Fedaseyeu, Viktar; Lvovskiy, Lev

Article

Personal financial incentives and corporate campaign contributions

BEROC working paper series

Provided in Cooperation with:
Belarusian Economic Research and Outreach Center (BEROC), Minsk

Reference: Fedaseyeu, Viktar/Lvovskiy, Lev (2020). Personal financial incentives and corporate campaign contributions. In: BEROC working paper series 67 S. 1 - 27.

Personal Financial Incentives and Corporate Campaign Contributions*

BEROC Working Paper 67

Viktar Fedaseyeu† Lev Lvovskiy‡

February 7, 2020

Abstract

Despite the well-documented benefits of political participation, few firms engage in politics. We argue that low levels of corporate political participation can be rationalized by financial incentives of employees and shareholders who are the ultimate source of corporate contributions. Since even large firm-level benefits are trivial for individuals with small equity-stakes, few people have sufficient incentives to contribute. This logic explains why corporate political contributions are relatively small and why firms seek alternative channels of political influence. Empirically, we document that corporate PACs are financially constrained and that financial incentives of individual contributors are a strong determinant of campaign contributions.

Keywords: PACs, political contributions, corporate political influence

JEL Classification: D72, G30, G38, P48

*For helpful comments and discussions we thank Luca Anderlini, Ilona Babenko, Salomé Baslandze, Travers Child, Robert Chirinko, Igor Livshits, Mounu Prem, Mario Schabus, Fabiano Schivardi, Gianfranco Siciliano, Stefan Zeume, Song Zhang, as well as seminar participants at the Belarusian Economic Research and Outreach Center (BEROC), China Europe International Business School (CEIBS), Einaudi Institute for Economics and Finance (EIEF) and conference participants at the 2019 International Conference on Applied Research in Economics.

†Department of Finance and Accounting, China Europe International Business School (CEIBS), 699 Hongfeng Rd., Shanghai, China 201206. Email: viktar.fedaseyeu@ceibs.edu.

‡Belarusian Economic Research and Outreach Center (BEROC), Prospekt Gazety Pravda 11B Office 1.4, Minsk, Belarus 220116. Email: lvovskiy@beroc.by.

1. Introduction

Corporate political participation has been a subject of intense academic inquiry, which has documented a variety of channels through which firms attempt to gain access to the political system. These channels include the employment of current or former politicians (**???**), lobbying (**??**), charitable donations (**?**), as well as direct campaign contributions through corporate political action committees, known as PACs (**??**). Academic research has also shown that the expected firm-level benefits from establishing political connections are very large (**?**).

Despite large expected benefits from political participation, however, the amount of money spent on politics is surprisingly low (**?**), and the vast majority of firms (e.g., 71.9% of Execucomp firms) fail to establish their own PACs. Even the firms that do have PACs fail to utilize them fully: An average corporate PAC donates $1,853.07 per candidate (conditional on donating), far below the legal contribution limit of $5,000 per election per candidate (which amounts to $10,000 for each candidate that participates in both the primary and general election). Why do so many firms choose not to establish their own PACs and why do firms resort to alternative channels of political influence without having fully utilized their ability to make campaign contributions?

In this paper, we argue that many of the puzzling facts about corporate political contributions can be rationalized by a simple yet somewhat under-appreciated observation that the ultimate source of these contributions are not firms themselves but their employees and shareholders. More specifically, the U.S. federal law prohibits firms from using their corporate treasuries to finance political campaigns directly. Instead, funds raised by corporate PACs must come from employees and shareholders of the firm (or their family members). Since even large firm-level benefits from political participation can be trivial for individual shareholders that hold a small fraction of the firm's equity, many shareholders don't have

sufficient incentives to give money to their corporate PACs. As a result, corporate PACs are unable to make substantial campaign contributions even if making such contributions generates large firm-level benefits. This reasoning explains why many firms fail to establish their own corporate PACs and why firms may have to seek alternative channels of political influence that avoid obtaining funds from individual shareholders. Overall, it appears that many of the observed empirical patterns of corporate campaign contributions can be directly linked to the financial incentives of individual contributors.

To provide a simple conceptual framework for understanding the link between personal incentives and corporate campaign contributions, we modify the standard portfolio choice problem by allowing shareholders to make campaign contributions (in addition to allocating their endowment between equity in the firm and a risk free asset). In this framework, shareholders with larger equity stakes make bigger campaign contributions because they reap most of the financial benefits associated with such contributions. Furthermore, if making campaign contributions is costly, only shareholders whose equity stakes are sufficiently large will donate to their corporate PACs. When there are few such shareholders, corporate PACs become financially constrained. As a result, PACs' campaign contributions may be small even if the total firm-level benefits of making such contributions are large.

Empirically, financial constraints appear to be binding for virtually all corporate PACs. As shown in Figure 1, corporate PACs spend nearly every dollar they raise. This fact alone, however, does not necessarily imply that PACs are financially constrained, since they may be simply maxing out contributions to a limited number of their preferred candidates. To rule out this possibility, Figure 1 also depicts the share of political candidates receiving PAC contributions below the legal contribution limit. This share averages 94.02%, suggesting that the vast majority of candidates receiving contributions from corporate PACs could have received larger contributions from the same PACs had these PACs simply donated the maximum amount allowed by law. Thus, corporate PACs donate little because they fail to raise sufficient funds and not because they run out of their preferred political candidates.

To confirm that PACs' financial constraints depend on financial incentives of individual contributors, we examine the link between individuals' equity holdings and their contributions to corporate PACs. Identifying this relation is empirically challenging because both equity holdings and political contributions can be driven by unobservable personal characteristics (such as risk aversion). To address this challenge, we compare contributions of the same individuals to PACs of different firms in which they hold equity stakes at the same time. Our identification is possible because we link individuals' *firm-specific* incentives to their *firm-specific* campaign contributions, while at the same time absorbing all time-varying heterogeneity across individuals with person-election cycle fixed effects.

We find strong evidence that financial incentives are an important determinant of personal campaign contributions, which in turn determine the amount of funds available to corporate PACs. The estimate from our most stringent specification implies that a one standard deviation increase in a person's equity stake increases his/her political contributions by 113.2% relative to the sample mean. In fact, the elasticity of political contributions with respect to the value of an individual's ownership stake is close to 1, suggesting that these variables move in lockstep. Such a relation is hard to explain by personal political preferences unrelated to financial incentives: i.e., it seems unlikely that the strength of one's political convictions grows by 1% when the value of his/her stock ownership increases by 1%. In contrast, a person's financial incentives do move in lockstep with his/her stock ownership.

Since a person's incentives to contribute to corporate PACs increase with stock ownership, individuals with the largest equity stakes are more likely to reach personal contribution limits on PAC donations. Such individuals, therefore, have an incentive to make direct political contributions to PAC-financed candidates (in addition to PAC contributions). Making such direct contributions provides a second channel for an individual to support political candidates likely to be beneficial to the firm. Indeed, we find that individuals with large equity stakes not only donate more to their firms' corporate PACs but also increase the contributions they make directly to the political candidates that those PACs support.

The final channel through which individuals with large equity stakes can increase financial support for their preferred candidates is contributions by these individuals' family members. In fact, the federal law explicitly allows corporate PACs to solicit campaign contributions from their shareholders' family members. Consistent with the idea that these contributions are also driven, at least in part, by personal financial interests, we find that family members of shareholders with large ownership stakes donate substantially more than family members of shareholders with small ownership stakes. This evidence further supports the notion that individuals with strong financial incentives make political contributions that are in line with their financial interests.

The portfolio choice approach to campaign contributions also implies that PACs of firms with concentrated ownership raise more funds than PACs of firms with disperse ownership (because concentrated ownership makes it more likely that there will be enough shareholders with sufficiently strong incentives to contribute to their corporate PACs). Indeed, we do find that PACs of firms with concentrated ownership raise more funds from their employees and shareholders. These results suggest that a firm's ownership structure is an important determinant of its campaign contributions.

Our results highlight the importance of personal financial incentives in campaign finance. It is these incentives rather than the legally mandated contribution limits that represent the binding constraint on corporate campaign contributions (after all, the vast majority of corporate PACs never reach the contribution limits). One implication of this fact is that the extent of corporate political participation is likely to be limited when the ultimate source of corporate contributions are individuals. Therefore, allowing firms to use their corporate funds for political purposes (see, e.g., the U.S. Supreme Court's *Citizens United* decision) is likely to have a much bigger impact on campaign finance than changing legal contribution limits. Another implication is that corporations (especially those that stand to benefit most from political participation) have incentives to seek alternative channels of political influence that do not require raising funds from individuals. Yet another, and

perhaps equally important, implication of our results is that PAC contributions, despite their relatively small size, can be used as a proxy for firms' political preferences. In fact, influential recent work (**?**) explicitly assumes that PAC contributions are a direct channel of political influence.[1] The results reported here can be viewed as a micro-founded justification for such an assumption.

This paper contributes to two strands of literature. The first strand examines the causes and consequences of corporate political participation. We contribute to this literature by linking the behavior of corporate PACs to financial incentives of individual contributors, which enables us to rationalize some puzzling facts about PAC contributions. The second strand of literature examines political spending more generally. As **?** note in a seminal paper, the amount of money in U.S. politics is surprisingly small relative to the potentially large benefits that come with political influence. Our paper shows that, in the case of corporate PACs, the small amount of money in politics can be justified by weak incentives of individual contributors (even when firm-level benefits of political participation are large).

The rest of this paper is organized as follows. Section 2 develops a simple framework of campaign contributions based on the classical portfolio choice theory. Section 3 describes the data and basic empirical facts about campaign contributions. Section 4 presents our empirical results. Section 5 concludes.

2. Portfolio choice approach to campaign contributions

Consider an investor who has constant absolute risk aversion (CARA) utility: $u(w) = 1 - e^{-\lambda w}$, where w denotes wealth and λ the coefficient of risk aversion. The investor faces a portfolio choice problem in which there is a risk free asset and a risky asset with normally distributed returns. Denote the return on the risk free asset by R_f and the return on the

[1] **?**, p. 6 state: "Our model assumes that [...] PAC contributions are, by definition, driven entirely by political concerns."

risky asset by $\widetilde{R}$. Let μ denote the mean and σ^2 denote the variance of $\widetilde{R}$. The investor's initial endowment of wealth is w_0.

In addition to allocating funds between the risky and risk free asset, the investor can make campaign contributions. The benefit of campaign contributions is that they shift the distribution of returns on the risky asset upward (e.g., thanks to better terms on government contracts and/or laxer taxation and/or financing terms).[2] We assume that the benefits of campaign contributions exhibit diminishing marginal returns. In particular, if the investor contributes an amount c, the risky asset's return goes up by $\beta\sqrt{c}$, where β is the scaling parameter that describes the effectiveness of campaign contributions (i.e., it indicates how difficult it is to buy political influence).[3]

The main trade-off determining the amount of campaign contributions can be described as follows. For a given α (i.e., the amount invested in the risky asset), the investor can buy less of the risk free asset if she makes campaign contributions (thus forgoing some of the risky asset's return). By making campaign contributions, however, the investor is able to shift the return on the risky asset upwards. The optimal amount of campaign contributions emerges from this trade-off.

Given the initial wealth w_0 and amount α invested in the risky asset, the investor's end-of-period utility is

$$1 - \exp\Big\{ -\lambda\big[(w_0 - c)R_f + \alpha(\widetilde{R} - R_f + \beta\sqrt{c})\big]\Big\}. \tag{1}$$

[2]Existing literature has shown that firms can benefit from political connections in a variety of ways, such as direct subsidies, preferential allocation of government contracts, less strict regulation, and lighter taxation. The positive effect of political activism on firm value is documented in **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, **?**, and **?**, among others. Recent experimental evidence in **?** shows that corporations get preferential access to politicians that receive their campaign contributions.

[3]For example, $\beta = 0$ indicates that political influence cannot be bought at any finite cost, while a large β indicates that political influence is easy to acquire. Also note that while using the functional form $\beta\sqrt{c}$ enables us to solve the problem in closed form, the underlying logic of our arguments will remain unchanged with any functional form that exhibits diminishing marginal returns.

The investor maximizes the expected value of (1). Assuming an interior optimum, after some algebra we obtain the following first-order conditions for α^* and c^* (we use asterisks to denote the optimal values):

$$\alpha^* = \frac{\mu - R_f + \beta\sqrt{c^*}}{\lambda\sigma^2}, \tag{2}$$

$$\sqrt{c^*} = \frac{\alpha^*\beta}{2R_f}. \tag{3}$$

Note that (2) is similar to the well-known solution to the standard CARA portfolio choice problem without campaign contributions. In the standard solution, the optimal amount invested in the risky asset is $\frac{\mu - R_f}{\lambda\sigma^2}$. Since campaign contributions shift the returns upward, the ability to make campaign contributions increases the amount invested in the risky asset, hence the term $\beta\sqrt{c^*}$ in (2). The increase in the amount of the risky asset is positively related to the ease of converting contributions into political influence: as β decreases (i.e., as it becomes more difficult to buy political influence), the amount invested in the risky asset also decreases. When $\beta = 0$ (i.e., when political influence cannot be bought), the investor's problem is equivalent to the standard portfolio choice problem. Finally, note that (3) implies that the optimal amount of campaign contributions is positively related to the holdings of the risky asset (because shareholders with larger equity stakes obtain larger benefits from the return increase associated with campaign contributions).

Implication 1. *The amount of campaign contributions increases in the value of the shareholder's equity stake in the firm.*

Note that every shareholder will have *some* incentive to make campaign contributions, but these incentives can become trivial for shareholders who own only a small fraction of their

firms. If there is a cost to making campaign contributions, then shareholders with small equity stakes may find it optimal not to contribute at all. Alternatively, the benefits of making campaign contributions may be non-linear: i.e., campaign contributions may have an impact only if they exceed a certain threshold. Such non-linearities can be modeled by assuming that the cost of making campaign contributions is infinite for contributions below a certain threshold and becomes finite for contributions above the threshold.

To keep the formal derivations simple yet sufficiently flexible, we assume that raising money from individual contributors entails a fixed cost, which we denote by $\delta > 0$.[4] Specifically, for every contribution that a PAC raises it needs to pay the cost δ (effectively reducing the amount it raises by δ). Naturally, only contributions in excess of δ will be made, while contributions below δ will be truncated at zero. Thus, shareholders whose optimal contribution is below δ will not contribute to their corporate PACs.

Let c^{**} denote campaign contributions in the presence of transaction costs. Since expression (3) can be rewritten as $c^* = \frac{\alpha^{*2}\beta^2}{4R_f^2}$, we have:

$$c^{**} = \begin{cases} \frac{\alpha^{*2}\beta^2}{4R_f^2} & \text{if } \frac{\alpha^{*2}\beta^2}{4R_f^2} \geq \delta, \\ 0 & \text{otherwise.} \end{cases} \tag{4}$$

Clearly, a shareholder whose α^* is sufficiently small will make no campaign contributions.

Implication 2. *Only shareholders with sufficiently large equity stakes make campaign contributions.*

Because only shareholders with sufficiently large equity stakes contribute to their corporate PACs, it can be shown that firms with disperse ownership make smaller campaign contributions than firms with concentrated ownership. Consider two firms, Firm A and Firm B, that

[4]This cost can be thought of as the cost of identifying relevant political candidates and communicating these candidates to employees and shareholders (i.e., PAC marketing campaigns and the associated mailings and information sessions for employees and shareholders). For analytical simplicity, we assume that δ is borne by the PAC that raises money from individuals, but all of our conclusions remain virtually unchanged if we assume, instead, that the δ is borne by the individuals making campaign contributions.

are identical in every respect except for their ownership structure. While Firm A is owned entirely by a single shareholder, Firm B is owned by two shareholders with stakes θ and $1-\theta$. Assume that all investors (both the sole shareholder of Firm A and the disperse shareholders of Firm B) have the same risk aversion and that $\frac{\alpha^{*2}\beta^2}{4R_f^2} > \delta$.[5] Assume further that $\frac{(\theta\alpha^*)^2\beta^2}{4R_f^2} > \delta$ but $\frac{((1-\theta)\alpha^*)^2\beta^2}{4R_f^2} < \delta$.[6] The total amount of contributions available to a corporate PAC is, by definition, the sum of contributions from individual shareholders. Therefore, it follows from (4) that Firm A's campaign contributions are $\frac{\alpha^{*2}\beta^2}{4R_f^2}$ while Firm B's campaign contributions are $\frac{(\theta\alpha^*)^2\beta^2}{4R_f^2}$. Since $\theta < 1$, Firm A's contributions are larger than Firm B's contributions.[7]

Implication 3. *PACs of firms with concentrated ownership raise more money than PACs of firms with disperse ownership.*

In what follows, we explore the extent to which the empirical implications developed in this section are borne out by the data.

3. Data and basic empirical facts

We use data on campaign contributions compiled by the Federal Election Commission (FEC), which are publicly available on the FEC's website. Disclosure requirements oblige all PACs to report the identity of each person whose aggregate contributions exceed $200 per calendar year (11 CFR §104.3(a)(4)(i)). The report must include the amount and date of the contribution, as well as the contributing individual's name, employer, occupation, and address. Furthermore, corporate PACs are required to disclose to the FEC "each political committee

[5] Naturally, α^* now represents the total market value of Firm A (and also of Firm B, since they are identical).

[6] This assumption guarantees that Firm B's shareholder whose equity stake is θ has sufficiently strong incentives to make campaign contributions while the shareholder whose equity stake is $1-\theta$ does not have sufficiently strong incentives to make campaign contributions.

[7] Strictly speaking, this example is just one possible combination of equity stakes in the firm with disperse ownership. However, it can be shown that, for all possible combinations of equity stakes in the firm with disperse ownership, the firm with concentrated ownership raises at least as much money in terms of campaign contributions as the firm with disperse ownership and sometimes raises strictly more money. We omit the formal derivation of this statement to save space.

which has received a contribution from the [PAC] [...], together with the date and amount of any such contribution, and, in the case of a contribution to an authorized committee, the candidate's name and office sought" (11 CFR §104.3(b)(1)(iv)). The $200 aggregate reporting requirement does not apply to contributions made by corporate PACs (i.e., they are obliged to report all of the contributions they make, including those below $200).

PACs established by corporations are identified by their type in the FEC data (such PACs have their interest group category coded as "C = Corporation"). We can therefore reliably track receipts and disbursements of all corporate PACs over time. To track total receipts and disbursements of corporate PACs, we use PAC summary files, which have been made publicly available starting with the 1995–1996 election cycle. We have data on total receipts and disbursements of 3,267 unique corporate PACs covering the 1996–2016 election cycles, for a total of 16,657 PAC-election cycle observations (not every PAC contributes in every election cycle). In addition to corporate PACs' total receipts and disbursements, we also identify all contributions that each PAC makes to individual political candidates. As noted earlier, all such contributions must be reported to the FEC regardless of the amount.

The focus of our analysis is on personal financial incentives. Since data on individual ownership are not available for the general population, we use the Execucomp database, which collects compensation and stock ownership data on top executives and directors of firms from the S&P 1,500 index. The database consists of two parts: executive compensation and director compensation. We combine the two parts in our analysis and, for each individual, compute the value (in dollar terms) of his or her ownership stake in each Execucomp firm in which that person is either a director or an executive.

For each individual (director or executive) from Execucomp, we identify all of his or her political contributions reported in the FEC data. Since FEC and Execucomp do not share a common identifier, we match individuals by name and zip code.[8] We then collect two types

[8] We calculate the Hamming distance between each pair of strings and retain only those cases in which this distance is smaller than 0.1. We manually verify a randomly selected sample of 1% of observations to ensure quality.

of individual political contributions. First, we collect the contributions that each person makes to the PACs of Execucomp firms in which this person has an equity stake. Second, we also collect the contributions that each person makes directly to the candidates that receive money from the PACs of Execucomp firms in which this person has an equity stake. This procedure enables us to track both direct and indirect support of political candidates that may be relevant to a specific firm.

To identify contributions made by individuals to corporate PACs, we first match firms from Execucomp with the corresponding PACs from the FEC data. In total, 1,030 firms (28.1% of the Execucomp sample) have their own corporate PACs. We supplement the Execucomp data with the data on firm characteristics from Compustat. To construct our final sample, we retain person-firm-cycle observations for which we have control variables from our main regression specification, which leaves us with 55,443 retain person-firm-cycle observations for 17,160 unique individuals.

3.1. Are corporate PACs financially constrained?

The summary statistics on aggregate PAC contributions and receipts are reported in Panel A of Table 1. On average, a corporate PAC raises $176,630.96 per election cycle, of which it spends $168,952.35. The total amount spent closely matches the total amount raised not only for an average PAC but also for the median PAC as well as the PACs at the 25th and the 75th percentile, which suggests that almost every PAC spends virtually every dollar it collects.

Slightly more than half of campaign contributions made by corporate PACs ($88,484.65 on average) can be traced to identifiable political candidates. The remaining contributions are directed to party committees as well as other PACs in a way that cannot be directly traced to identifiable candidates (an example of such a PAC would be a joint fundraising committee). An average corporate PAC donates to approximately 35 candidates, and an average PAC

contribution per candidate per election cycle is $1,853.07. This amount is far below the limit set by law ($5,000 per election, which amounts to $10,000 for candidates that run both in the primary and general election). In fact, 94.02% of candidates to which PACs donate never receive the maximum allowed by law (see Figure 1).

That PACs spend almost all of the funds they raise and at the same time fail to reach their contribution limits suggests that corporate PACs are financially constrained and have little flexibility in terms of the amount that they can contribute. In what follows, we investigate if these financial constraints are lined to the financial incentives of individual contributors (who are the ultimate source of PAC contributions).

3.2. Individual equity ownership and campaign contributions

Panel B of Table 1 reports summary statistics for the sample of people in the Execucomp dataset for whom we have their ownership stakes. The distribution of personal political contributions is very skewed, a fact that has been documented in prior literature on campaign contributions. The average donation to a corporate PAC is $387.16 in the full sample, but the majority of individuals make no campaign contributions (the median is zero), with most of the donations coming from relatively few people. Personal contributions are far less skewed and much larger, however, in the sample of people who make at least one contribution to their corporate PAC. Conditional on contributing to a corporate PAC, an individual donates $4,880.75 on average, and the median is $4,992.00. The limit on individual contributions to PACs is $5,000 per year, and this limit has not changed during our sample period.[9] Thus, an individual can donate up to $10,000 to a given PAC in a two-year election cycle. However, most campaign contributions take place in the last year of the election cycle because the roster of candidates running in an election is often unknown until then. It is likely, therefore, that the effective contribution limit is $5,000 for many people, indicating that the average

[9]Note that different contribution limits apply to donations made by individuals to political candidates directly, in which case the limit is $2,700 *per election* for the 2014-2016 election cycle.

donation of $4,880.75 is close to the effective limit on individual contributions to corporate PACs.

These patterns are consistent with the portfolio choice approach to campaign contributions, according to which individuals make no campaign contributions at all unless their equity stake in the firm is sufficiently large. This notion is supported by the fact that the skewness in the distribution of campaign contributions is similar to the skewness in the distribution of ownership stakes: While the average value of the ownership stake in our sample is $3.33 million, the median is just $0.48 million. Figure 2 shows graphically that ownership stakes and personal contributions are indeed closely related. The figure plots average campaign contributions by ownership deciles and shows that people increase their political contributions as the value of their equity stake grows. Notably, individuals with the largest equity stakes show the sharpest increase in the amount of their campaign contributions.

Panel C of Table 1 reports summary statistics at the firm level. Consistent with the distribution of individual contributions reported in Panel B, the amount of money raised by a firm's PAC is also skewed (the mean is $92,613.81 while the median is zero). This skewness is due to the fact that of 2,615 unique firms in our sample only 738 have their own PACs. Since our sample firms are rather large (with total assets of $17.6 billion on average), it is unlikely that firm size is a limiting factor constraining these firms' ability to establish PACs or make political contributions. Rather, it seems more likely that these firms' ability to establish corporate PACs is constrained by the personal financial incentives of their employees and shareholders.

While the pattern documented in Figure 2 is highly suggestive, it may be due to a variety of unobservable personal characteristics that determine both the individual's equity stake and his or her political contributions. The advantage of our data, however, is that we can observe the same individual holding equity stakes in several firms at the same time, which enables us to remove the effect of any time-varying person-specific characteristics in estimating the

relation between financial incentives and political contributions. We report formal tests of this relation in the next section.

4. Empirical Results

To test the empirical predictions of our framework, we estimate empirical models of the following form:

$$Y_{ijt} = \alpha + \beta \text{Ownership}_{ijt} + \eta' \text{Controls}_{jt} + \rho_{it} + \mu_j + \gamma_t + \varepsilon_{ijt}, \tag{5}$$

where i indexes the person, j indexes the firm, and t indexes the election cycle when a contribution is made. Y_{ijt} is the amount that person i contributes to firm j's PAC in election cycle t, while Ownership_{ijt} is the corresponding value of this person's ownership stake in firm j in election cycle t. We control for firm characteristics such as firm size (log of assets), Tobin's Q, ROA, capital expenditures, and R&D expenditures. All models include election cycle fixed effects, γ_t, that control for macro factors common to all firms, and some models also include firm fixed effects, μ_j, that absorb all time-invariant heterogeneity across firms. To account for arbitrary correlation between observations pertaining to the same individual, standard errors are clustered by person (**?**).

4.1. The impact of personal financial incentives on campaign contributions

The first empirical prediction of the portfolio choice framework of campaign contributions is that campaign contributions are positively related to the person's ownership stake in the firm. We test this prediction formally in Table 2, in which we regress the amount that a person donates to a firm's PAC on this individual's ownership stake in that firm. Since the law prohibits corporate PACs to collect contributions from individuals who are not the firm's employees or shareholders (or their family members), we only include person-firm

combinations in which the person is either the firm's director or executive in the election cycle in which the contribution is made.[10] Panel A of Table 2 includes the full sample, while Panel B of Table 2 restricts the sample to individuals who make at least one campaign contributions in a given election cycle.

The results in Table 2 provide strong evidence that personal financial incentives are an important determinant of political contributions. In the most stringent specification that includes person-cycle fixed effects as well as election cycle and firm fixed effects, a one standard deviation increase in a person's ownership stake increases this person's contribution to the firm's PAC by \$438.15 (=21.228×20.64, based on column (3) of Panel A). This effect represents a 113.2% increase relative to the sample mean (\$387.16). Thus, people who own equity stakes in different firms at the same time contribute significantly more to the PACs of firms in which they have larger equity stakes. Since this effect is a within person-cycle estimate, it cannot be explained by such factors as personal wealth or risk aversion (even if these characteristics vary for the same person over time).

Apart from giving money to their firms' PACs, the shareholders can also finance political candidates directly (by donating to those candidates' authorized political committees). In fact, corporate executives have been shown to use this channel when political candidates prohibit corporate PACs from contributing to their campaigns (**?**). This channel is likely to be particularly important for individuals who reach their personal contribution limits on PAC donations, and the results presented above suggest that individuals with large ownership stakes are more likely to reach these limits. Such individuals, therefore, have an incentive to donate to PAC-supported candidates directly, thus increasing their support of political candidates expected to be most beneficial for their firms.

To test this hypothesis, we first identify all candidates that receive contributions from the PACs in our sample. We then collect all contributions that individuals in our sample make to

[10]The results are, unsurprisingly, stronger if we include all person-firm combinations since such an alternative specification includes many additional observations in which an individual has no ownership stake in the firm and does not make any contributions to the firm's PAC.

these candidates. Finally, for each person-firm combination, we aggregate all contributions made by that person to the candidates financed by that firm's PAC and regress this amount (which we term 'direct contributions to PAC candidates') on the person's equity stake in the firm. The results, reported in Table 3, indicate that individuals with larger ownership stakes indeed make larger direct contributions to the candidates supported by their firm's PACs. A one standard deviation in a person's ownership stake increases this person's direct contribution to PAC-financed political candidates by \$612.22 (=29.662×20.64, based on column (3) of Panel A). This effect is economically large as it amounts to a 174.34% increase relative to the sample mean (\$351.79).

4.2. Contributions by shareholders' family members

The Code of Federal Regulations states that a corporate PAC may solicit contributions from the corporation's "stockholders and executive or administrative personnel, and their families [...]" (11 CFR §114.1(j)). Thus, contributions by family members represent another channel for shareholders to provide financial support to the political candidates most beneficial to their firm. Since large shareholders are more likely to reach their personal contribution limits, such shareholders have stronger incentives to ensure that their family members donate to their firm's corporate PAC and/or directly to the political candidates supported by their firm's PAC.

To identify contributions by the family members of Execucomp directors and executives, we collect contributions made by people with the same last name and living in the same zip code as the firm's directors and executives.[11] We then relate directors and executives' ownership stakes to their family members' political contributions. As before, we consider two types

[11] Admittedly, this procedure introduces a measurement error since not all people who live in the same zip code and share the same last name are family members. However, the FEC data contain no other variables that can help us identify family members more precisely. Furthermore, the measurement error that this procedure introduces is limited entirely to the dependent variable — therefore, this measurement error, while reducing statistical precision, does not bias the estimates.

of contributions: contributions made to the firm's PAC as well as direct contributions to the political candidates supported by the firm's PAC. In both cases, we find that a person's ownership stakes is positively related to the contributions made by this person's family members (see Table 4).

4.3. Ownership concentration and PAC receipts

In our final set of tests (reported in Table 5), we investigate if ownership concentration is related to the total amount of money raised by corporate PACs, which is one of the empirical implications of the portfolio choice framework of campaign contributions developed above.

While our prior results focused on contributions from directors and executives (for whom we observe their equity stakes), in this final set of tests we will focus on the total amount raised by corporate PACs from all employees and shareholders.[12] Since we do not observe equity stakes for all employees and shareholders, we have to use the aggregate ownership stake of the firm's directors and executives reported in Execucomp as a proxy for ownership concentration at the firm level. We find results consistent with our framework: PACs of firms with high ownership concentration raise more money than PACs of firms with low ownership concentration.

4.4. Robustness

As noted earlier, individual ownership stakes and political contributions are highly skewed, suggesting the presence of outliers. While Figure 2 helps alleviate concerns about outliers, Table 6 provides further evidence that outliers do not drive our results. In the tests reported in Table 6, we log-transform our explanatory variable or our dependent variable (or both). The log-log specification has the added benefit of enabling us to interpret the coefficient of interest as the elasticity of political contributions with respect to stock ownership.

[12] In fact, prior literature suggests that employees are an important source of campaign contributions (**?**).

In all instances, we continue to find a statistically strong and economically large relation between stock ownership and campaign contributions, suggesting that the link between personal financial incentives and political contributions is robust. Furthermore, the elasticity of campaign contributions with respect to stock ownership is close to 1 in the sample of people who make at least one contribution, suggesting that political donations and stock ownership move almost in lockstep. Such a relation would have been unlikely if political contributions had been driven entirely by personal preferences unrelated to financial incentives: It is hard to imagine that a person's political leanings become 1% stronger if the value of his or her ownership stake increases by 1%.

5. Conclusions

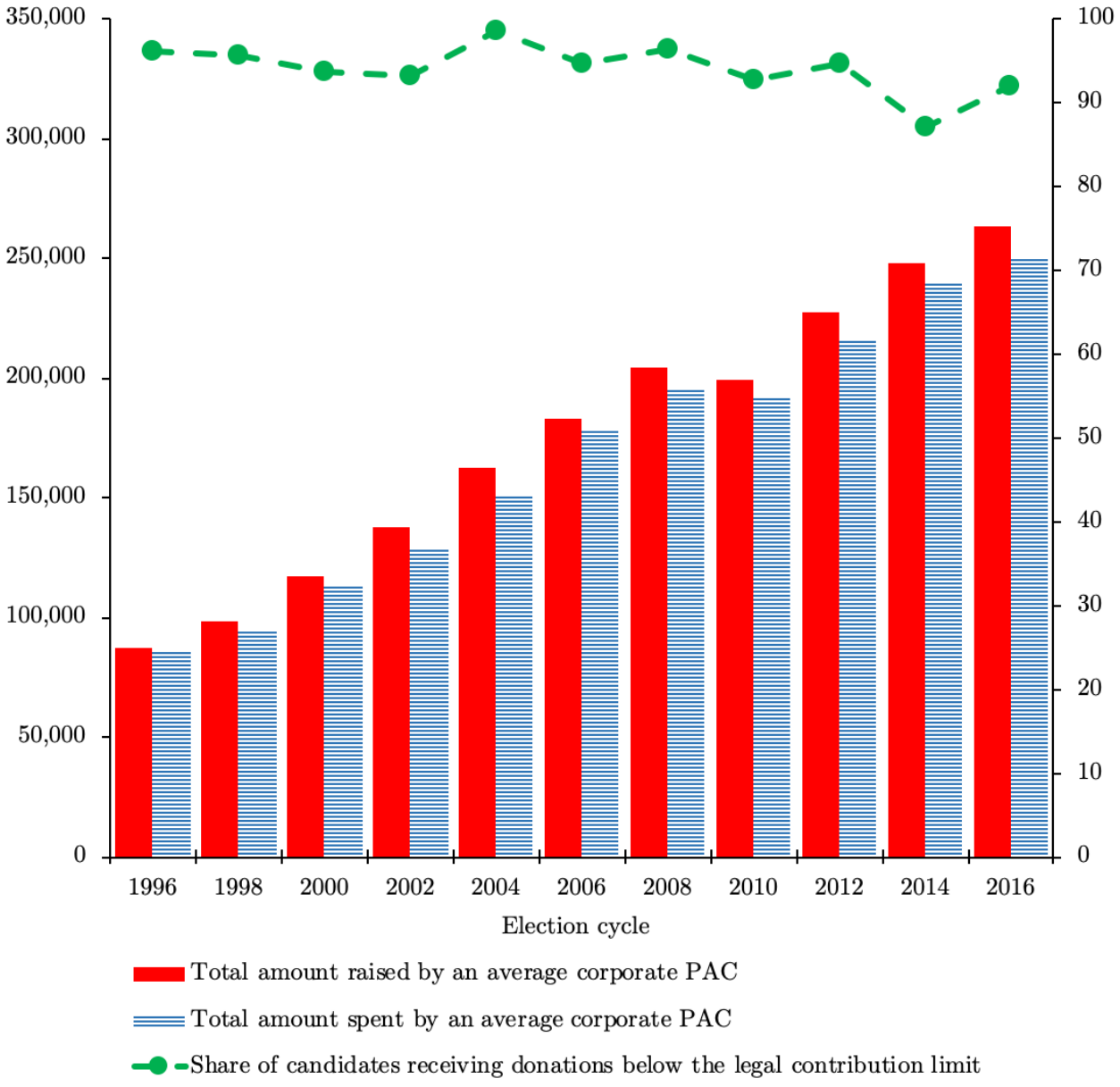
In this paper, we argue that the low observed levels of corporate political participation can be rationalized by personal financial incentives of employees and shareholders (who are the ultimate source of corporate campaign contributions). Since even large firm-level benefits may be trivial for individuals with small ownership stakes, few people have sufficiently strong incentives to give money to corporate PACs. As a result, corporate PACs become financially constrained.

Empirically, we provide evidence that corporate PACs are indeed financially constrained and therefore make relatively small political contributions because they fail to raise sufficient funds from individuals. We then show that personal financial incentives are a strong determinant of campaign contributions.

Our results demonstrate the importance of personal financial incentives in campaign finance, a fact that has so far been overlooked in the literature. It is these incentives rather than the legally mandated contribution limits that represent the binding constraint on corporate campaign contributions (after all, the vast majority of corporate PACs never reach the

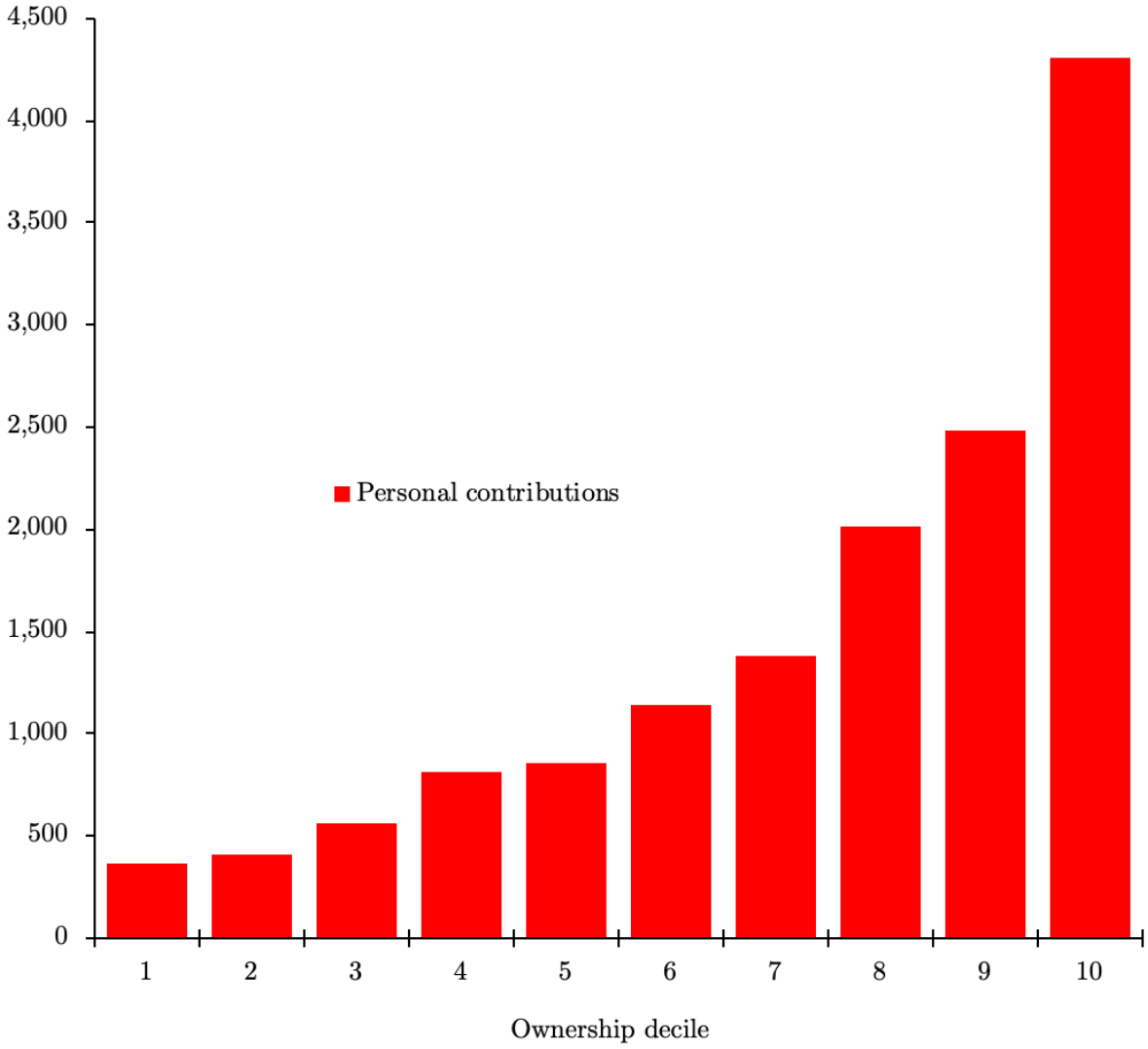
contribution limits). In addition to rationalizing the relatively small campaign contributions made by corporate PACs, our framework also helps explain why corporations may have to seek alternative channels of political influence for which they can use their corporate treasuries instead of relying in contributions from individual employees and shareholders.

Figure 1: Inflows and outflows at corporate PACs



This figure plots the total amount raised by an average corporate PAC (solid red bars), the total amount spent by an average corporate PAC (striped blue bars), as well as the share of candidates to which a corporate PAC donates that receive less than the legal contribution limit (the dashed green line). The receipts and disbursements are measured in USD against the left vertical axis; the share of candidates receiving donations below the legal contribution limit is measured in percentages against the right vertical axis. The horizontal axis indicates election cycles.

Figure 2: Ownership stakes and personal contributions



This figure plots the average amount of total campaign contributions that individuals make to their firm's PAC and directly to the candidates supported by their firm's PAC as a function of these individuals' ownership stakes (measured in dollar terms). The contribution amounts are measured in USD against the vertical axis. The horizontal axis indicates deciles of ownership.

Table 1: Summary statistics

This table reports summary statistics. Total receipts is the total amount of funds raised by a corporate PAC in an election cycle ($); Total disbursements is the total amount spent by a corporate PAC in an election cycle ($); Total contributions to candidates is the amount contributed by a corporate PAC to authorized campaign committees associated with identifiable political candidates ($); Number of candidates is the number of political candidates to whose authorized campaign committees a corporate PAC contributes ($); Contribution per candidate is the average corporate PAC contribution per authorized campaign committee associated with a political candidate ($); Share of contributions below limit is the share of candidates receiving corporate PAC contributions below the per-candidate legal limit on campaign contributions (%); Contribution to the firm's PAC is the amount of campaign contributions made by a given individual to the corporate PAC associated with his/her employer in Execucomp ($); Direct support of PAC candidates is the total amount given by an individual to all candidates that the firm's PAC also donates to ($); Value of ownership stake in the firm is the value of the firm's ownership stake held by a given individual ($ millions); Total amount raised by the firm's PAC is the total amount raised by a firm's PAC from individual contributors, including executives, directors, and all other employees ($, the variable is set to zero if the firm does not have a PAC); Concentration of ownership is the total stake in the firm owned by the firm's executives whose ownership stakes are reported in Execucomp (%); Firm size is $Log(1+$the total book value of assets); Tobin's q is the ratio of the market value of total assets to the book value of total assets (calculated using Compustat items as follows: $(AT - CEQ + PRCC\_F \times CSHO)/AT$); ROA is the ratio of net income to total assets; Capital expenditures is the ratio of capital expenditures to total assets; R&D is the ratio of research and development expenses to total assets (the variable is set to zero if this data item is missing).

Variable	N	Mean	25th Pctl.	Median	75th Pctl.	Std. Dev.
Panel A: PAC-level summary statistics						
Total receipts	16,657	176,630.96	15,450.00	52,641.56	155,618.00	408,402.31
Total disbursements	16,657	168,952.35	15,093.00	47,075.00	146,270.00	394,661.18
Total contributions to candidates	16,657	88,484.65	5,500.00	24,000.00	82,500.00	200,077.24
Number of candidates	16,657	35.30	4.00	14.00	43.00	53.87
Contribution per candidate	16,657	1,853.07	1,000.00	1,615.38	2,500.00	1,635.16
Share of contributions below limit	16,657	94.02	92.59	100.00	100.00	12.03
Panel B: Individual-level summary statistics						
Contribution to the firm's PAC (all)	55,443	387.16	0.00	0.00	0.00	1,622.83
Contribution to the firm's PAC (nonzero)	4,398	4,880.75	2,000.00	4,992.00	8,000.00	3,357.06
Direct support of PAC candidates (all)	55,443	351.79	0.00	0.00	0.00	9,533.93
Direct support of PAC candidates (nonzero)	1,201	16,242.65	5,000.00	7,500.00	16,500.00	62,779.01
Value of ownership stake in the firm	55,443	3.33	0.12	0.48	1.67	20.64
Panel C: Firm-level summary statistics						
Total amount raised by the firm's PAC	13,337	92,613.81	0.00	0.00	0.00	387,095.68
Concentration of ownership	13,337	3.93	0.54	1.55	3.83	7.62
Firm size	13,337	7.84	6.59	7.75	8.97	1.77
Tobin's q	13,337	1.90	1.13	1.48	2.13	1.53
ROA	13,337	0.03	0.01	0.04	0.08	0.12
Capital expenditures	13,337	0.04	0.01	0.03	0.05	0.05
R&D	13,337	0.03	0.00	0.00	0.02	0.06

Table 2: Stock ownership and personal campaign contributions

The dependent variable is the amount contributed by person i to the PAC of firm j in election cycle t. Panel A includes all observations, while Panel B includes only those observations in which person i made at least one campaign contribution in election cycle t (but not necessarily to the PAC of the firm which employs this person). All variables are as described in the text and in Table 1. Standard errors clustered by person are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: Full sample			
	Contributions to the firm's PAC		
	(1)	(2)	(3)
Value of ownership stake in the firm	22.624***	22.635***	21.228***
	(3.309)	(3.309)	(2.722)
Firm size		-3.879	-28.659
		(19.530)	(82.378)
Tobin's q		68.339*	26.878
		(38.847)	(43.070)
ROA		-307.947	-149.136
		(336.856)	(363.872)
Capital expenditures		-129.852	-2595.019**
		(927.996)	(1,116.130)
R&D		492.766	747.748
		(715.475)	(1,736.728)
Observations	55,443	55,443	55,443
R-squared	0.913	0.913	0.932
Person-cycle fixed effects	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes
Firm fixed effects	No	No	Yes
Panel B: Sample of individuals that made at least one campaign contribution			
	Contributions to the firm's PAC		
	(1)	(2)	(3)
Value of ownership stake in the firm	35.896***	35.930***	26.658***
	(5.447)	(5.421)	(4.704)
Firm size		0.761	59.156
		(53.750)	(244.568)
Tobin's q		227.497**	219.335
		(113.145)	(149.774)
ROA		-837.233	-15.814
		(965.235)	(1,188.837)
Capital expenditures		-215.144	-6896.641**
		(2,630.915)	(3,187.735)
R&D		992.749	6669.743
		(2,136.841)	(6,224.058)
Observations	12,386	12,386	12,386
R-squared	0.895	0.896	0.942
Person-cycle fixed effects	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes
Firm fixed effects	No	No	Yes

Table 3: Stock ownership and direct contributions to PAC-financed political candidates

The dependent variable is the total amount contributed by person i to all candidates that the PAC established by firm j also contributes to in election cycle t, excluding the amount that person i donates to the PAC itself. Panel A includes all observations, while Panel B includes only those observations in which person i made at least one campaign contribution in election cycle t (but not necessarily to the PAC of the firm which employs this person). All variables are as described in the text and in Table 1. Standard errors clustered by person are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: Full sample			
	Direct contributions to PAC candidates		
	(1)	(2)	(3)
Value of ownership stake in the firm	33.614**	33.291**	29.662**
	(16.551)	(16.244)	(14.217)
Firm size		442.219	372.648
		(322.611)	(372.864)
Tobin's q		-12.988	112.903
		(150.493)	(405.871)
ROA		-1971.540	-1961.083
		(2,965.562)	(5,495.982)
Capital expenditures		-2836.498	-13444.169
		(5,990.358)	(13,534.524)
R&D		3668.381*	41770.814
		(2,107.615)	(41,860.549)
Observations	55,443	55,443	55,443
R-squared	0.435	0.435	0.540
Person-cycle fixed effects	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes
Firm fixed effects	No	No	Yes
Panel B: Sample of individuals that made at least one campaign contribution			
	Direct contributions to PAC candidates		
	(1)	(2)	(3)
Value of ownership stake in the firm	53.333**	51.813**	22.629
	(25.970)	(24.754)	(21.621)
Firm size		1242.587	1775.333
		(907.359)	(1,807.045)
Tobin's q		40.862	875.120
		(524.773)	(1,196.962)
ROA		-4566.166	7434.836
		(8,040.290)	(11,054.964)
Capital expenditures		-7114.936	-24896.057
		(16,945.339)	(26,049.854)
R&D		9830.530	13575.683
		(6,315.912)	(26,357.496)
Observations	12,386	12,386	12,386
R-squared	0.432	0.434	0.644
Person-cycle fixed effects	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes
Firm fixed effects	No	No	Yes

Table 4: Contributions by family members

In columns 1 and 2 of both panels, the dependent variable is the amount contributed by family members of person i to the PAC of firm j in election cycle t. In columns 3 and 4 of both panels, the dependent variable is the total amount contributed by family members of person i to all candidates that the PAC established by firm j also contributes to in election cycle t, excluding the amount that the family members donate to the PAC itself. Panel A includes all observations, while Panel B includes only those observations in which person i made at least one campaign contribution in election cycle t (but not necessarily to the PAC of the firm which employs this person). All variables are as described in the text and in Table 1. Standard errors clustered by person are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: Full sample				
	Contributions to the PAC		Direct contributions	
	(1)	(2)	(3)	(4)
Value of ownership stake in the firm	7.938***	7.483***	139.209**	83.518**
	(1.859)	(1.570)	(58.564)	(37.951)
Firm size	36.516*	-0.820	3528.482***	4521.247***
	(20.024)	(80.741)	(514.906)	(1,510.764)
Tobin's q	106.780**	33.414	-1766.217*	-1203.895
	(42.532)	(48.673)	(1,018.005)	(1,404.042)
ROA	-36.508	-247.183	25986.070	12173.853
	(347.255)	(309.475)	(18,991.391)	(16,393.212)
Capital expenditures	1044.795*	1436.530	6559.945	-1836.667
	(626.690)	(1,285.938)	(16,944.305)	(22,247.515)
R&D	-1093.221	-814.826	-7510.610	-75011.239
	(1,091.423)	(2,280.863)	(35,156.600)	(95,452.102)
Observations	55,443	55,443	55,443	55,443
R-squared	0.873	0.913	0.782	0.870
Person-cycle fixed effects	Yes	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	No	Yes	No	Yes
Panel B: Sample of individuals that made at least one campaign contribution				
	Contributions to the PAC		Direct contributions	
	(1)	(2)	(3)	(4)
Value of ownership stake in the firm	7.565***	4.016**	217.237**	87.540**
	(2.215)	(1.713)	(87.965)	(42.491)
Firm size	43.413	239.504	4717.625***	7889.684**
	(42.615)	(206.615)	(793.159)	(3,158.113)
Tobin's q	149.807*	20.803	-2434.991*	-4883.452**
	(86.910)	(91.598)	(1,259.854)	(2,332.494)
ROA	-23.759	-718.830	10098.323	-14799.224
	(675.042)	(864.721)	(20,598.734)	(23,658.541)
Capital expenditures	1251.015	3969.705*	43365.608	-4315.540
	(1,063.663)	(2,030.755)	(30,143.386)	(40,564.599)
R&D	-5587.724**	-4142.202	34739.545	150593.939**
	(2,449.925)	(3,983.343)	(31,972.696)	(71,733.733)
Observations	12,386	12,386	12,386	12,386
R-squared	0.828	0.916	0.799	0.880
Person-cycle fixed effects	Yes	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	No	Yes	No	Yes

Table 5: Ownership concentration and total PAC receipts

The dependent variable is the total amount that a corporate PAC raises in an election cycle. All variables are as described in the text and in Table 1. Standard errors clustered by firm are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

	Total amount raised by the firm's PAC			
	All firms		Firms with a PAC	
	(1)	(2)	(3)	(4)
Concentration of ownership	418.648**	564.941**	1298.671**	1876.603**
	(199.320)	(223.165)	(653.199)	(891.652)
Firm size	42883.420***	17367.452***	181631.981***	86403.394***
	(5,286.710)	(5,148.237)	(25,729.531)	(22,983.683)
Tobin's q	1849.820	-605.736	15991.147	4937.921
	(1,992.049)	(1,869.312)	(11,353.668)	(9,282.345)
ROA	-931.288	10539.958	63719.172	125976.702**
	(6,740.762)	(7,538.770)	(54,022.816)	(57,613.012)
Capital expenditures	53802.119	149088.068**	402311.665	787819.377**
	(64,290.523)	(70,975.685)	(316,376.976)	(348,184.025)
R&D	97622.865***	38467.938	678255.843*	535149.463
	(27,364.488)	(28,215.635)	(389,687.649)	(386,715.126)
Observations	13,337	13,337	3,297	3,297
R-squared	0.873	0.875	0.890	0.895
Election cycle fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	No	Yes	No	Yes

Table 6: Robustness

In columns (1) and (2) of both panels, the dependent variable is the amount contributed by person i to the PAC of firm j in election cycle t. In columns (3) and (4) of both panels, the dependent variable is $Log(1 +$ the amount contributed by person i to the PAC of firm j in election cycle $t)$. Panel A includes all observations, while Panel B includes only those observations in which person i made at least one campaign contribution in election cycle t (but not necessarily to the PAC of the firm which employs this person). All variables are as described in the text and in Table 1. Standard errors clustered by person are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively.

Panel A: Full sample				
	Contributions to the firm's PAC		*Log*(1+Contributions to the firm's PAC)	
	(1)	(2)	(3)	(4)
Log(1+Value of ownership stake)	448.489***	451.369***	0.624***	0.626***
	(42.304)	(42.635)	(0.051)	(0.051)
Observations	55,443	55,443	55,443	55,443
R-squared	0.916	0.917	0.919	0.920
Control variables	No	Yes	No	Yes
Person-cycle fixed effects	Yes	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes	Yes
Panel B: Sample of individuals that made at least one campaign contribution				
	Contributions to the firm's PAC		*Log*(1+Contributions to the firm's PAC)	
	(1)	(2)	(3)	(4)
Log(1+Value of ownership stake)	836.866***	839.789***	1.164***	1.164***
	(68.660)	(68.449)	(0.082)	(0.082)
Observations	12,386	12,386	12,386	12,386
R-squared	0.904	0.905	0.896	0.897
Control variables	No	Yes	No	Yes
Person-cycle fixed effects	Yes	Yes	Yes	Yes
Election cycle fixed effects	Yes	Yes	Yes	Yes