at the firm level all contributions made by the firm's Political Action Committee (PAC) to economically relevant politicians analogously to Eqs. (5) and (6). If a firm does not have an established PAC, the value of $CorpEDDC^{Freq}$ and $CorpEDDC^{Amt}$ is set to zero. The correlation results in Panel B indicate that individual political contributions are in fact positively correlated with corporate contributions, especially when contributions are made to economically relevant politicians. This result is consistent with the view that individuals, at least in part, make political contributions strategically by targeting politicians who are economically relevant for the nearby firms.

Political contributions to economically relevant politicians vary systematically not only with firm characteristics but also across CDs. For example, the ten firms with the most political contributions from nearby residents and their locations are Allied Healthcare headquartered in New York's 14th district (with $21.2 million in contributions over our sample period), Occidental Petroleum in California's 29th district ($16.3 million), Emcor Group in Connecticut's 4th district ($12.9 million), Hess Corp in New York's 14th district ($12.8 million), Consolidated Edison in New York's 14th district ($9.7 million), Verizon in New York's 8th district ($8.8 million), Williams Controls in Oregon's 1st district ($8.1 million), Overseas Shipholding Group in New York's 14th district ($7.8 million), Warren Resources in New York's 14th district ($7.7 million), and Ryland Group in California's 24th district ($7.5 million). It is quite evident that contributors are non-randomly distributed in space with half of the top ten firms headquartered in a single Congressional district.[8] From a slightly different perspective, the ten CDs with the highest per-firm average contributions to economically relevant politicians are District of Columbia ($2 million average per-firm contributions over our sample period), Texas' 7th district ($1.2 million), Texas' 18th district ($1.0 million), Virginia's 8th district ($1.0 million), Colorado's 1st district ($993 thousand), New York's 14th district ($947 thousand), Maryland's 8th district ($846 thousand), California 29th district ($780 thousand), Oregon's 1st district ($715 thousand), and Oklahoma's 1st district ($686 thousand).[9]

Again, there appears a strong spatial concentration of political contributions to economically relevant politicians. Fig. 3 and Table 3 explore in detail the sources of this concentration. First, political contributions are related to the geographic clustering of different industries across the U.S. Fig. 3 plots this relation. We first sort Fama-French 48 industries based on the average amount of political contributions made to economically relevant politicians by local residents over our sample period. The five industries with the highest average contributions from local residents are Petroleum and Natural Gas ($1.7 million per firm), Construction ($1.3 million), Utilities ($1 million), Aircraft ($995 thousand), and Healthcare ($911 thousand). The five industries with the lowest contributions from local residents are Food Products ($385 thousand), Agriculture ($286 thousand), Pharmaceutical Products ($259 thousand), Medical Equipment ($169 thousand), and Wholesale ($13 thousand). Second, we use the ArcMap "Point Density" tool to identify geographic clusters of the 48 industries in our sample. The clusters are defined as intersections of 150-km-radius areas centered on the location of each firm from the same industry. We define industry-locations as more clustered if they contain a greater number of these area intersections. We then independently sort industry-locations into quintiles based on their "clustering score." Finally, we intersect the two sorts and plot the locations of the highest (lowest) contributing industries that are also the most (least) clustered in Panel A (Panel B). The results are quite salient. In Panel A, three out of five highest contributing industries are also in the top decile of the most clustered industries. In contrast, in Panel B, two out of five least contributing industries are in the bottom decile of the least clustered industries.

Table 3 expands this analysis to include other geographic characteristics that impact the individuals' propensity to support economically relevant politicians. We estimate seven Poisson models that relate the number of contributions to economically relevant politicians to characteristics of the households that reside in contributing CDs (such as age, race, and education), CD employment and income characteristics, as well as characteristics of the business environment (such as the average profitability of firms in the CD, their average size, and investment intensity).[10]

In the first two models, we formalize the positive relation between industry clustering (measured by the clustering score or the number of firms in a CD) and political contribution activity. State gross domestic product (GDP) is negatively related to contribution activity, especially when we control for industry clustering. The GDP result suggests that individuals are more politically active during bad economic times. In the last three models, we show that CDs with older population, higher

[8] In a robustness test, we verify that our main results are not driven by firms headquartered in the New York's 14th Congressional district.

[9] At the other extreme, the ten CDs with the lowest per-firm average contributions to economically relevant politicians are New York's 24th district ($140 average per-firm contributions over our sample period), California's 2nd district ($151), Florida's 2nd district ($625), California's 39th district ($959), New York's 12th district ($1,060), North Carolina's 7th district ($1,542), Pennsylvania's 3rd district ($2,572), Missouri's 8th district ($2,863), South Carolina's 3rd district ($3,044), and Washington's 2nd district ($3,080).

[10] The results are similar in Tobit models that relate the amount of political contributions to economically relevant politicians to these geographic characteristics.

Fig. 3. Geographic industry density characteristics, 1991–2008. The data is from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The sample includes 4,874,994 contributions to 8,302 unique political candidates. We assign individual contributions to their Congressional Districts (CD) using the zip code data. The methodology for assigning contributions to their CDs is described in Section 2 and Appendix A. We sort Fama-French 48 industries based on the average amount of political contributions made to economically relevant politicians by local residents over our sample period. Economically relevant politicians are defined in Section 2. We also calculate the industry-location clustering score for all industries and all locations in our sample. The clustering score is defined in Section 2. Panel A plots the locations of the highest average contributing industries that are also in the top quintile of the industry clustering score. Panel B plots the locations of the lowest average contributing industries that are also in the bottom quintile of the industry clustering score.

household income, and larger labor force contribute more to economically relevant politicians. Note that the inclusion of these CD characteristics eliminates the relation between the clustering score and political contribution activity. We investigate further and find that it is the inclusion of household income that renders the relation between the industry clustering score and political contribution activity insignificant.[11] Finally, there is evidence that CDs with larger firms that spend more on capital expenditures contribute more to economically relevant politicians. These results are quite intuitive and generally consistent with prior literature (Welch, 1981; Gimpel, Lee, and Kaminski, 2006; Campante, 2011). The results also underscore the importance of controlling for the above and any other unobserved CD-level characteristics in our analysis below. Hence, we include CD fixed effects in all our specifications and focus on the within-CD variation in political contributions to economically relevant politicians and their effects on firm performance. The next two sections provide a detailed analysis of our hypotheses.

3. Contributions from economically dependent congressional districts

We start with the first hypothesis and find a significantly higher propensity of individuals residing in economically dependent CDs to make political contributions to economically relevant politicians. For every year of

[11] The correlation between the clustering score and household income is 0.27 in our sample.

Table 3
Determinants of individual political contributions to economically relevant politicians, 1991–2008.

The data are from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The sample includes 4,874,994 contributions to 8,302 unique political candidates. We assign individual contributions to their Congressional Districts (CD) using the zip code data. The methodology for assigning contributions to their CDs is described in Section 2 and Appendix A. We calculate the total number of political contributions made to economically relevant politicians as defined in Eq. (5) in Section 2. Economically relevant politicians are defined in Section 2. The frequency of political contributions to economically relevant politicians during the 1991–1999 and the 2001–2008 periods is regressed on characteristics of the Congressional Districts (CD) measured in the 1990 and the 2000 decennial Censuses, respectively. *Clustering score* is the industry clustering score defined in Section 2. *Firms* is the number of firm headquarters in the CD from Compustat. *State GDP* is the inflation-adjusted GDP from the Bureau of Economic Analysis. *Percent white* is the percentage of the CD population that is white. *Percent > 18 yr* and *Percent > 65 yr* are the percentages of the CD population that are older than 18 years and 65 years, respectively. *Education* is the percentage of the CD population with at least some college-level education. *Households* is the number of households in the CD. *Income* is the median household income in the CD. *Labor force* is the percentage of the CD population that is in the labor force. *Employed* is the percentage of the CD labor force that is employed. These variables are from the 1990 and the 2000 decennial U.S. Censuses. *ROA*, *CAPX*, and *RD/ A*, are the average ROA, capital expenditures, and R&D expenditures ratios of firms headquartered in the CD. *Size* is the average market capitalization of firms headquartered in the CD. C^{Freq} is the frequency of political contributions from the CD to politicians who are not economically relevant. All regressions include year fixed effects. Standard errors are adjusted for heteroskedasticity and clustered by CD. [a], [b], [c], Indicates significance at the 1%, 5%, and 10% level, respectively.

Variable	1		2		3		4		5		6		7	
Clustering score	0.3670[a]	(0.0644)					0.1665[b]	(0.0653)	−0.0224	(0.0594)	0.0044	(0.0489)	0.0041	(0.0471)
Firms			0.0147[a]	(0.0011)			0.0137[a]	(0.0011)	0.0099[a]	(0.0013)	0.0055[a]	(0.0008)	0.0046[a]	(0.0008)
State GDP					−0.1179	(0.1630)	−0.4904[a]	(0.1824)	−0.6984[a]	(0.1577)	−0.2203[b]	(0.1032)	−0.2094[b]	(0.0961)
Percent white									−1.4676[a]	(0.3425)	−0.9236[a]	(0.2394)	−0.7532[a]	(0.2295)
Percent > 18 yr									7.2430[a]	(1.9039)	−0.5608	(0.9684)	−0.9041	(0.8983)
Percent > 65 yr									0.6844	(2.1233)	4.3824[a]	(1.3821)	5.2443[a]	(1.4645)
Education									1.4227[a]	(0.5369)	0.2338	(0.5323)	0.4984	(0.4902)
Households									−0.0000[b]	(0.0000)	−0.0000	(0.0000)	−0.0000	(0.0000)
Income									0.0377[a]	(0.0060)	0.0085[c]	(0.0045)	0.0090[b]	(0.0043)
Labor force									−0.2382	(1.5746)	2.6094[b]	(1.1153)	3.0209[b]	(1.2782)
Employed									−1.3525	(1.9980)	2.0831	(1.8332)	0.3601	(1.5809)
ROA									−0.1948	(0.6642)			0.0793	(0.5270)
CAPX									0.5974[a]	(0.2974)			0.8809[a]	(0.2422)
RD/A									−3.0378[a]	(1.0090)			−0.3770	(0.7584)
Size									0.0035[c]	(0.0020)			0.0031[c]	(0.0017)
C^{Freq}											0.0006[a]	(0.0001)	0.0006[a]	(0.0001)

data, we estimate the following regression:

$$C_{ijt} = a_i + a_j + C_{ijt-1} + EDD_{ijt} + \varepsilon_{ijt}, \quad (7)$$

where C_{ijt} is a political contribution made from CD i to politician j at time t, a_i and a_j are CD- and politician-specific fixed effects, and EDD_{ijt} is an indicator variable set to one if a contribution is made from an economically dependent district. C_{ijt-i} captures possible persistence in CD giving. Linear fixed effects, a_i and a_j, capture all sources of observed and unobserved heterogeneity in contribution practices across CDs and across politicians, respectively. Examples of the former include variables studied in Table 3. Examples of the latter include the politician's party affiliation, the incumbency status, and any ideological positions held. Thus, by exploiting the within-CD and the within-politician variation in contribution practices in Eq. (7), we control for all potential confounding covariates at the CD and the politician levels.

Following Fama and MacBeth (1973), we average coefficients across years and compute standard errors from the time-series variation in parameter estimates.[12] This approach, also used in Fama and French (2001, 2002), allows for correlation of residuals across CDs and politicians. We use four measures of CD economic dependence defined in Eqs. (1)–(4) above and estimate three separate models of CD contributions: (i) a logit model relating the contribution probability to the CD economic dependence status, (ii) a Poisson model relating the contribution frequency to the CD economic dependence status, and (iii) a left-censored Tobit model relating the contribution total amount (censored at zero) to the CD economic dependence status. The results of estimating all 12 models are reported in Panel A of Table 4.

The results are consistent with the first hypothesis. Contributions are more likely, more frequent, and of higher amount when a CD is economically dependent on a politician. In the first row, the coefficient on the *EDD* indicator is positive and at least marginally significant in all three models. This implies that CDs that contain one or more firms in the politician's Congressional committee jurisdiction are more likely to make political contributions to that politician. These economically dependent CDs also contribute more frequently and contribute higher amounts.

The remaining three rows present the results for the other measures of the CD economic dependence status. The coefficients on EDD^{Firms}, EDD^{Assets}, and $EDD^{Employees}$ are positive in all three models and significant at the 1% level in all but one specification. Compared to a simple indicator, all three variables are more precise measures of the geographic clustering of industries, so the results in the bottom three rows of Panel A provide stronger evidence that CDs with greater industry clustering and, therefore, with greater economic dependence, have an increased tendency to target economically relevant politicians.

To gauge the economic significance of the relation between the CD economic dependence status and its tendency to contribute to economically relevant politicians, we perform the following simple calculation. We sort all CDs into deciles based on the average values of their economic dependence variables and calculate the total amount of political contributions to economically dependent politicians for each decile. The results are economically significant. Specifically, CDs in the bottom EDD^{Firms} decile contribute a total of $84.9 million to economically relevant politicians over our sample period. In contrast, CDs in the top EDD^{Firms} decile contribute a total of $172.3 million to economically relevant politicians. This represents a 103% increase in the political contribution total as we move from the least economically dependent CDs (with an average of 2.7 economically dependent firms) to the most economically dependent CDs (with an average of 23.1 economically dependent firms). Similarly, when CDs are sorted into the EDD^{Assets} and $EDD^{Employees}$ deciles, the total amount of political contributions to economically relevant politicians increases from $69.9 million and $78.0 million for CDs in the bottom respective deciles to $168.2 million and $152.9 million for CDs in the top respective deciles. This represents, respectively, a 141% and a 96% increase in the political contribution total as we move from the least economically dependent CDs to the most economically dependent CDs.

In Panel A of Table 4, we treat all CD political contributions equally. It is plausible, however, that individuals making contributions may rationally discriminate between local and non-local politicians, especially if local politicians are also economically relevant. On one hand, it is possible that individual contributors are less likely to contribute money to a local politician because they can instead pledge voter support (Bombardini and Trebbi, 2011). On the other hand, if political contributions represent an investment in political capital and individuals rationally maximize the expected return on their investment, they may be more likely to contribute to a local politician because of their own voting expectation (Stratmann, 1992). To capture the incremental effect of the politician locality, we extend Eq. (7) and include an indicator variable for contributions received from the politician's own Congressional district as well as the interaction between the locality indicator and the CD economic dependence variables above:

$$C_{ijt} = a_i + a_j + C_{ijt-1} + OD_{ijt} + EDD_{ijt} + OD_{ijt} \times EDD_{ijt} + \varepsilon_{ijt}, \quad (9)$$

where OD_{ijt} is an indicator variable set to one if a contribution is made from the politician's own district and the rest of the variables are as defined above. The results are presented in Panel B of Table 4.

Two results are evident. First, the coefficients on all economic dependence variables themselves, which in this specification measure the tendency of individual

[12] We use the Fama-MacBeth approach in this section because it is computationally feasible. The alternative approach using pooled data would involve estimating the following model:

$$C_{ijt} = a_t + a_i + a_j + (a_t \times a_i) + (a_t \times a_j) + C_{ijt-1} + EDD_{ijt} + \varepsilon_{ijt}, \quad (8)$$

where a_t are year fixed effects and the rest of the variables are as defined above. In this model, the interactions of fixed effects, $(a_t \times a_i)$ and $(a_t \times a_j)$, capture unobserved heterogeneity in contributions across CDs and time (such as the CD wealth and income, population, and education level) and across politicians and time (such as the politician's age and tenure in Congress), respectively. Unfortunately, the estimation of such a model is computationally prohibitive since it requires identification of 19 year fixed effects, 466 CD fixed effects, 7,781 politician fixed effects, 8,388 CD-year interactions, and 24,375 politician-year interactions.

Table 4
Political contributions from economically dependent Congressional districts, 1991–2008.

The data are from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The sample includes 4,874,994 contributions to 8,302 unique political candidates. We assign individual contributions to their Congressional Districts (CD) using the zip code data. The methodology for assigning contributions to their CDs is described in Section 2 and Appendix A. For each CD, we compute four measures of its economic dependence:

$$EDD_{ijt} = \begin{cases} 1 & \text{if CD}_i \text{ contains at least one firm in jurisdiction of politician}_j \\ 0 & \text{otherwise} \end{cases}$$

$$EDD_{ijt}^{Firms} = \sum_{n=1}^{N} I_{nt}$$

$$EDD_{ijt}^{Assets} = \sum_{n=1}^{N} I_{nt} \times Assets_{nt}$$

$$EDD_{ijt}^{Employees} = \sum_{n=1}^{N} I_{nt} \times Employees_{nt,}$$

where I_{nt} is an indicator variable set to one if firm n is headquartered in CD i and operates in the jurisdiction of politician j and zero otherwise, *Assets* are the firm total assets, and *Employees* are the firm total employees. The table estimates 12 regressions that relate the CD contribution intensity to its economic dependence status. The regression specification in Panel A is described in Eq. (7) in Section 3. The regression specification in Panel B is described in Eq. (9) in Section 3. All regressions are estimated with CD and politician fixed effects. Each regression includes 624,071 observations from CDs and politicians with a non-zero within-CD and within-politician variation in the independent variables. Columns 1 and 2 present the results from the logit model that relates the contribution probability to the CD economic dependence status. Columns 3 and 4 present the results from the Poisson model that relates the contribution frequency to the CD economic dependence status. Columns 5 and 6 present the results from the Tobit model that relates the contribution total amount to the CD economic dependence status. We estimate each model for every year of data and then average the coefficients across years and compute standard errors from the time-series variation in parameter estimates. Standard errors (SE) are reported in parentheses. [a], [b], [c], Indicates significance at the 1%, 5%, and 10% level, respectively.

	Logit		Poisson		Tobit	
	Parameter	SE	Parameter	SE	Parameter	SE
Variable	1	2	3	4	5	6
Panel A: Main results						
EDD	0.0322[c]	(0.0159)	0.1004[a]	(0.0259)	230.47[c]	(113.54)
EDD^{Firms}	0.0075[a]	(0.0009)	0.0104[a]	(0.0021)	104.60[a]	(16.66)
EDD^{Assets}	0.0004[a]	(0.0001)	0.0011[a]	(0.0003)	10.11[a]	(2.57)
$EDD^{Employees}$	0.0005[a]	(0.0002)	0.0004	(0.0003)	6.36[a]	(1.60)
Panel B: Interactions with politician's own district indicator						
EDD	0.0147	(0.0159)	0.0154	(0.0197)	57.65	(122.91)
$EDD \times OD$	0.1677[c]	(0.0885)	−0.0567	(0.0405)	1,761.98	(2,020.86)
EDD^{Firms}	0.0072[a]	(0.0010)	0.0077[a]	(0.0012)	75.20[a]	(12.70)
$EDD^{Firms} \times OD$	0.0501[a]	(0.0140)	−0.0107[b]	(0.0045)	803.87[b]	(319.49)
EDD^{Assets}	0.0004[a]	(0.0001)	0.0009[a]	(0.0003)	6.50[a]	(1.56)
$EDD^{Assets} \times OD$	0.0085[b]	(0.0030)	−0.0012[a]	(0.0004)	101.04[b]	(38.57)
$EDD^{Employees}$	0.0004[b]	(0.0002)	0.0006[b]	(0.0003)	3.36[b]	(1.17)
$EDD^{Employees} \times OD$	0.0066[b]	(0.0024)	−0.0015[b]	(0.0005)	59.23[b]	(23.74)

contributors to support non-local economically relevant politicians, are positive and, except for the *EDD* indicator, statistically significant. Thus, the economic dependence effect that we are finding is not merely a local constituency effect. In other words, it is not the case that politicians who we think are economically relevant are simply local politicians who raise more money from their own districts. Second, there appears no robust evidence on whether local economically relevant politicians are any more likely to be targeted by their own constituents compared to other contributors. In the logit and Tobit models, the coefficients on interactions of the locality indicator with the economic dependence variables are positive and mostly significant, but in the Poisson models the coefficients on the interactions are negative and usually significant. Therefore, we do not draw any conclusions with respect to whether individuals discriminate between local and non-local economically relevant politicians in their contribution decisions.

The methodology in this section is robust to all CD-level and all politician-level confounding covariates. In a Web appendix, we subject the analysis in this section to a number of robustness tests which, collectively, allow us to make a stronger statement about the propensity of economically dependent CDs to contribute to economically relevant politicians. We also perform a number of subsample analyses in the online appendix to further rule out alternative explanations for our baseline results. Collectively, the results of all these tests provide strong evidence that individuals make political contributions strategically by targeting politicians who are economically relevant.

4. Individual political contributions and firm performance

We now proceed to our main hypothesis and analyze operating performance of firms located in economically dependent CDs. If individual political contributions, at least in part, represent a positive net present value (NPV) investment in political capital, we expect a positive relation between political contributions from economically dependent CDs and future firm performance. We proceed in three steps. First, we identify a strong positive association between political contributions from economically dependent CDs and future firm performance in the overall sample. Second, we attempt to tackle reverse causality by identifying situations when the relation between political contributions and firm performance should be stronger under our hypothesis but absent or of the reverse sign under the reverse causality explanation. Third, we set the bar significantly higher and analyze how individual political contributions adjust to exogenous changes in the CD economic dependence status.

4.1. Main results

We estimate two models that relate individual political contributions to future firm performance:

$$\begin{aligned}\Delta IAROA_{it} = {} & a_{CD} + a_{Ind} + a_t + Ind\ size_{it} + \Delta\mathrm{Ln}(Q_{it-1}) \\ & + \Delta\mathrm{Ln}(Size_{it-1}) + \Delta IAROA_{it-1} \\ & + \Delta\mathrm{Ln}(CorpEDDC_{it-1}) + \Delta\mathrm{Ln}(C_{it-1}) \\ & + \Delta\mathrm{Ln}(EDDC_{it-1}) + \varepsilon_{it} \end{aligned} \tag{10}$$

$$\begin{aligned}\Delta IAQ_{it} = {} & a_{CD} + a_{Ind} + a_t + Ind\ size_{it} + \Delta CAPEX_{it-1} \\ & + \Delta R\&D_{it-1} + \Delta\mathrm{Ln}(Size_{it-1}) \\ & + \Delta ROA_{it-1} + \Delta\mathrm{Ln}(CorpEDDC_{it-1}) + \Delta\mathrm{Ln}(C_{it-1}) \\ & + \Delta\mathrm{Ln}(EDDC_{it-1}) + \upsilon_{it}, \end{aligned} \tag{11}$$

where $\Delta IAROA_{it}$ is the industry-adjusted ROA change for firm i in year t defined as $(ROA_{it} - ROA_{it-i}) - (IROA_{it} - IROA_{it-i})$, $IROA_{it}$ is the industry median ROA ratio, $Ind\ size_{it}$ is the industry size measured by the number of firms in firm i's industry and located in firm i's CD in year t, $\Delta\mathrm{Ln}(Q_{it-i})$ is the change in the logarithm of market-to-book from year $t-2$ to $t-1$, $\Delta\mathrm{Ln}(Size_{it-i})$ is the change in the logarithm of market capitalization, $\Delta\mathrm{Ln}(CorpEDDC_{it-i})$ is the change in the logarithm of the number and the amount of corporate political contributions defined similarly to Eqs. (5) and (6) but using data on corporate political contributions (Cooper et al., 2010), ΔIAQ_{it} is the industry-adjusted change in market-to-book defined as $(Q_{it} - Q_{it-i}) - (IQ_{it} - IQ_{it-i})$, IQ_{it} is the industry median market-to-book ratio, $\Delta CAPEX_{it-i}$ is the change in the firm's capital expenditures ratio, $\Delta R\&D_{it-i}$ is the change in the firm's R&D expenditures ratio, and a_{CD}, a_{Ind}, and a_t are the CD, industry, and year fixed effects. The CD fixed effect, a_i, captures all sources of heterogeneity in firm performance across Congressional districts (see Table 3). Examples include characteristics of the local labor force, access to local capital markets, and any performance spillover effects that stem from the geographic clustering of firms within a CD. Similarly, the industry and year fixed effects, a_{Ind} and a_t, capture all sources of unobserved heterogeneity in firm performance across industries and time. We estimate Eqs. (10) and (11) in first differences to capture the effects of changes in political contribution practices on changes in firm performance.

ROA is measured as income before extraordinary items [ib] over lagged assets [at]. Q is measured as market equity (shares outstanding [csho] times the stock price [prcc_f]) plus total debt [dltt+dlc] plus preferred stock liquidating value [pstkl] minus deferred taxes and investment tax credit [txditc] all over assets. Capital expenditures and R&D expenditures are measured as capital expenditures [capex] over lagged assets and as the research and development expense [xrd] over lagged assets, respectively. All control variables are from prior literature (McConnell and Servaes, 1990; Ferris, Jagannathan, and Pritchard, 2003; Cooper, Gulen, and Ovtchinnikov, 2010; Coles, Lemmon, and Meschke, 2012, among others). The error terms in Eqs. (10) and (11), ε_{it} and υ_{it}, are assumed to be possibly heteroskedastic and correlated within firms and across years (Petersen, 2009). All variables are winsorized at the upper and lower one-percentiles.

Eqs. (10) and (11) include two sets of measures of individual political contributions. $\Delta\mathrm{Ln}(EDDC_{it-i})$ is the change in the logarithm of the number and the amount of individual contributions to economically relevant politicians defined in Eqs. (5) and (6) above. $\Delta\mathrm{Ln}(C_{it-i})$ is the change in the logarithm of the number and the amount of individual contributions to all other politicians. When both of these variables are included in the regression, the former variable picks up the cross-sectional variation in contribution intensity related to the politician's economic relevancy status. The latter variable controls for any remaining cross-sectional variation in contribution intensity related to ideological, partisan, and other motives.

Table 5 presents the results. In total, we estimate four separate models. In Panel A columns 1–6, we relate the frequency of individual political contributions to the industry-adjusted ROA changes; in columns 7–12, we replace the frequency with the amount of contributions and relate it to the industry-adjusted ROA changes. In Panel B, we relate the frequency (columns 1–6) and the amount (columns 7–12) of individual political contributions to the industry-adjusted market-to-book changes.

In columns 1 and 2 and columns 7 and 8, respectively, we consider the frequency and the amount of contributions made only to non-economically relevant politicians. There is little relation between changes in these contributions and changes in future operating performance. The coefficient on $\Delta\mathrm{Ln}(C_{it-i})$ is insignificantly negative in all four specifications. These results present the first challenge to the reverse causality explanation. If it were the case that persistent good firm performance induced local residents to contribute more to politicians, we would expect a positive relation between all contributions, including those made to non-economically relevant politicians, and firm performance. Instead, the coefficient on $\Delta\mathrm{Ln}(C_{it-i})$ is indistinguishable from zero.

We do find a strong positive relation between changes in contributions to economically relevant politicians and changes in firm performance in columns 3 and 4 and columns 9 and 10. In ROA regressions, the coefficient on $\Delta\mathrm{Ln}(EDDC_{it-i})$ is positive and highly significant in both

Table 5
Firm operating performance as a function of individual political contributions, 1991–2008.

The political contributions data are from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The sample includes 4,874,994 contributions to 8,302 unique political candidates. We assign individual contributions to their Congressional Districts (CD) using the zip code data. The methodology for assigning contributions to their CDs is described in Section 2 and Appendix A. We calculate the total number and the total amount of political contributions to economically relevant politicians, $EDDC^{Freq}$ and $EDDC^{Amt}$, as follows:

$$EDDC_{it}^{Freq} = \sum_{j=1}^{J} Contribution_{jt}$$

$$EDDC_{it}^{Amt} = \sum_{j=1}^{J} Amount_{jt,}$$

where $Contribution_{jt}$ is the total number of political contributions that economically relevant politician j receives from individuals who reside in the firm's CD and $Amount_{jt}$ is the total amount of contributions that economically relevant politician j received from individuals who reside in the firm's CD. Economically relevant politicians are defined in Section 2. We calculate analogously the frequency and the amount of political contributions to politicians who are not economically relevant, C^{Freq} and C^{Amt}. We merge our contributions variables with Compustat. The merged sample is 99,501 firm-years for the period 1991–2008. We then regress industry-adjusted ROA and market-to-book changes from year $t-1$ to t on the changes in political contributions measures from year $t-2$ to $t-1$, the Congressional district, industry, and year fixed effects, and other control variables. All control variables are defined in Section 4. Panel A presents the results for the ROA regressions. Panel B presents the results for the market-to-book regressions. Standard errors are adjusted for heteroskedasticity and clustered by firm and year and are reported in parentheses. [a], [b], [c], Indicates significance at the 1%, 5%, and 10% level, respectively.

	Frequency of contributions						Amount of contributions					
	Parameter	SE	Parameter	SE	Parameter	SE	Parameter	SE	Parameter	SE	Parameter	SE
Variable	1	2	3	4	5	6	7	8	9	10	11	12
Panel A: ROA analysis												
Ind size	0.0004	(0.0003)	0.0004	(0.0003)	0.0004	(0.0003)	0.0004	(0.0003)	0.0004	(0.0003)	0.0004	(0.0003)
ΔLn(*Q*)	0.0060	(0.0047)	0.0060	(0.0047)	0.0060	(0.0047)	0.0060	(0.0047)	0.0060	(0.0047)	0.0060	(0.0047)
ΔLn(*Size*)	−0.0044	(0.0039)	−0.0044	(0.0039)	−0.0044	(0.0039)	−0.0044	(0.0039)	−0.0044	(0.0039)	−0.0044	(0.0039)
Δ*ROA*	−0.0734[a]	(0.0132)	−0.0734[a]	(0.0132)	−0.0734[a]	(0.0132)	−0.0734[a]	(0.0132)	−0.0734[a]	(0.0132)	−0.0734[a]	(0.0132)
ΔLn($CorpEDDC^{Freq}$)	0.0002	(0.0004)	0.0002	(0.0004)	0.0002	(0.0004)						
ΔLn($CorpEDDC^{Amt}$)							0.0001	(0.0003)	0.0001	(0.0003)	0.0001	(0.0003)
ΔLn(C^{Freq})	−0.0012	(0.0009)			−0.0016	(0.0010)						
ΔLn($EDDC^{Freq}$)			0.0027[a]	(0.0008)	0.0028[a]	(0.0007)						
ΔLn(C^{Amt})							−0.0003	(0.0010)			−0.0010	(0.0007)
ΔLn($EDDC^{Amt}$)									0.0038[a]	(0.0008)	0.0039[a]	(0.0008)
Panel B: Market-to-book analysis												
Ind size	−0.0046	(0.0055)	−0.0046	(0.0055)	−0.0046	(0.0055)	−0.0046	(0.0055)	−0.0046	(0.0055)	−0.0046	(0.0056)
Δ*CAPX*	−0.0227	(0.0144)	−0.0226	(0.0144)	−0.0226	(0.0144)	−0.0226	(0.0144)	−0.0227	(0.0144)	−0.0227	(0.0144)
Δ*RD/A*	0.0188[b]	(0.0090)	0.0189[b]	(0.0091)	0.0189[b]	(0.0091)	0.0188[b]	(0.0090)	0.0189[b]	(0.0091)	0.0189[b]	(0.0091)
ΔLn(*Size*)	−0.2720[a]	(0.0928)	−0.2720[a]	(0.0929)	−0.2720[a]	(0.0929)	−0.2720[a]	(0.0929)	−0.2720[a]	(0.0929)	−0.2719[a]	(0.0929)
Δ*ROA*	0.0641	(0.0530)	0.0641	(0.0530)	0.0641	(0.0530)	0.0641	(0.0530)	0.0642	(0.0530)	0.0642	(0.0530)
ΔLn($CorpEDDC^{Freq}$)	0.0029	(0.0049)	0.0029	(0.0040)	0.0029	(0.0030)						
ΔLn($CorpEDDC^{Amt}$)							0.0029	(0.0044)	0.0030	(0.0045)	0.0030	(0.0045)
ΔLn(C^{Freq})	−0.0033	(0.0088)			−0.0037	(0.0087)						
ΔLn($EDDC^{Freq}$)			0.0089[c]	(0.0051)	0.0092[c]	(0.0052)						
ΔLn(C^{Amt})							−0.0049	(0.0073)			−0.0065	(0.0074)
ΔLn($EDDC^{Amt}$)									0.0080[b]	(0.0039)	0.0085[b]	(0.0038)

the frequency and the amount of contributions regressions. In market-to-book regressions, the coefficient on $\Delta\text{Ln}(EDDC_{it-i})$ is positive and significant at the 10% level in the frequency of contributions regression and significant at the 5% level in the amount of contributions regression. In terms of economic significance, the effect of political contributions on performance is about one-half (two-thirds) of the effect of market-to-book (firm size) in ROA regressions and about one-half of the effect of capital expenditures and R&D expenditures in market-to-book regressions. The average industry-adjusted ROA and market-to-book changes are -0.07% and -0.134 in our sample, respectively. So, a one-standard-deviation greater increase in political contributions to economically relevant politicians improves the industry-adjusted ROA and market-to-book growth rates by an average of 4% and 7%, respectively.

Finally, in columns 5 and 6 and columns 11 and 12, we consider all individual contributions together. The relation between political contributions to economically relevant politicians and firm performance remains positive and significant. The coefficient on $\Delta\text{Ln}(EDDC_{it-i})$ is significant at the 1% level in both ROA regressions. In market-to-book regressions, the coefficient on $\Delta\text{Ln}(EDDC_{it-i})$ is again significant at the 10% level in the frequency of contributions regression and at the 5% level in the amount of contributions regression. The economic significance of individual political contributions actually increases slightly in all regressions. There remains no relation between political contributions to non-economically relevant politicians and firm performance.

Interestingly, there also appears no strong relation between *corporate* political contributions, $\Delta\text{Ln}(CorpEDDC_{it-i})$, and firm performance in any of our regressions in Table 5.[13] This may be surprising given that individual and corporate political contributions, especially to economically relevant politicians, are positively correlated (Table 2). A likely explanation is that firms maintain more stable contribution patterns by donating more consistently to the same set of politicians over time. Specifically, 41% of politicians receiving corporate contributions received contributions from the same firm a year earlier. In comparison, only 32% of politicians receiving individual contributions from a given CD received contributions from the same CD a year earlier. As we go further back in time, the percentages of politicians receiving corporate (individual) contributions from the same firm (CD) 2, 3, 4, and 5 years earlier drop to 34% (22%), 25% (17%), 22% (15%), and 17% (13%), respectively. As a result, there is much more variability in individual contributions compared to corporate contributions. Prior studies also argue that firms maintain stable contribution patterns and build long-term relationships with politicians (Snyder, 1992; Kroszner and Stratmann, 1998, for example). If firms are long-term planners, changes in corporate contribution patterns are likely to be gradual and related to reasons other than firm performance, such as political retirement or committee reassignment. Individuals, on the other hand, are likely to seek more immediate impact from their political involvement (as the BP example above illustrates), so changes in their political contributions should have a more immediate impact on the nearby firms.

The results in Table 5 are robust to a variety of alternative specifications. First, we replicate our analysis in Fama and MacBeth (1973) regressions. The results modestly improve. Specifically, in market-to-book-regressions, the coefficient on $\Delta\text{Ln}(EDDC_{it-i})$ becomes significant at the 5% level in the frequency of contributions regression and at the 1% level in the amount of contributions regression. In ROA regressions, the coefficient on $\Delta\text{Ln}(EDDC_{it-i})$ is still significant at the 1% level. Second, we confirm that our results are robust to our definition of future performance changes. We replace industry-adjusted ROA and market-to-book changes in Table 5 with raw changes in these variables and find a consistently strong positive relation between political contributions to economically relevant politicians and future ROA and market-to-book changes. The ROA results are also robust to the inclusion of R&D and capital expenditures ratios as additional controls. Third, we analyze whether our results reflect an employee contribution effect. Perhaps individual contributions to economically relevant politicians are made by employees of the affected firms, which may explain the positive link between contributions and firm performance. Where we can, we collect individual employment data from the FEC individual contribution reports and decompose our political contributions to economically relevant politicians into those made by firm employees and those made by other individuals who reside in the firm's Congressional district. Despite the inherent noisiness of the self-reported employment data,[14] we can say that contributions by firm employees are not solely responsible for our results. Specifically, we find that contributions made by firm employees to economically relevant politicians are associated with positive, although insignificant, improvements in future firm performance. Importantly, contributions to economically relevant politicians from individuals who, to the best of our knowledge, are not affiliated with the

[13] This result at first seems inconsistent with the results in Cooper, Gulen, and Ovtchinnikov (2010) who find a strong positive relation between corporate political contributions and future firm operating performance changes. There are two important differences between our methodology and that of Cooper, Gulen, and Ovtchinnikov (2010). First, we regress changes in political contributions on changes in firm performance, while Cooper, Gulen, and Ovtchinnikov (2010) regress levels of political contributions on changes in firm performance. Indeed, when we follow their methodology and replace changes in political contributions with the level of contributions, we find a strong positive relation between political contributions (individual and corporate) and subsequent performance changes. Second, our sample includes all firms with individual political contributions from nearby residents, while their sample includes only firms with established PACs. Cooper, Gulen, and Ovtchinnikov (2010) address the sample selection bias by estimating a first-stage probit regression of whether a firm has a PAC on determinants of PAC participation and including the Inverse Mills' Ratio (IMR) in the second-stage performance regressions. If we follow their approach and confine our sample only to firms with an established PAC while also correcting for the sample selection bias with the IMR from the first-stage probit model, we find a stronger positive relation between changes in corporate political contributions and subsequent changes in firm performance.

[14] Employment is left blank in 1,317,926 records (14.1% of our sample). Individuals list their occupation instead of employment in another 927,885 records (9.96%). Thus, for at least one out of four records, we cannot reliably verify the place of employment of contributing individuals.

affected firms continue to have a robust positive effect on future firm performance.[15]

Fourth, we analyze whether our results reflect the local residents' preference to support incumbents and local politicians. Economically relevant politicians are incumbents by design because they have to sit on relevant Congressional committees at the time when political contributions are made. It is also possible that politicians on relevant committees are local politicians because they have superior expertise of the local industry. So, we first delete all local politicians from our sample and repeat the analysis in Table 5 for non-local politicians. The coefficients on political contributions to economically relevant and other politicians barely budge. Second, we consider only incumbent politicians when calculating contributions to non-economically relevant as well as relevant politicians. The results in Table 5 are again little affected.

Fifth, we analyze whether our documented effect is related to the seniority of Congressional committee members. Grier and Munger (1991) and Romer and Snyder (1994), among others, show that powerful politicians, such as committee chairs and ranking members, raise more money. On one hand, this may reflect contributors' expectations of favorable policy. If these expectations are unbiased, we expect a stronger effect of contributions to senior committee members on firm performance. On the other hand, because these powerful politicians are flush with cash, the value of a marginal dollar is lower. In this case, they may be less willing to trade favors for contributions. We split our contributions into contributions to senior members of relevant Congressional committees and contributions to other members. The effect of contributions on firm performance is statistically and economically stronger for contributions to non-senior members of relevant Congressional committees. Contributions to senior committee members are associated with positive but insignificant improvement in future firm performance.

Finally, we verify that the results are consistent across industries. We break firms into groups of industries under the jurisdiction of each Congressional committee in Table B.1 and repeat the analysis in Table 5 separately for each group. The statistical significance varies across industry groups but we find that individual political contributions are positively associated with firm performance across industries.

At this point, our results simply establish a positive correlation between individual political contributions and firm performance. To argue causality, we next attempt to identify instances where the positive relation between individual contributions and firm performance should be stronger under our hypothesis but absent or of the reverse sign under the reverse causality explanation.

[15] In another robustness check, we use the Chief Executive Officer (CEO) identity data from Execucomp to identify political contributions made by CEOs of firms covered in the Execucomp database. We find that CEO contributions have a positive but mostly insignificant effect on firm performance. We also find that political contributions by non-CEOs continue to have a positive and significant effect on firm performance.

4.2. Subsample analysis

Our first two tests are based on the argument in Section 3 that individuals should be particularly motivated to invest in political capital during bad economic times. We present evidence consistent with this hypothesis in Table 2 in the Web appendix. So, if individual political contributions are more likely during bad times and if these contributions, in turn, are beneficial to firms, the relation between political contributions and firm performance should be stronger in subsamples of poorly performing firms. Note that under the reverse causality explanation, we expect the opposite. If individual political participation is a form of a normal consumption good, the positive relation between individual political contributions and firm performance should be stronger when firms and nearby residents are doing well.

Table 6 presents the results. In Panels A.1 and A.2 we sort firms into lagged performance quintiles and analyze the relation between individual political contributions and firm performance separately for each quintile. Firms are sorted into quintiles based on lagged ROA changes (i.e., changes from $t-2$ to $t-1$), with the worst performing firms placed in quintile 1 and the best performing firms placed in quintile 5.[16] We then estimate a version of Eqs. (10) and (11) that includes interactions of political contribution measures with indicator variables for each quintile. This allows for tests of the differences in coefficients across performance quintiles. Panel A.1 presents the ROA analysis; Panel A.2 presents the market-to-book analysis. In the interest of space, we present the coefficients on the individual political contributions variables only.

The evidence in both panels is consistent with our hypothesis. The coefficient on $\Delta\text{Ln}(EDDC_{it-i})$ is the most significant, both statistically and economically, for firms in the lowest performance quintile and declines rather noticeably as we move to higher quintiles. The difference in the coefficients between the extreme quintiles, reported in the bottom row of each panel, is significant at least at the 5% level in the ROA regressions and at least at the 10% level in market-to-book regressions. Note also that for firms in the highest quintile, the relation between individual political contributions and future firm performance is never statistically different from zero. This is inconsistent with the reverse causality explanation. If individuals were making political contributions because the nearby firms (and hence the individual contributors themselves) were doing well, we would expect the relation between contributions and firm performance to be the strongest for the best performing firms. There is also no discernible pattern in the $\Delta\text{Ln}(C_{it-i})$ coefficient as we move from low to high performance quintiles. Under the reverse causality, we would expect the coefficient to be more positive for higher quintiles.

In Panels B.1 and B.2, we sort firms by their distress likelihood. We measure distress likelihood by Altman's *Z*-score and classify firms as distressed if their *Z*-score is less than 1.8, as grey if their *Z*-score is between 1.8 and 3, and as healthy if their *Z*-score is above 3. We again interact our

[16] We obtain similar results when prior performance is measured by lagged market-to-book changes.

Table 6
Firm operating performance as a function of individual political contributions for poorly and well-performing firms, 1991–2008.

The political contributions data are from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The sample includes 4,874,994 contributions to 8,302 unique political candidates. We assign individual contributions to their Congressional Districts (CD) using the zip code data. The methodology for assigning contributions to their CDs is described in Section 2 and Appendix A. We calculate the total number and the total amount of political contributions to economically relevant politicians, $EDDC^{Freq}$ and $EDDC^{Amt}$, as follows:

$$EDDC_{it}^{Freq} = \sum_{j=1}^{J} Contribution_{jt}$$

$$EDDC_{it}^{Amt} = \sum_{j=1}^{J} Amount_{jt,}$$

where $Contribution_{jt}$ is the total number of political contributions that economically relevant politician j receives from individuals who reside in the firm's CD and $Amount_{jt}$ is the total amount of contributions that economically relevant politician j received from individuals who reside in the firm's CD. Economically relevant politicians are defined in Section 2. We calculate analogously the frequency and the amount of political contributions to politicians who are not economically relevant, C^{Freq} and C^{Amt}. We merge our contributions variable with Compustat. The merged sample is 99,501 firm-years for the period 1991–2008. We sort firms into performance quintiles, with worst performers placed in quintile one and best performers placed in quintile five. Performance is measured by lagged ROA changes. We also calculate the Altman Z-score for all firms in our sample and place firms in three portfolios based on their likelihood of financial distress. We then regress industry-adjusted ROA and market-to-book changes from year $t-1$ to t on the changes in political contributions measures from year $t-2$ to $t-1$ interacted with the performance quintile indicator variables and, separately, with the Z-score indicator variables and other control variables. All control variables are defined in Section 4. We present the results for the political contributions variables only. Panels A.1 and A.2 present the results for the performance quintiles. Panels B.1 and B.2 present the results for the Z-score portfolios. Standard errors are adjusted for heteroskedasticity and clustered by firm and year and are reported in parentheses. The bottom row of each panel presents the difference in extreme portfolio coefficients. [a], [b], [c], Indicates significance at the 1%, 5%, and 10% level, respectively.

	Frequency of contributions				Amount of contributions			
	$\Delta\text{Ln}(C^{Freq})$	SE	$\Delta\text{Ln}(EDDC^{Freq})$	SE	$\Delta\text{Ln}(C^{Amt})$	SE	$\Delta\text{Ln}(EDDC^{Amt})$	SE
Portfolio	1	2	3	4	5	6	7	8
Panel A.1: ROA analysis conditional on prior ROA performance								
Low	−0.0017	(0.0033)	0.0063[b]	(0.0023)	−0.0011	(0.0034)	0.0079[a]	(0.0020)
2	0.0011	(0.0022)	0.0028	(0.0020)	0.0014	(0.0021)	0.0036[c]	(0.0020)
3	0.0018	(0.0023)	0.0018	(0.0013)	0.0014	(0.0021)	0.0020[c]	(0.0012)
4	−0.0009	(0.0010)	0.0002	(0.0012)	−0.0010	(0.0010)	−0.0001	(0.0012)
High	−0.0058[c]	(0.0034)	0.0008	(0.0010)	−0.0041	(0.0026)	0.0011	(0.0009)
Low–high	0.0041	(0.0032)	0.0056[b]	(0.0020)	0.0030	(0.0026)	0.0068[a]	(0.0019)
Panel A.2: Market-to-book analysis conditional on prior ROA performance								
Low	0.0090	(0.0106)	0.0095	(0.0074)	0.0057	(0.0096)	0.0116[c]	(0.0059)
2	−0.0043	(0.0077)	0.0020	(0.0081)	−0.0097	(0.0059)	0.0024	(0.0098)
3	−0.0083	(0.0086)	0.0039	(0.0051)	−0.0131	(0.0082)	0.0016	(0.0063)
4	−0.0030	(0.0087)	−0.0022	(0.0058)	−0.0063	(0.0084)	−0.0094	(0.0076)
High	−0.0082	(0.0132)	−0.0133[c]	(0.0068)	−0.0048	(0.0119)	−0.0024	(0.0053)
Low–high	0.0172	(0.0135)	0.0228[b]	(0.0113)	0.0105	(0.0125)	0.0140[c]	(0.0085)
Panel B.1: ROA analysis conditional on Altman's Z-score								
Distressed	−0.0027[c]	(0.0016)	0.0046[a]	(0.0015)	−0.0018	(0.0012)	0.0061[a]	(0.0015)
Grey	0.0008	(0.0009)	0.0020	(0.0012)	0.0011	(0.0009)	0.0029[a]	(0.0010)
Healthy	−0.0011	(0.0014)	0.0001	(0.0011)	−0.0009	(0.0014)	0.0006	(0.0011)
Distressed–healthy	−0.0016	(0.0024)	0.0045[b]	(0.0021)	−0.0009	(0.0022)	0.0055[b]	(0.0021)
Panel B.2: Market-to-book analysis conditional on Altman's Z-score								
Distressed	−0.0092	(0.0110)	0.0116	(0.0075)	−0.0060	(0.0082)	0.0166[b]	(0.0076)
Grey	0.0001	(0.0170)	−0.0101	(0.0083)	−0.0049	(0.0150)	−0.0045	(0.0086)
Healthy	0.0013	(0.0115)	−0.0065	(0.0054)	−0.0058	(0.0130)	−0.0041	(0.0055)
Distressed–healthy	−0.0105	(0.0150)	0.0181[c]	(0.0095)	−0.0002	(0.0126)	0.0207[b]	(0.0099)

political contribution measures with indicators for the distress likelihood and estimate Eqs. (10) and (11) jointly for all firms in our sample. Panel B.1 presents the ROA analysis; Panel B.2 presents the market-to-book analysis.

The results are again consistent with our hypothesis. The coefficient on $\Delta\text{Ln}(EDDC_{it-i})$ is the most significant for distressed firms and declines significantly as we move to grey and to healthy firms. The differences in the $\Delta\text{Ln}(EDDC_{it-i})$ coefficients between distressed and healthy firms are significant at the 5% level in all but one specification. The differences between distressed and other firms are also economically significant. For example, in Panel B.1, firm performance is more than twice as sensitive to political contributions to economically relevant politicians for distressed compared to grey firms (0.0046 vs. 0.0020 in the frequency of contributions regression and 0.0061 vs. 0.0029

in the amount of contributions regression). The differences between distressed and healthy firms are even more pronounced. Under the reverse causality explanation, we would expect a stronger relation between political contributions and firm performance for a portfolio of healthy firms.

In a series of robustness tests, we independently double sort firms into lagged performance and $\Delta\text{Ln}(EDDC_{it-i})$ quintiles and report the subsequent industry-adjusted ROA and market-to-book changes separately for each of the 25 resulting portfolios. We find that firm performance improves, although often non-monotonically, as we move from low to high political contributions quintiles. Importantly, this pattern is especially economically and statistically significant for quintiles of poorly performing firms. Similarly, we double sort firms into the Altman *Z*-score portfolios and, separately, into $\Delta\text{Ln}(EDDC_{it-i})$ quintiles and again find that firm performance improves as we move from low to high contributions quintiles. This pattern is more significant for distressed than grey and healthy firms. These results are consistent with our explanation but inconsistent with the reverse causality explanation.

In another robustness test, we also analyze whether the results in Table 6 are related to the changing industry conditions at the time when individual political contributions are made. For example, increasing political contributions may forecast favorable future industry economic conditions, so a firm that is performing poorly for idiosyncratic reasons may be expected to do particularly well going forward. Similarly, increasing contributions may be correlated with increasing industry competition, so a firm that is performing poorly for unrelated reasons may be in a more attractive position to tackle future competition. We add the change in industry ROA and the change in industry size (as measured by the change in the number of industry firms in a CD) and verify that these variables do not affect our results in Table 6.

We next switch our focus from the subsamples of firms that should especially benefit from individual political contributions to the subsample of politicians who should be more likely to promise favors in exchange for political contributions. A number of studies argue theoretically and show empirically that politicians in close races raise more campaign financing (Jacobson, 1980, 1985; Kau, Keenan, and Rubin, 1982; Poole and Romer, 1985; Stratmann, 1991). One explanation for this relation is that the marginal dollar of contributions matters more to a politician in a close race against a strong opponent. Hence, a politician running in a close race may promise more favors to contributors to attract more campaign financing. The assumption that a politician may promise favors in exchange for contributions is made in a number of theoretical arguments including Coate (2004) and has received empirical support (Stratmann, 1998, 2002, for example).[17]

Based on this argument, the relation between individual political contributions and firm performance should be stronger in subsamples of contributions in close elections. For each politician in our sample we collect from the FEC the percentage of votes received in his/her (re)election campaign. We average that percentage across all candidates who receive contributions from each CD and sort the averages into quintiles. CDs that contribute, on average, to politicians in close elections are placed in quintile 1 and CDs that contribute to politicians in the biggest landslides are placed in quintile 5. We then analyze the relation between political contributions and firm performance for a subsample of contributions made in close races and all other races.

Table 7 presents the results. Panel A presents the ROA analysis; Panel B presents the market-to-book analysis. The evidence in both panels is consistent with our hypothesis. Political contributions in close elections are more positively related to future firm performance compared to contributions made in other elections. In all specifications, the differences in the $\Delta\text{Ln}(EDDC_{it-i})$ coefficients between close and other elections are positive. In three out of four specifications, the differences are significant at the 10% level or better. Economically, the $\Delta\text{Ln}(EDDC_{it-i})$ coefficients in close elections are also much greater. For example, in Panel A, firm performance is almost twice as sensitive to the number and the amount of individual contributions in close elections compared to other elections (0.0034 vs. 0.0019 in the number of contributions regression and 0.0042 vs. 0.0022 in the amount of contributions regression). It is difficult to imagine (at least for us) why such results would hold under the reverse causality explanation, which would require that individuals residing near well-performing firms are somehow compelled to contribute more but only in close elections.

In another robustness test, we again double sort firms into election closeness and $\Delta\text{Ln}(EDDC_{it-i})$ quintiles and report the subsequent industry-adjusted ROA and market-to-book changes for each resulting portfolio. Similar to other double sorts, we find that firm performance improves as we move from low to high political contributions quintiles. This effect is economically and statistically stronger for close election portfolios. The results are available upon request.

The results in this section provide stronger evidence of a causal relation between individual political contributions and future firm performance. We next set the bar even higher and look for an exogenous change in the economic dependence status of a CD that should lead under our hypothesis to changes in the CD political contribution practices.

4.3. Exogenous changes in the CD economic dependence status

Corporate restructurings, such as mergers and spinoffs, that involve firms operating in different locations and in

[17] In a related study, Houser and Stratmann (2008) show in an experimental setting that high-quality candidates are elected less often when their campaigns are financed by special interests. The victory margin is also decreasing in special interest groups' campaign financing. These results imply that voters take into account the sources of campaign financing and are skeptical of politicians who receive money from special interests because of the possibility of quid pro quo arrangements between the politicians and the contributors.

Table 7
Firm operating performance as a function of individual political contributions in close elections and other elections, 1991–2008.

The political contributions data are from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The sample includes 4,874,994 contributions to 8,302 unique political candidates. We assign individual contributions to their Congressional Districts (CD) using the zip code data. The methodology for assigning contributions to their CDs is described in Section 2 and Appendix A. We calculate the total number and the total amount of political contributions to economically relevant politicians, $EDDC^{Freq}$ and $EDDC^{Amt}$, as follows:

$$EDDC_{it}^{Freq} = \sum_{j=1}^{J} Contribution_{jt}$$

$$EDDC_{it}^{Amt} = \sum_{j=1}^{J} Amount_{jt,}$$

where $Contribution_{jt}$ is the total number of political contributions that economically relevant politician j receives from individuals who reside in the firm's CD and $Amount_{jt}$ is the total amount of contributions that economically relevant politician j received from individuals who reside in the firm's CD. Economically relevant politicians are defined in Section 2. We calculate analogously the frequency and the amount of political contributions to politicians who are not economically relevant, C^{Freq} and C^{Amt}. We merge our contributions variable with Compustat. The merged sample is 99,501 firm-years for the period 1991–2008. We sort firms in quintiles based on the closeness of the economically relevant politician's election outcome. Individuals in the firm's CD who contribute to economically relevant politicians in the closest elections are placed in quintile one and individuals in the firm's CD who contribute to economically relevant politicians in the elections with the biggest margin for victory are placed in quintile five. The regression is estimated only for those firm-years in which individuals contribute positive amounts to economically relevant politicians, so the sample is reduced to 38,462 observations. We regress industry-adjusted ROA and market-to-book changes from year $t-1$ to t on the changes in political contributions measures from year $t-2$ to $t-1$ interacted with the election closeness interaction variables and other control variables. All control variables are defined in Section 4. We present the results for the political contributions variables only. Panel A presents the results for the ROA regressions. Panel B presents the results for the market-to-book regressions. Standard errors are adjusted for heteroskedasticity and clustered by firm and year and are reported in parentheses. The bottom row of each panel presents the difference in coefficients for close and other elections. [a], [b], [c], Indicates significance at the 1%, 5%, and 10% level, respectively.

	Frequency of contributions				Amount of contributions			
	$\Delta Ln(C^{Freq})$	SE	$\Delta Ln(EDDC^{Freq})$	SE	$\Delta Ln(C^{Amt})$	SE	$\Delta Ln(EDDC^{Amt})$	SE
Portfolio	1	2	3	4	5	6	7	8
Panel A: ROA analysis								
Contributions in close elections	0.0010	(0.0013)	0.0034[a]	(0.0009)	0.0006	(0.0011)	0.0042[a]	(0.0009)
Contributions in other elections	−0.0002	(0.0009)	0.0019[b]	(0.0009)	−0.0003	(0.0009)	0.0022[a]	(0.0008)
Close—other elections	0.0012	(0.0014)	0.0015	(0.0012)	0.0009	(0.0013)	0.0020[c]	(0.0011)
Panel B: Market-to-book analysis								
Contributions in close elections	−0.0058	(0.0102)	0.0046	(0.0040)	−0.0057	(0.0100)	0.0084	(0.0060)
Contributions in other elections	0.0020	(0.0056)	−0.0084[b]	(0.0038)	−0.0016	(0.0057)	−0.0053	(0.0034)
Close—other elections	−0.0078	(0.0102)	0.0130[b]	(0.0065)	−0.0041	(0.0092)	0.0138[c]	(0.0082)

different industries represent a convenient setting in which to examine whether changes in the CD economic dependence status alter individual contribution practices. Specifically, when a bidder acquires a target from another location and another industry, especially a target that is large and therefore is more economically relevant to the bidder, individuals in both locations should increase their contributions to newly economically relevant politicians if they indeed pursue economic motives when making political contributions. Of course, the converse is also true in the case of a spinoff. We obtain data on mergers and spinoffs involving public bidders and targets from the Securities Data Corporation (SDC) for the period 1991–2008. We exclude transactions in which the bidder (or the parent) and the target (or the subsidiary) are from the same CD and operate in industries that are under the jurisdiction of the same Congressional committees and transactions in which the bidder (parent) owns more that 30% of the target (subsidiary) prior to (after) the merger (spinoff) or less than 50% of the target (subsidiary) after (before) the merger (spinoff). Finally, we only consider mergers and spinoffs of equals, defined as those transactions in which the total assets of the two firms are within 20% of each other. The final merger sample includes 1,941 mergers. The final spinoff sample includes 194 spinoffs.

Table 8 analyzes changes in individual contribution practices around mergers and spinoffs in our sample. For the merger sample, we consider annual contributions from the bidder and the target CDs to the target and the bidder economically relevant politicians (i.e., politicians with jurisdictional authority over the target's and the bidder's industry). Similarly, for the spinoff sample, we consider annual contributions from the parent and the subsidiary CDs to the subsidiary and the parent economically relevant politicians. To avoid any contemporaneous effects of the merger, we define the pre-restructuring period as the period at least 12 calendar months before the restructuring announcement date; we define the post-restructuring period as the period at least 24 calendar months after the restructuring effective date. Panel A presents changes in the annual frequency of contributions around mergers and spinoffs; Panel B presents changes in the annual contribution amount.

Table 8
Changes in CD political contribution intensity around mergers, 1991–2008.

The political contributions data are from the FEC detailed individual contributions file for the period 1991–2008. We include all contributions to politicians and their (re)election committees. The original sample includes 4,874,994 contributions to 8,302 unique political candidates. We intersect this sample with a sample of mergers and spinoffs for the period 1991–2008. The merger and spinoff sample is from SDC and includes all public bidders (parents) and targets (subsidiaries) that operate under different Congressional jurisdictions and in different Congressional districts (CDs). Further, we select transactions in which the bidder (parent) owns more that 30% of the target (subsidiary) prior to (after) the merger (spinoff) or less than 50% of the target (subsidiary) after (before) the merger (spinoff). We also only consider mergers and spinoffs of equals, defined as those transactions in which the total assets of the two firms are within 20% of each other. The table reports individual political contributions made from the bidder (parent) and the target (subsidiary) Congressional districts to the bidder's (parent's) and the target's (subsidiary's) economically relevant politicians. Economically relevant politicians are defined in Section 2. We calculate the average annual total number and total amount of contributions made to economically relevant politicians during the pre- and post-transaction periods. The pre-transaction period is the period at least 12 months prior to the merger or the spinoff announcement. The post-transaction period is the period at least 24 months after the merger or the spinoff effective date. Panel A presents the results for the number of contributions during the pre- and post-transaction periods. Panel B presents the results for the amount of contributions during the pre- and post-transaction periods. The last column is the *t*-statistic from the *t*-test for the difference in mean and median contributions during the pre- and post-transaction periods.

	Means				Medians			
Political contributions	Pre-restructuring 1	Post-restructuring 2	Difference 3	*t*-statistic 4	Pre-restructuring 5	Post-restructuring 6	Difference 7	*t*-statistic 8
Panel A: Contribution frequency								
			Mergers					
From bidder CD to target politicians	78.98	97.99	19.01	2.04	30	39	9	2.23
From target CD to bidder politicians	69.62	112.53	42.91	4.43	27	33	6	2.50
			Spinoffs					
From parent CD to subsidiary politicians	94.45	63.94	−30.50	−1.37	22	19	−3	−1.27
From subsidiary CD to parent politicians	66.42	36.17	−30.25	−2.08	19	15	−4	−1.07
Panel B: Contribution amount (in $ thousands)								
			Mergers					
From bidder CD to target politicians	70.23	79.43	9.21	1.16	23.19	35.02	11.83	3.02
From target CD to bidder politicians	54.93	106.830	51.90	5.26	20.99	26.97	5.98	3.08
			Spinoffs					
From parent CD to subsidiary politicians	81.61	47.16	−34.44	−1.65	16.88	15.41	−1.47	−1.12
From subsidiary CD to parent politicians	55.77	29.22	−26.55	−2.02	17.04	12.32	−4.72	−1.03

In the merger sample, there appears robust evidence that individuals increase their contributions to newly economically relevant politicians from before to after the merger announcement. All differences in the pre- and post-merger contribution intensities are positive and significant in all but one case. The mean increases in contributions from target CDs to bidder economically relevant politicians are particularly large, where the frequency of contributions increases by 61.6% from before to after the merger (from an average of 69.62 contributions to an average of 112.53 contributions) and the amount of contributions increases by 94.5% over the same period. The increases in contributions from bidder CDs to target economically relevant politicians are more modest, although still economically significant.

In the spinoff sample, there is a notable decline in contributions from parent (subsidiary) CDs to subsidiary (parent) economically relevant politicians from before to after the spinoff. All differences in the pre- and the post-spinoff contribution intensities are negative, although the results are less statistically significant. We note that the spinoff sample is one-tenth the size of the merger sample, so we may simply lack sufficient power in our tests. The results are economically significant and of the same order of magnitude as those of the merger sample.

Overall, the results in Table 8 are consistent with our hypothesis that individuals strategically change their contribution practices and begin to target politicians who become economically relevant as a result of a merger with a firm from another industry. In the case of a spinoff, the opposite is true. Individuals reduce their support for politicians who were economically relevant in the past but are no longer relevant (or less relevant) post-spinoff because the parent or the subsidiary is no longer directly involved in the fortunes of the other firm.

5. Conclusion

In this paper, we present evidence that individuals pursue economic motives when making political contributions to members of Congress. We also show that individual political contributions benefit firms headquartered in Congressional districts (CDs) of contributing individuals. We exploit the geographic clustering of industries and the differences in Congressional committee jurisdictions to construct various measures of economic dependence of CDs on different politicians. In our empirical analysis, we first show a strong positive relation between measures of CD economic dependence and the probability of contributions

to economically relevant politicians, as well as the frequency and the amount of these contributions. We confirm that these results are robust across different methodologies and in different subsamples.

Second, we document that contributions to economically relevant politicians are associated with improvements in operating performance of firms under the jurisdiction of these politicians. We find that ROA and market-to-book changes are systematically positively related to changes in the frequency and the amount of political contributions to economically relevant politicians. This relation is stronger for poorly performing firms and firms closer to financial distress. These results are consistent with the assertion that the need to seek political support should be stronger during bad economic times. We also find that the relation between political contributions and firm performance is stronger for political contributions made in close races. This result is consistent with the argument that the politician's desire for contributions and, therefore, his/her willingness to trade political favors for contributions is stronger in close elections against a strong opponent. Finally, we find that individuals change their contribution practices in response to an exogenous shock to their economic dependence status.

The results in this paper imply that individual political contributions have a positive impact on operating performance of firms located in close proximity of contributing individuals. One question that we are unable to comment on in this paper concerns the exact mechanism behind our documented effect. Given the sheer scale of our study, we suspect that the answer to this question is rather extensive and complex. What we can say is that political contributions appear valuable, not only when they are made by the firm itself but also by individuals who are

Table A1
Assignment of zip codes to CDs.

State	CD	Zip code	Longitude	Latitude
Alabama	07	35203	−86.81	33.51
Alabama	07	35,212	−86.75	33.54
Alabama	06	35,209	−86.81	33.46

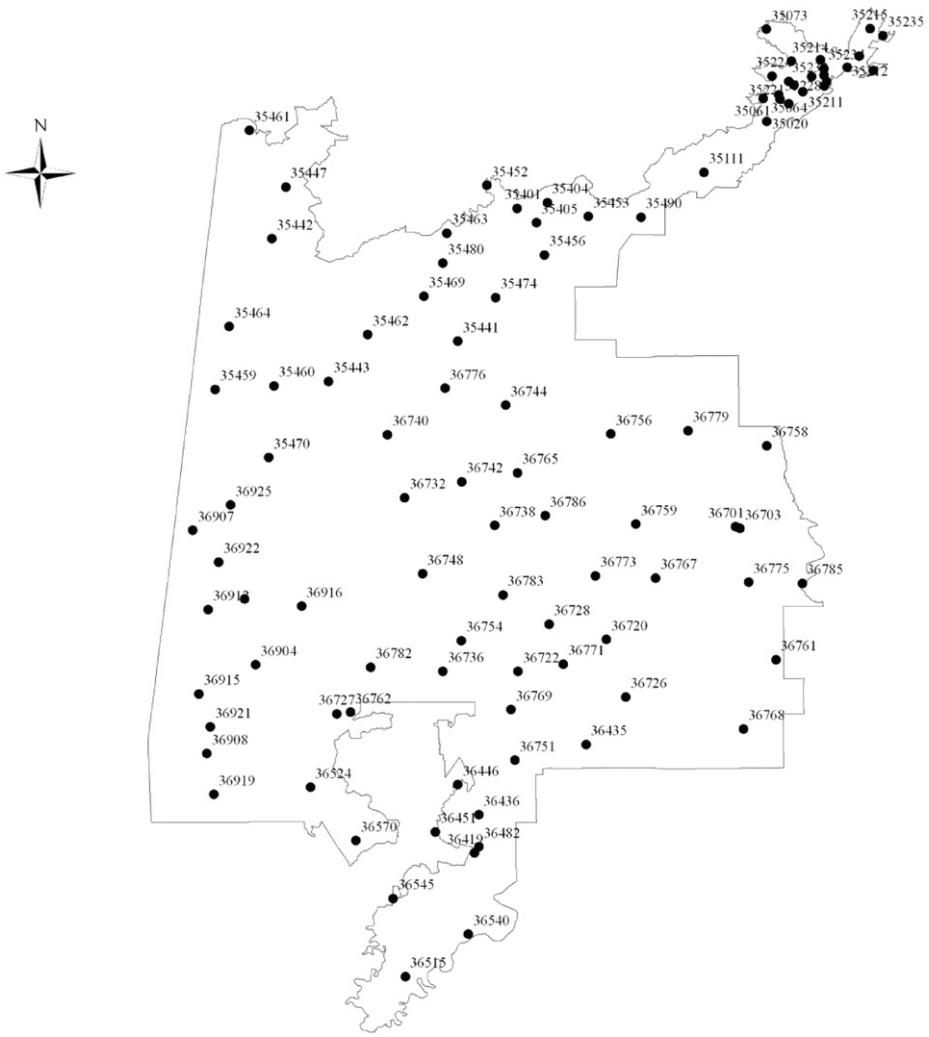

Fig. A1. The map of Alabama's 7th CD, and the 100 zip codes within the CD's boundaries.

economically dependent on that firm. Our hope is that future research will analyze the sources of our documented effect further.

Appendix A

The Census Bureau provides cartographic boundary files for the Congressional Districts (CDs) during the 103rd to 110th Congress in shape file (.shp) format. We import all shape files in the ArcGIS® 9.2 software and project the Congressional District boundaries on two dimensions, the latitude and the longitude. We then determine the centroid of each district using the ArcGIS® geometry calculator. The geometric centroid, or geometric center, of a two-dimensional shape A is given by the intersection of all straight lines that divide A into two parts of equal moment about the line. In other words, it equals the arithmetic mean of all points of A. The centroid is defined by the latitude and the longitude (x,y) expressed in decimal degrees. In one of our robustness tests, we also calculate the distance between centroids, using the following formula:

$$D(a,b) = \arccos\{\cos(a_1)\times\cos(a_2)\times\cos(b_1)\times\cos(b_2) + \cos(a_1)\times\sin(a_2)\times\cos(b_1)\times\sin(b_2) + \sin(a_1)\times\sin(b_1)\}r, \quad (A.1)$$

where a and b are the latitude and the longitude of the centroids expressed in radians, and r is the mean radius of the Earth (6,371 km).

We also collect the cartographic boundary files of zip codes developed from the Zip Code Tabulation Areas (ZCTAs) by the Census Bureau for the Census 2000. The boundary files are generalized area representations of the U.S. Postal Service zip codes. In most instances, the ZCTA code equals the zip code of a given area. We calculate the geographic centroid of each zip code as above and merge it with the CD boundary data.

Each CD contains one or more zip codes. If the centroid of the zip code falls into the geographic boundaries of a CD, the zip code is assigned to that CD. Table A1 provides an example of the zip code assignment to its respective CD. Fig. A1 shows an example of Alabama's 7th Congressional district and its 100 zip codes.

Appendix B

Tables B1 and B2 lists the Senate and House committees and their industry jurisdictions. Industry jurisdictions are from the Congressional committees' Web sites and are supplemented with data on committee jurisdiction from the Center for Responsive Politics. We first match the jurisdiction data with the Fama-French 48-industry definitions and then verify and supplement the matching with four-digit Standard Industrial Classification (SIC) code definitions.

Table B1
Congressional committee jurisdictions.

Senate committee	FF-48 industry	Additional industries defined at the SIC 4-digit level
Agriculture, Nutrition, and Forestry	Agriculture	0800–0899 (Forestry)
	Food	5143, 5450, 5451 & 2020 (Dairy products and stores)
	Smoke	5144, 2015 (Poultry and eggs)
		6220–6221 (Commodity brokers & dealers)
Armed Services,	Guns	3721, 3720, 3724, 3728 (Aircraft, engine and parts)
Banking, Housing, and Urban Affairs	Banks	
	Construction	
	Health	
	Insurance	
	Real estate	
	Trading	
Commerce, Science, and Transportation	Aero	4520, 4522, 4512 (Air transport)
	Autos	5146, 0920, 0921, 0900, 0910 (Commercial fishing and wholesale)
	Fun	3740, 3743 (Railroad equipment)
	Insurance	3730–3731 (Ship building and repair)
	Meals	7510, 7515 (Auto and truck rental)
	Oil	
	Telecomm	
	Transportation	
Energy and Natural Resources	Mines	0800–0899 (Forestry)
	Oil	5093 (Scrap and waste materials)
	Utilities	
Environment and Public Works	Autos	5146, 0920, 0921, 0900, 0910 (Commercial fishing and wholesale)
	Building materials	1520, 1540, 1541, 1521, 1542, 1522 (General contractors)
	Chemicals	7510, 7515 (Auto and truck rental)
	Construction	5093 (Scrap and waste materials)
	Mines	
	Oil	
	Utilities	

Table B1 (*continued*)

House committee	FF-48-industry	Additional industries defined at the SIC 4-digit level
Agriculture	Agriculture	0800–0899 (Forestry)
	Food	5143, 5450, 5451, & 2020 (Dairy products and stores)
	Smoke	5144, 2015 (Poultry and eggs)
		6220–6221 (Commodity brokers & dealers)
Armed Services/National Security	Guns	3721, 3720, 3724, 3728 (Aircraft, engine and parts)
Financial Services	Banks	
	Construction	
	Health	
	Insurance	
	Real estate	
	Trading	
Energy and Commerce	Autos	5093 (Scrap and waste materials)
	Chemicals	
	Utilities	
	Health	
	Meals	
	Mines	
	Oil	
	Drugs	
	Medical equipment	
	Fun	
	Telecomm	
Resources/Natural Resources	MinesOil	5146, 0920, 0921, 0900, 0910 (Commercial fishing and wholesale)
		0800–0899 (Forestry)
Transportation and Infrastructure	Aero	4520, 4522, 4512 (Air transport)
	Autos	1520, 1540, 1541, 1521, 1542, 1522 (General contractors)
	Construction	3740, 3743 (Railroad equipment)
	Building materials	3730–3731 (Ship building and repair)
	Transportation	7510, 7515 (Auto and truck rental)
Merchant Marine and Fisheries		5146, 0920, 0921, 0900, 0910 (Commercial fishing and wholesale)

Table B2
Descriptions of political contributions variables.

Variable	Description
EDD_{ijt}	An indicator variable set to one if CD i contains at least one firm in year t in jurisdiction of an economically relevant politician j and zero otherwise. Economically relevant politicians are politicians who serve on Congressional committees with jurisdictional authority over firms headquartered in the contributing CD.
EDD_{ijt}^{Firms}	The total number of firms headquartered in CD i in year t that operate under the jurisdiction of an economically relevant politician j. Economically relevant politicians are politicians who serve on Congressional committees with jurisdictional authority over firms headquartered in the contributing CD.
EDD_{ijt}^{Assets}	The total assets of firms headquartered in CD i in year t that operate under the jurisdiction of an economically relevant politician j. Economically relevant politicians are politicians who serve on Congressional committees with jurisdictional authority over firms headquartered in the contributing CD.
$EDD_{ijt}^{Employees}$	The total employees of firms headquartered in CD i in year t that operate under the jurisdiction of an economically relevant politician j. Economically relevant politicians are politicians who serve on Congressional committees with jurisdictional authority over firms headquartered in the contributing CD.
$EDDC_{it}^{Freq}$	The total number of political contributions made by individuals in CD i in year t to politicians who are economically relevant. Economically relevant politicians are politicians who serve on Congressional committees with jurisdictional authority over firms headquartered in the contributing CD.
$EDDC_{it}^{Amt}$	The total amount of political contributions made by individuals in CD i in year t to politicians who are economically relevant. Economically relevant politicians are politicians who serve on Congressional committees with jurisdictional authority over firms headquartered in the contributing CD.
C_{it}^{Freq}	The total number of political contributions made by individuals in CD i in year t to politicians who are not economically relevant. These are politicians who do not serve on Congressional committees with jurisdictional authority over firms headquartered in the contributing CD.
C_{it}^{Amt}	The total amount of political contributions made by individuals in CD i in year t to politicians who are not economically relevant. These are politicians who do not serve on Congressional committees with jurisdictional authority over firms headquartered in the contributing CD.

Table B2 (*continued*)

Variable	Description
$CorpEDDC_{it}^{Freq}$	The total number of political contributions made by a firm with an established corporate Political Action Committee (PAC) in CD *i* in year *t* to politicians who are economically relevant to that firm. Economically relevant politicians are politicians who serve on Congressional committees with jurisdictional authority over the firm.
$CorpEDDC_{it}^{Amt}$	The total amount of political contributions made by a firm with an established corporate Political Action Committee (PAC) in CD *i* in year *t* to politicians who are economically relevant to that firm. Economically relevant politicians are politicians who serve on Congressional committees with jurisdictional authority over the firm.

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