KIN IN THE GAME:

HOW FAMILY TIES HELP FIRMS OVERCOME CAMPAIGN

FINANCE REGULATION[†]

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Abstract

Can campaign finance regulation mitigate the political influence of economic actors? In this article, we identify a new factor behind the ineffectiveness of campaign finance regulation—the internal structure of organizations whose behavior it seeks to change. We study the effect of a Supreme Court ban on corporate campaign contributions on the political behavior of Brazilian public companies. We argue that the ban posed a collective action problem for shareholders to which family ties provided a solution by internalizing the value of political investments. Consistent with this prediction, using a difference-in-differences design and previously untapped data on family ties in Brazilian public companies, we show that, after the ban, hitherto politically active family firms substituted individual for corporate contributions, while no substitution is observed in non-family firms. We probe the notion that family ties transmit influence by documenting the presence of peer effects in the contribution behavior of family members. The bifurcated effects of the ban illustrate how organizational structure—an understudied source of de facto power—can limit the effectiveness of programmatic reforms seeking to curtail political influence and thus contain a cautionary tale for policymakers.

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Introduction

Can campaign finance regulation mitigate the political influence of economic actors? Business interests routinely affect policy outcomes across the developing and developed world (Fairfield, 2015; Szakonyi, 2020; Zingales, 2017). To counteract this influence, scholars and activists have increasingly advocated for the regulation of corporate campaign finance. Such policies are typically justified on egalitarian or anti-corruption grounds (Cagé, 2020; Dawood, 2015; Dotan, 2003; Hasen, 1996; Pasquale, 2008; Sunstein, 1994). Currently, forty-two countries prohibit corporate campaign contributions (IDEA, 2020). Despite vocal advocacy in favor of such regulation, evidence on its effectiveness is still mixed (Scarrow, 2007; La Raja and Schaffner, 2014; Avis et al., 2021; Gulzar, Rueda and Ruiz, 2021).

In this article, we identify a new factor behind the ineffectiveness of campaign finance regulation—the internal structure of organizations whose behavior it seeks to change. We study the effect of a ban on corporate campaign contributions in Brazil, where in the aftermath of a major corruption scandal, the Supreme Court prohibited corporate donations. In Brazil, campaign contributions are a key component of the business political activity (Schneider, 2010*a*).² Prior to the ban, firms made the majority of campaign contributions (75 percent in the 2010 election cycle), with fewer than 100 firms making roughly half of total contributions (Mancuso, 2015).

¹For example, Cagé (2020) writes: "In many countries, for excellent reasons, private corporate donations to parties and election campaigns are prohibited. Recently, as we have seen, they have even been outlawed in Brazil, a country that cannot be said to be in the forefront of the struggle for democratic equality. I think that such bans should be introduced wherever they do not yet operate."

²While in the United States campaign contributions are typically complemented by other strategies such as lobbying (Kim, Stuckatz and Wolters, 2020), Brazil does not have a professional lobbying industry and does not regulate lobbying activities. See OECD (2014).

We study the effect of this policy on the political behavior of family firms, the most prevalent corporate structure in the developing world (La Porta, Lopez-De-Silanes and Shleifer, 1999; Villalonga and Amit, 2020). In Latin America, family capitalism has been characterized as endemic (Schneider, 2013, p.47). Previous research shows that family firms display lower levels of productivity (Bennedsen et al., 2007; Lemos and Scur, 2019) and have a comparative advantage in rent-seeking (Morck and Yeung, 2004; Morck, Wolfenzon and Yeung, 2005). In Brazil, a country where campaign contributions typically secure material benefits to donors, family firms are particularly active political actors and obtain substantial benefits from their political donations (Balán, Dodyk and Puente, 2022).

We argue that family ties have the capacity to furnish collective action as a response to negative shocks, building on the notion that family ties can help individuals cooperate in the face to social dilemmas (Henrich and Henrich, 2007; Enke, 2019; McNamara and Henrich, 2017).³ The ban on corporate contributions posed a collective action problem for shareholders. In Brazil, campaign contributions are best understood as long-term investments in relationships with politicians (Samuels, 2001a). Such political investments are costly for individual businesmen, but accrue benefits to all shareholders—such as subsidized loans, favorable regulation, or procurement contracts.⁴ Once the corporate contribution channel becomes unavailable, an investor holding a significant share of the firm's stock can still make a private contribution and internalize these benefits to some extent, but cannot prevent other shareholders from free-riding on her private contribution.⁵ Contributions, thus, become strategic substitutes. By creating this

³See also Hamilton (1964); Henrich and Henrich (2007); Enke (2019); Akbari, Bahrami-Rad and Kimbrough (2019); Akbari et al. (2020); McNamara and Henrich (2017).

⁴As noted, this is the case in our setting. See, for example, Boas, Hidalgo and Richardson (2014) and Cavgias and Granella (2020).

⁵Another important reason why they may not contribute is that, unlike family owners or managers with longer time horizons, professional managers cannot make credible long-term commitments necessary to build relation-

collective action problem that threatens the continuity of political donations, the ban constituted a negative shock with the potential to hurt the value of the firm.

We contend that family ties within firms provide a solution to this collective action problem by internalizing the value of political investments. A key feature of family firms is that they transmit capital across generations. Owners typically appoint their offspring as the CEO (Pérez-González, 2006), who expects to inherit control of the firm.⁶⁷ We claim that this interngenerational dynamic—coupled with greater trust— aligns incentives of family members who care about protecting the value of the firm. By facilitating collective action among family members, family ties make contributions strategic complements.

We evaluate this argument using a difference-in-differences design and document that, after the ban on corporate contributions, hitherto politically active family firms are more likely to channel their political donations through their individual members compared to non-family firms, thus substituting individual for corporate contributions. Furthermore, we document the presence of peer effects among individuals linked by family ties within a firm, giving credence to the notion that such ties transmit influence and help to overcome collective action problems. Together, our findings indicate that family ties enable economic actors to circumvent regulation seeking to limit their political influence, revealing a major unintended consequence of the reform.

This article contributes to several strands of literature. First, we add to the literature on family firms (Bertrand and Schoar, 2006; Burkart, Panunzi and Shleifer, 2003; Caselli and Gennaioli, 2013; Iacovone, Maloney and Tsivanidis, 2019; Morck and Yeung, 2004). While ships.

⁶This factor has been invoked to explain the persistence of family firms despite their economic inefficiency (Anderson and Reeb, 2003).

⁷Moreover, family ties encode trust, which can act as a lubricant to overcome collective action problems (Morck and Yeung, 2004).

existing studies have mostly focused on economic outcomes, we study whether such firms display distinctive political behavior. More broadly, we contribute to a growing agenda on the sources of corporate power by identifying family ties as a key factor underpinning the political advantage of firms (Zingales, 2017).

Second, we contribute to the literature on campaign contributions and campaign finance regulation (Ansolabehere, Snyder and Ueda, 2004; Primo and Milyo, 2006; Scarrow, 2007) by identifying a condition that can render such legislation less effective. Recent work documents mostly salutary effects of campaign contribution limits—stricter limits have been found to increase political competition and reduce incumbent reelection (Avis et al., 2021), while looser limits appear to increase the number of public contracts assigned to top donors and decreases the quality of such contracts (Gulzar, Rueda and Ruiz, 2021). Closer to our paper, recent work shows that the Brazilian ban on corporate contributions had unintented effects. Studying the effects of the ban on political competition, Peveri (2021) shows that the ban hurt the electoral advantage of incumbents who were more reliant on corporate contributions. Focusing on the relationship between firms and procurement contracts, Cavgias and Granella (2020) provide evidence that large firms were able to circumvent the effect of the ban by substituting individual for corporate contributions, suggesting that the ban had limited effects in curtailing the influence of money in politics. By contrast, we focus on the heterogeneous effects of the ban among firm types and study how internal features of organizations can allow firms to circumvent its effects.

Third, the paper adds to an expanding literature on social influence in economic and political settings (Alt et al., 2022; Fafchamps, Vaz and Vicente, 2020; Ferrali et al., 2020; Field et al., 2016; Harmon, Fisman and Kamenica, 2019; Kuchler and Stroebel, 2020; Mas and Moretti, 2009; Nickerson, 2008). Recent work on corporate political influence opens the black box of firms and shows that corporate and individual-level political activity within them are shaped by their internal dynamics. Most prominently, students of American politics have focused on the

relationship between employers, workers, and political action committees (PACs). For example, Stuckatz (2021) shows that a significant fraction of employees contribute to PACs supported by their company, and Hertel-Fernandez (2017) provides evidence that employers actively influence employee's political participation. Relatedly, Li (2018) shows that ideological heterogeneity among employees limits their willingness to contribute when firms donate to PACs that seek access to ideologically opposing parties. By contrast, we switch our focus to the behavior of board members and top executives. Closest to out paper is Larreguy and Teso (2018), who document the existence of peer effects in the contribution behavior of directors sitting in partially overlapping boards after the passage of the McCain-Feingold act, which increased contribution limits. Acknowledging that certain types of ties may matter more than others in different settings (Kuchler and Stroebel, 2020), we refine the analysis and focus on a specific type of social tie within firms—family ties—and study its role in the transmission of political influence.

Fourth, we contribute to a classic yet recently reinvigorated debate in social science on whether kinship and kinship-based institutions foster or hinder political development (Banfield, 1958; Alesina and Giuliano, 2011; Fukuyama, 2011; Schulz et al., 2019; Todd, 1985; Padgett and McLean, 2006)⁹. For example, Fukuyama (2011, p.51) writes that state-building represented "a transition from kinship-based forms of organization to state-level organization." More recently, some have argued that the emergence of modern economic and political institutions required the dissolution of extended kin networks (Schulz et al., 2019; Henrich, 2020). An important point supported by both theory and empirical evidence is that certain features of families—such as in-group trust and a superior coordination capacity (Alesina and Giuliano, 2010; Enke, 2019; McNamara and Henrich, 2017)—provide kin-related individuals with

⁸Also related to our contribution, Cruz and Graham (2019) show that peer ties *across* firms facilitate industry-level political participation.

⁹Weber writes: "The great achievement of [...] the ethical and ascetic sects of Protestantism was to shatter the fetters of the sib [the extended family]" (Lipset and Lenz, 2000).

a comparative advantage at collective action. We refine this notion by studying it in a high-stakes strategic setting and specifying the conditions that make it more likely. Recent work shows how familial collective action can be politically consequential. Naidu, Robinson and Young (2021) show that families with higher network centrality were more likely to participate in the 1991 Haiti coup. Wang (2021) offers a more nuanced view by showing that the collective action capacity of kin groups can be conducive to state-building when kinship networks are geographically disperse. We bring this discussion to the context of corporate political activity and evaluate the impact of familial collective action within kinship-based *economic* institutions on a more specific dimension of political development by showing that family ties can frustrate programmatic reforms seeking to advance political equality.

Finally, we contribute to the literature on the sources of institutional weakness (Acemoglu, 2005; Levitsky and Murillo, 2009; Brinks, Levitsky and Murillo, 2019, 2020), defined as the difference between institutional goals and outcomes (Brinks, Levitsky and Murillo, 2019). Scholars have identified lack of will (Holland, 2015, 2016), capacity (O'Donnell, 1993; Besley and Persson, 2011), or the presence of societal resistance (Migdal, 1988) as key reasons for institutional weakness. In this regard, our findings contain a paradox: while the reform was, in fact, effective at achieving its immediate goal—prohibiting corporate contributions—, it triggered an unintended, bifurcated response driven by organizational features of the actors whose behavior it sought to change. Our results provide micro-level evidence on a previously overlooked factor underpinning institutional weakness: organizational structure as an important source of de facto power.¹¹

¹⁰A broader literature on the influence of the family in politics has mostly focused on electoral settings. See, for example, (Cruz, Labonne and Querubin, 2017; Dal Bó, Dal Bó and Snyder, 2009; Querubin, 2016; Smith, 2018).

¹¹More broadly, we join an expanding research agenda establishing that "social structure"—broadly understood—is an important factor shaping political outcomes, such as conflict (Moscona, Nunn and Robinson, 2017, 2020), coups (Naidu, Robinson and Young, 2021), and public goods provision (Cruz, Labonne and Querubin,

Adverse Shocks and Familial Collective Action

We argue that family ties help individuals cooperate in the face of social dilemmas induced by negative shocks. Research across the social sciences indicates that families have a comparative advantage at cooperation (Hamilton, 1964; Henrich and Henrich, 2007; Enke, 2019). Kin-related individuals have been shown to display higher levels of in-group cooperation (Enke, 2019), favoritism (Akbari, Bahrami-Rad and Kimbrough, 2019; Akbari et al., 2020), and coordination (McNamara and Henrich, 2017). Families also have long time horizons, allowing them to transmit capital across generations (Bates, Greif and Singh, 2004). Scholars agree that the type of cooperation furnished by family ties is parochial in nature (Bowles and Gintis, 2004). In the domain of market exchange, kinship, coethnicity, and—more generally—shared group membership have been shown to facilitate cooperative behavior (Fehr and Gächter, 2000; Chen and Li, 2009; Habyarimana et al., 2007) and the enforcement of informal contracts (Greif, 1994; Tirole, 1996; Sanchez de la Sierra, 2021).

We study this property of family ties in a strategic setting: that of firms facing an adverse shock that created a new political environment designed to curtail their political advantage. This allows us to empirically inform notions of familial cooperation, illustrating how it plays out in a high-stakes setting. First, our setting features a high-stakes collective action problem, which—in contrast with studies that tend to assume that cooperation among kin-related individuals is more likely in general—allows us to elucidate when familial collective action is more likely to happen. Second, it features individuals connected by different types of ties facing the same strategic and informational environment, allowing us to isolate the specific effect of family ties on political behavior from the effect of other networks in which individuals take part.

donors, donations are best understood as a collective good that increases the value of the firm, thus benefiting all shareholders. A ban on corporate contributions creates a collective action problem. By foreclosing the possibility of using the corporation as a vehicle for contributions and presenting executives with the decision to contribute individually, each individual confronts a dilemma. Whoever contributes can appropriate a fraction of the collective good proportional to her shares. But, since the benefits accrue to all members—who cannot be prevented from free-riding on their contribution—any single individual may prefer not to do so. In other words, the ban turns individual contributions into strategic substitutes.

We contend that family ties significantly assuage this problem by aligning incentives. In Becker's theory of the family, families are characterized by altruism: the utility of each family member is affected by the utility of other family members, leading to the internalization of externalities (Becker, 1974). A chief reason why incentives are more aligned in family firms is that junior members, typically appointed to leadership positions, expect to inherit control (Pérez-González, 2006; Villalonga and Amit, 2020). Indeed, students of corporate governance note that family ownership solves the classic agency problem between owners and managers by appointing members in top leadership positions, while creating a new agency problem between shareholders who belong to the controlling family and those who do not (Villalonga et al., 2015). We argue that the ban had a differential effect on these two groups, inducing a different political behavior in their members. While related to notions such as trust and in-group identity, our theory highlights that familial collective action is a strategic response to a negative shock

¹²Suppose that V is the value of the firm, and that maintaining a political connection increases the value of the firm to V + r at a cost c. Suppose that the executives use the firm's cash flow to pay the cost c because it is profitable to do so, which implies that r > c. An individual who owns $s \in [0,1]$ shares of the firm will pay the cost individually if sr > c, since she formally owns a fraction s of the firm's value.

¹³See Li (2018) for a related argument about how ideological differences pose a collective action problem for firm employees seeking to make campaign contributions.

that threatens the value of the firm. Such value plausibly depends on the rents that firms obtain from their political investments, such as subsidized state credit (Online Appendix Table K.1).¹⁴ As a consequence of aligned incentives, we argue that contributions by family members should turn into strategic complements after the ban.

In sum, we argue that the ban on corporate contributions can be interpreted as a common shock that, while affecting all individuals in the same environment, produced a differential strategic response by family and non-family members. Empirically, the argument implies that collective action should be enhanced for those individuals who are affected by the ban. In particular, it entails that, after the ban on corporate contributions, members of the controlling family in hitherto politically active firms should start contributing as individuals (EI 1). If, as our theory predicts, contributions by family members are strategic complements after the ban, we should observe that the probability of a family member contributing should increase as a response to the contributions of other family members (EI 2).

Background

Electoral Competition and Campaign Finance

Brazil is a federal presidential democracy with a multiparty system. Legislative candidates are elected through an open-list proportional representation system, allowing voters to cast ballots for individual candidates. This makes politicians highly autonomous vis-à-vis parties, creating incentives to cultivate a personal vote and to pursue long-term political careers (Samuels, 2001*b*, 2002). It also makes campaigns more expensive, since candidates have to compete against their own list mates. The organizational weakness of parties and the low level of public financing

¹⁴The behavioral response we predict is akin to that documented by studies of informal insurance after negative shocks (Fafchamps and Lund, 2003).

of politics (Bourdoukan, 2010) further increase the cost of campaigns and induce candidates to raise their own funds. Brazilian elections are among the most expensive in the world. The 2014 presidential election cost \$4.8 billion—approximately \$23 per capita; for comparison, the United States 2016 presidential election cost \$6.5 billion—approximately \$20 per capita. 15

Campaign contributions are a key component of the investment portfolio of business in politics (Schneider, 2010*b*). It is useful to highlight some differences between Brazil and the United States. In 2015, the Brazilian Supreme Court issued a ruling banning corporate campaign contributions (ADI-4650). In this section, we describe the logic of campaign contributions in Brazil prior to this change.¹⁶

For a host of legal and institutional reasons, corporate campaign contributions in Brazil constitute a privileged channel of political influence and are orders of magnitude higher than in the United States. First, under the pre-2015 regime—governed by Law 9.504/1997—corporate campaign contributions were legal and contribution limits were lax. Firms were legally allowed to donate up to 2 percent of their gross annual revenue and individuals could donate up to 10 percent of their gross annual income to political campaigns. Second, despite the country's large and dynamic industrial sector, it lacks a strong economy-wide peak association (Schneider, 2004). As a result, business actors have been compelled to find alternative channels of political influence. Under this regime, firms made the majority of campaign contributions (75 percent in the 2010 election cycle), with fewer than 100 firms making roughly half of contributions

¹⁵Wall Street Journal, "Brazil's Congress Approves Public Campaign Finance Bill", Oct 5, 2017.

¹⁶The purpose of this ruling was to limit the influence of money in politics, especially after the salient *Lava Jato* corruption scandal.

¹⁷While in the United States campaign contributions are typically complemented by other strategies such as lobbying (Kim, Stuckatz and Wolters, 2020), Brazil does not have a professional lobbying industry and does not regulate lobbying activities (OECD, 2014). For an argument on why pragmatic contributions are more prevalent in countries with weak business associations, see McMenamin (2012).

(Mancuso, 2015). To provide a sense of the magnitude of contributions, Table M.1 in the Online Appendix displays a list of the top ten corporate donors to the 2014 election and the amounts they contributed, as well as their assets and the government bank loans they received. By contrast, in the United States, before the *Citizens United* Supreme Court ruling, political action committees (PACs) could give no more than \$10,000 to candidates in a two-year election cycle.¹⁸

A second distinction exists regarding the returns to political donations. Puzzled by the relatively small amount of corporate money in politics in the United States, students of American politics have concluded that campaign contributions likely reflect a consumption motive (Ansolabehere, de Figueiredo and Snyder, 2003). By contrast, studies of campaign finance in developing countries consistently show that contributions can buy legislation, favorable regulation, or state bank loans (Mironov and Zhuravskaya, 2016; Treisman, 1998; Szakonyi, 2020). In Brazil, corporate political action can affect policy outcomes through several access points. Seeking to further their political careers, Brazilian legislators typically trade pork-barrel projects for corporate money (Samuels, 2002). Brazilian presidents typically use public resources to build and sustain legislative coalitions (Amorim Neto, 2007; Power, 2010), but some presidents, such as PT's Lula da Silva, also rewarded individual legislators by influencing key ministries' spending decisions (Boas, Hidalgo and Richardson, 2014; Samuels, 2008).

The Ban on Campaign Contributions

Until 2015—under Law 9.504/1997—corporate campaign contributions in Brazil were legal and contribution limits were lax. Firms were legally allowed to donate up to 2 percent of their gross annual revenue to political campaigns and individuals could donate up to 10 percent of

¹⁸Research shows that the *Citizens United* ruling did not alter contributions by major corporations (Hansen, Rocca and Ortiz, 2015).

their gross annual income.

In 2011, the Brazilian Bar Association elevated a petition—a "Direct Action of Unconstitutionality", known as ADI-4650—to the Brazilian Supreme Court challenging the legality of corporate contributions. The petition argued that Law 9.504 violated the principle of political equality. ADI-4650 gained popular support after the salient *Lava Jato*, the biggest corruption scandal in the country's history, which involved the exchange of campaign contributions for private contracts with oil giant Petrobras. The Supreme Court ruled in favor of ADI-4650 in September 2015, effectively banning corporate contributions.¹⁹ According to the Court's leading opinion by Justice Luiz Fux, corporate contributions were not a matter of freedom of expression, since they are not ideological but instead seek to establish connections with politicians, leading to the capture of politics by corporations.

The ban was effective at achieving its immediate goal—after 2015 the corporate contributions dropped to exactly zero (Figure F.2 in the Online Appendix). It was also largely effective at reducing the amount of money in politics—the amount contributed by firms and individuals in firms' leadership plummeted after the ban (Figure F.3 in the Online Appendix).

The Import of Family Firms

Brazilian firms extract considerable benefits from their political investments.²⁰ Contributing firms are more likely to obtain government contracts (Boas, Hidalgo and Richardson, 2014),

¹⁹While shortly after the final ruling Congress tried to legalize corporate contributions to parties, President Dilma Rousseff vetoed that provision. The new law imposed stricter limits on individual contributions. See Law 13.165.

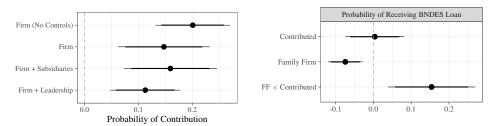
²⁰In contrast with the United States, where the average firm obtains no returns from their contributions (Fowler, Garro and Spenkuch, 2020). The best available evidence shows that campaign contributions can buy access to legislators (Kalla and Broockman, 2016).

secure more procurement contracts (Cavgias and Granella, 2020), obtain preferential access to finance (Claessens, Feijen and Laeven, 2008), are more likely to receive state-subsidized loans (Lazzarini et al., 2015), and perform better in the stock market (Claessens, Feijen and Laeven, 2008).²¹ Campaign contributions thus increase the economic capital of firms—in essence, they are investments in political capital.

As noted, family firms are the most prevalent corporate structure in the developing world and a particularly pervasive in Latin America (Schneider, 2013). Existing research shows that family firms display lower levels of productivity and have a comparative advantage in rent-seeking (Bennedsen et al., 2007; Lemos and Scur, 2019; Balán, Dodyk and Puente, 2022). In Brazil, a country where contributions typically secure material benefits to corporate donors, family firms are relevant political actors: they display particularity high levels of political activism and benefit handsomely from their contributions compared to non-family firms. Figure 1 below shows that family firms are 15 percentage points more likely to make campaign contributions relative to non-family firms.

²¹More specifically, construction firms donating to a candidate who barely wins have been shown to obtain an additional \$73,921 to \$184,676 in government contracts for each corporate donor—14 to 39 times the average contribution (Boas, Hidalgo and Richardson, 2014). Claessens, Feijen and Laeven (2008) estimate that a one standard deviation increase in contributions is associated with a 9.4 percent increase in bank leverage growth in the four-year period following an election. The marginal donation to a winning deputy increases loans by Brazil's National Development Bank (BNDES) by around \$45.9 million (Lazzarini et al., 2015). Lastly, contributing firms perform better on the stock market: a one standard deviation increase in contributions is associated with a 3.5 percent increase in cumulative abnormal returns (Claessens, Feijen and Laeven, 2008).

FIGURE 1: FAMILY FIRMS ARE MORE LIKELY TO CONTRIBUTE TO POLITICS AND TO RECEIVE STATE-SUBSIDIZED CREDIT



Notes: Point estimates are coefficients from Equation A.1. All specifications are estimated using OLS, include year fixed effects and (except in the first model) firm fixed effects. The first and second coefficients include contributions by the firm only. The third coefficient includes contributions by the firms and its subsidiaries. The bottom coefficient includes contributions by the firm, its subsidiaries, and its leadership (board members and management). Except for the first coefficient, all specifications include firm-level controls (whether the firm is a holding, foreign or state-owned, assets, income, and age), corporate governance controls (percent of ordinary shares owned by natural persons, concentration of ordinary shares in the hand of a firm's ultimate owners, percent of shares in free float, and largest shareholder gap), and industry fixed effects. See Table M.3 in the Online Appendix for the exact variable definitions. Thicker and thinner lines represent 90 and 95percent confidence intervals. Standard errors are clustered at the firm level. Sample size varies between 1,355 and 1,773 depending on the availability of controls and whether individual contributions are included. See Table J.1 in the Online Appendix for the full set of estimates.

Recent research shows that this higher political activity stems from the fact that family firms are better able to build and sustain relationships with political actors, likely because families' longer time horizons allow to turn campaign contributions into relational contracts, thus overcoming the commitment problem inherent to such political transaction (Balán, Dodyk and Puente, 2022). Family firms' contributions also pay off—contributing firms are more likely to obtain subsidized loans by Brazil's National Development Bank compared to non-family, whereas those that fail to contribute face a penalty (Table K.1 in the Online Appendix). In other words, family firms' contributions drive financial rent-seeking (Khwaja and Mian, 2011). These stylized facts indicate that in Brazil family firms are political actors that display high levels of political activism, wield significant political influence, and profit handsomely from their

political investments.²²

Data

We employ administrative data on Brazil's public companies and on the universe of campaign contributions in the country.

Brazilian public companies. We construct a novel dataset comprising all the companies under the supervision of Brazil's securities regulator. We collect all 6,219 structured reports and 6,424 forms containing additional data on firms, comprising a total of 593 public companies between 2010 and 2018.

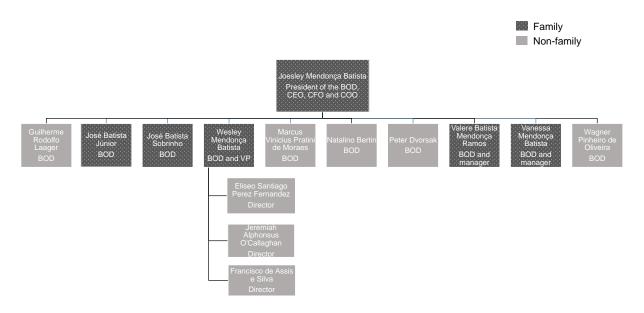
The data include firms' financial information, ownership structure (up to the ultimate owners), its subsidiaries and, crucially for this paper, family ties between individuals in leadership positions (board members and top management) and blockholders (either of the firm or controlled companies). This unique feature allows us to measure family ties with higher precision than studies relying on rough measures such as shared last names.²³

Consider the case of JBS, the world's largest meat processing company (Figure 2). In 2010, Joesley Mendonça Batista sat atop the board of directors and also served as CEO and CFO. Five other members of the Batista family were board members, with José Batista Sobrinho, the company's founder, also serving on the board. This organizational chart illustrates the involvement of the family in the firm and the substantial overlap between board and management membership characteristic of family firms.

²²This is consistent with past work identifying family firms and family-controlled economic groups as particularly powerful actors in the region (see Schneider (2013).

²³See Online Appendix Section L for more details and Table M.2 for descriptive statistics on firms in our sample.

FIGURE 2: ORGANIZATION CHART AND FAMILY TIES IN JBS S.A. IN 2010



There are two main advantages to focusing on listed companies. First, the firms in our sample control substantial assets—the market capitalization of listed companies in Brazil represented between 50 percent and 70 percent of the country's GDP in the period we study.²⁴ Second, because these companies abide by securities regulations—and therefore arguably have better management practices and governance structures relative to private companies—our sample provides a more stringent setting to evaluate our argument.²⁵

Campaign contributions. We match this firm-level information with data on the universe of campaign contributions. This information is available from Brazil's electoral court. We collect data for every election held between 2010 and 2018, comprising three general elections (2010, 2014 and 2018) and two municipal elections (2012 and 2016). Firm-level contribution

²⁴World Bank Open Data.

²⁵Worse corporate governance is associated with political activism, potentially due to agency problems (Aggarwal, Meschke and Wang, 2012).

data include contributions made by listed companies and their subsidiaries, while individual-level data comprises those by board members and individuals in top management positions. We employ data on both individual and corporate contributions for the 2010-2014 period, and only on individual contributions after the 2015 ban. We exactly match individual and corporate contributions to the firm data using Brazil's system of unique individual and firm identifiers.

Results

Family Firms Substitute Individual for Corporate Contributions After the Ban

Regression analysis

We regress the amount contributed by individuals in 2018 (after the ban) on the amount contributed by firms in 2014 (before the ban), including an interaction capturing family firm status (Table 1).²⁶ The coefficient on the interaction term is positive, indicating that top executives and board members in family firms were at least partly able to substitute individual for pre-ban corporate contributions.²⁷ Such substitution is absent in non-family firms.²⁸

²⁶We compare 2014 to 2018 because these election cycles featured national and state-level elections.

²⁷While the specification controls for ownership concentration, the results are robust to including ownership concentration as an interaction.

²⁸Although our focus is on this (unintended) heterogeneous effect, the ban did reduce total contribution amounts, albeit more so for non-family firms. See Online Appendix Figure F.3.

TABLE 1: SUBSTITUTION OF CONTRIBUTIONS BY THE FIRM

| | Contributions by the Leadership in 2018 (log) |
|---|---|
| Contributions by the Firm in 2014 (log) | -0.027 |
| | (0.060) |
| × Family Firm | 0.237** |
| | (0.099) |
| Contributions by the Leadership in 2014 (log) | 0.282*** |
| | (0.056) |
| Observations | 292 |
| Adjusted R ² | 0.214 |
| Industry FE | \checkmark |

Notes: Estimates from an OLS model with standard errors clustered at the firm level. The model includes firm-level controls (whether the firm is a holding, foreign or state-owned, assets, income, and age) and corporate governance controls (percent of ordinary shares owned by natural persons, concentration of ordinary shares in the hand of a firm's ultimate owners, percent of shares in free float, and largest shareholder gap). See Table M.3 for the exact variables definitions.

Difference-in-Differences

We estimate the effect of the ban on the probability of contribution by members of the controlling family using a difference-in-differences design. Identification depends on the assumption that, absent the ban, the contribution probability of such individuals would have followed the same trend as that of those in the same firm who do not belong to the controlling family, conditional on observable covariates. We estimate the equation:

Contribution_{ijt} =
$$\beta$$
 Family Member_{ij} × Post Ban_t + $\gamma^{\mathsf{T}} \mathbf{X}_{ijt} + u_i + v_{jt} + \epsilon_{ijt}$, (1)

where i denotes individuals, j denotes firms, t denotes election cycles, Contribution_{ijt} is a binary indicator of whether individual i in a leadership position in firm j contributed in election

^{***}p < 0.01; **p < 0.05; *p < 0.1

cycle t, Family Member $_{ij}$ indicates membership to the firm's controlling family, Post Ban $_t$ is an indicator marking the post-ban period, and \mathbf{X}_{ijt} is a vector of individual characteristics (whether the individual has an executive position in the firm, sits on the board of directors, is a share-holder, has worked in the public sector, or has been an elected official in government). Finally, u_i are individual-level fixed effects, v_{jt} are firm-year-level fixed effects, and ϵ_{ijt} are robust standard errors clustered at the individual level. Under parametric assumptions, this specification estimates the effect of the ban on the contribution probability of family members, controlling both for unobserved individual-level time-invariant- and time-varying firm-level factors.

To provide evidence for the substitution hypothesis, we break down the estimate by whether a firm contributed before the ban. Consistent with our argument, we expect that members of the controlling family start contributing after the ban *only if* the firm contributed before.

TABLE 2: DIFFERENCE-IN-DIFFERENCES SPECIFICATION

| | Probability of Contribution | | |
|---|-----------------------------|--------------|--|
| | (1) | (2) | |
| Family Member × Post 2015 | 0.044*** | | |
| · | (0.009) | | |
| × The Firm Contributed Before the Ban | | 0.048*** | |
| | | (0.010) | |
| × The Firm Did Not Contribute Before the Ban | | 0.020 | |
| | | (0.015) | |
| Manager × Post 2015 | 0.006 | 0.004 | |
| | (0.009) | (0.010) | |
| Manager and in Board of Directors × Post 2015 | 0.020 | 0.027 | |
| | (0.016) | (0.018) | |
| Politician × Post 2015 | 0.032 | 0.028 | |
| | (0.047) | (0.048) | |
| Worked in Public Sector × Post 2015 | 0.020 | 0.006 | |
| | (0.023) | (0.022) | |
| Fraction of Voting Shares Owned × Post 2015 | 0.105^{**} | 0.141** | |
| | (0.046) | (0.068) | |
| Observations | 38192 | 30621 | |
| Adjusted R ² | 0.420 | 0.394 | |
| Firm × Year FE | \checkmark | \checkmark | |
| Individual FE | ✓ | ✓ | |

Notes: Estimates from Equation 1 using OLS. Units are individuals in leadership positions in one of the firms in the sample. We include fixed effects at the firm-year and the individual level. Standard errors are clustered at the individual level. See Table M.4 for variable definitions. ***p < 0.01; **p < 0.05; *p < 0.1

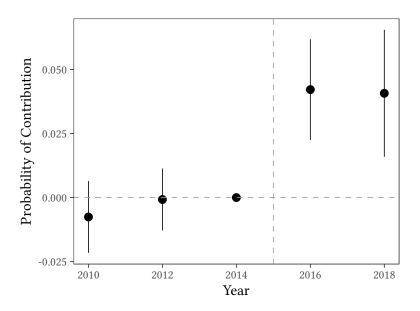
Consistent with our expectations, the contribution probability of member of the controlling family increases, on average, by 4.4 percentage points after the ban. The effect increases to 4.8 pp if we restrict the analysis to hitherto contributing firms (Table 2). Since only 6.24 percent of family members contributed before the ban, the marginal effect represents a 77 percent increase. Furthermore, Table B.1 in the Online Appendix repeats the analysis using the intensive margin of family ties, suggesting that such *ties* are the driving force behind the political behavior we document. We assess the plausibility of the parallel trends assumption with an event-study

specification:

$$Contribution_{ijt} = \sum_{\tau \neq 2014} \mathbb{1}(t = \tau) \times (\beta_{\tau} \text{ Family member}_{ij} + \gamma_{\tau}^{\top} \mathbf{X}_{ijt}) + u_i + v_{jt} + \epsilon_{ijt}. \quad (2)$$

Parallel trends imply that $\beta_t = 0$ for t < 2014. Figure 3 shows the estimates of β_t are indistinguishable from zero for t < 2014. We repeat the analysis adding an interaction with an indicator of corporate contributions before the ban. Consistent with the substitution hypothesis and the results in Table 2, the positive effects of family membership are concentrated in such firms (Figure 4).

FIGURE 3: DYNAMIC EFFECTS PLOT



Notes: Point estimates are coefficients from Equation 2. Bars are 95 percent confidence intervals. The β_t represent departures from firm-specific parallel trends for individuals who are members of controlling families.

Firms that Contributed Before 2015 Firms that Did Not Contribute Before 2015 0.075 Probability of Contribution 0.050 0.025 0.000 -0.025 2010 2012 2014 2016 2018 2010 2012 2014 2016 2018 Year

FIGURE 4: DYNAMIC EFFECTS, BY PREVIOUS CONTRIBUTIONS

Notes: Point estimates are coefficients from Equation 2, interacting by indicators of contributions by the firm in the pre-ban period. Bars are 95 percent confidence intervals. The β_t represent departures from firm-specific parallel trends for individuals who are members of controlling families.

Family Members Influence Each Others' Contribution Decisions

So far we established that members of the controlling family are more likely to contribute privately after the ban. We now study whether these individual decisions are interrelated. Our argument is that family ties in the firm help individuals solve the collective action problem created by the ban. As per our argument, this collective action problem implies that contributions are strategic substitutes, since individuals can free-ride on each other's contributions. By contrast, if, as we claim, individuals internalize the benefits of contributions by their family members, contributions by family members should be strategic complements.

We test this argument by estimating the effect of an individual's peers on her contribution decision. We focus on two types of peers: those in the network defined by her family ties and the network induced by co-membership in a firm's leadership. We estimate the following linear

model:

$$\mathbf{y} = \rho \mathbf{g}^{\text{family}} \mathbf{y} + \delta \mathbf{g}^{\text{firm}} \mathbf{y} + \gamma \mathbf{x} + \epsilon, \tag{3}$$

where y_i indicates a contribution by individual i, $\mathbf{g}^{\text{family}}$ is the adjacency matrix of the family network, 29 \mathbf{g}^{firm} is the adjacency matrix of the network induced by shared membership in a firm's board or top management, and $\mathbf{x_i}$ is a vector of individual characteristics. We assume $\mathbb{E}(\epsilon|\mathbf{g}^{\text{family}},\mathbf{g}^{\text{firm}},\mathbf{x})=\mathbf{0}$.

The coefficient of interest, ρ , captures the effect of contributions (y) by other members of the family ($\mathbf{g}^{\text{family}}$) on the contribution probability of a given family member, while δ captures the effect of contributions by peers in the firm's leadership on an individual's decision to donate. A positive ρ means that campaign contributions are strategic complements for members of the family, while a negative ρ indicates strategic substitutes. We expect ρ to be positive after the ban and δ to be negative.

The OLS estimator of the parameters of Equation 3 is inconsistent, in a network with cycles—as the ones in our data—the presence of peer effects implies that the behavior of an individual's peers is endogenous to her behavior. That is, $(gy)_i$ is correlated with ϵ_i if the network g^{family} has cycles.

To overcome this problem, we implement an instrumental variables estimator, using the characteristics of peers ($\mathbf{g}^{\text{family}}\mathbf{x}$) as an instrument for their behavior ($\mathbf{g}^{\text{family}}\mathbf{y}$) (Bramoullé, Djebbari and Fortin, 2009).³⁰ Using the characteristics of peers as instruments likely satisfies exo-

²⁹The adjacency matrix is defined as follows: $g_{ij} = 1$ if $i \neq j$ are members of the same controlling family, and $g_{ij}^{\text{family}} = 0$ otherwise.

³⁰Under the null hypothesis of no peer effects $\rho = \delta = 0$, the OLS estimator is consistent, so it can be used as a test statistic. In the general case, if $\mathbf{I}, \mathbf{g}^{\text{family}}, (\mathbf{g}^{\text{family}})^2$ and $\mathbf{I}, \mathbf{g}^{\text{firm}}, (\mathbf{g}^{\text{firm}})^2$ are linearly independent, there is a consistent IV estimator (Bramoullé, Djebbari and Fortin, 2009). Specifically, Equation 3 implies $\mathbf{g}^{\text{family}}\mathbf{y} = \mathbf{g}^{\text{family}}\mathbf{y}$

geneity, since peers' membership in the family network and their characteristics (such as owning shares) are exogenous to their contribution behavior. We estimate Equation 3 using OLS and 2SLS, breaking down the data into pre- and post-ban periods.³¹

TABLE 3: PEER EFFECTS ESTIMATES

| | OLS | | 2SLS | |
|-------------------------------|---------------|---------------|--------------|--------------|
| | Before 2015 | After 2015 | Before 2015 | After 2015 |
| Contributions by Family Peers | 0.011 | 0.094*** | 0.036 | 0.077*** |
| | (0.014) | (0.014) | (0.036) | (0.024) |
| Contributions by Firm Peers | 0.002^{***} | 0.005^{***} | 0.004** | -0.001 |
| | (0.001) | (0.001) | (0.002) | (0.001) |
| Family Member | 0.028** | 0.052^{**} | 0.018 | 0.058*** |
| | (0.012) | (0.020) | (0.012) | (0.021) |
| Observations | 23380 | 10955 | 23380 | 10955 |
| Adjusted R ² | 0.068 | 0.088 | 0.095 | 0.132 |
| Year FE | \checkmark | \checkmark | \checkmark | \checkmark |
| Firm FE | | | \checkmark | \checkmark |

Notes: Estimates from Equation 3. "Contributions by Family Peers" is $\mathbf{g}^{\text{family}}\mathbf{y}$, the number of members of the individual's family who contributed to campaigns in the current election cycle. It can only be positive for members of the controlling family of a firm. "Contributions by Firm Peers" is $\mathbf{g}^{\text{firm}}\mathbf{y}$, the number of members of the firm's leadership who contributed to campaigns. Columns 1 and 2 are estimated using OLS, which is biased and inconsistent if peer effects are not null. Columns 3 and 4 are estimated using $\mathbf{g}^{\text{family}}\mathbf{x}$ and $\mathbf{g}^{\text{firm}}\mathbf{x}$, i.e., the sum of the exogenous characteristics of peers, as instruments for $\mathbf{g}^{\text{family}}\mathbf{y}$ and $\mathbf{g}^{\text{firm}}\mathbf{y}$. Controls include membership in the top management, membership both in management and in the board of directors, fraction of voting shares owned, having worked in the public sector, having served in elected office, and age. All specifications include year fixed effects and Columns 3 and 4 include firm fixed effects. Standard errors clustered at the individual level in parentheses.

Consistent with our expectations, the results in Table 3 indicate the existence of positive peer effects in the family network after the ban. While the OLS estimator is biased upwards, the 2SLS estimator implies that the contribution probability of a member of the controlling family increases by 7.7 percentage points if another family starts contributing. We do not find evidence

 $\rho(\mathbf{g}^{\text{family}})^2\mathbf{y} + \delta\mathbf{g}^{\text{family}}\mathbf{g}^{\text{firm}}\mathbf{y} + \gamma\mathbf{g}^{\text{family}}\mathbf{x} + \mathbf{g}\epsilon, \text{ so } \mathbf{g}^{\text{family}}\mathbf{x} \text{ is correlated with } \mathbf{g}^{\text{family}}\mathbf{y}, \text{ and given the exogeneity}$ assumption $\mathbb{E}(\epsilon|\mathbf{g}^{\text{family}},\mathbf{x}) = \mathbf{0}$, it can be used as an instrument for $\mathbf{g}^{\text{family}}\mathbf{y}$.

^{***}p < 0.01; **p < 0.05; *p < 0.1

³¹See Online Appendix Section H for a discussion of the validity of the IV strategy.

of positive peer effects in the family before the ban (even in the OLS estimator, which should be biased upwards).³² We find the opposite pattern for the firm network: peer effects are positive before the ban and negative—but indistinguishable from zero—afterwards.³³

Overall, we document positive peer effects by family members, even accounting for the influence of membership in the same firm and in the family.³⁴ These results suggest that the ban altered the social logic of political donations, creating strategic complementarities in family members' decisions, while depressing those of firm members unrelated by family ties. The fact that these effects are larger than the effect of the ban itself—about 4.4 pp according to the difference-in-differences estimates—suggests that the influence among members of the family is a quantitatively important force activated by the ban.

³⁴We also control for family membership (i.e., having family ties) to assuage the concern that family peer effects may be capturing the fact that family members have a higher incentive to donate independent of each others' behavior. The instrumental variables strategy should also assuage this concern. We include firm fixed effects to remove unobserved common shocks to individuals' propensities to donate, which could create non-causal correlations in peer behavior.

³²See Online Appendix Section C for a more detailed discussion.

³³To account for the possibility that this effect could be generated by *any* ties, we generate random ties among individuals in leadership positions. The ties induced by 1,000 random networks do not achieve an effect comparable to that of family ties. Similarly, we reestimate Equation 3 using alternative networks defined by (1) public sector peers, (2) higher education peers, and (3) private equity peers. These networks do not yield the peer effects induced by the family network, especially after the ban and in the IV specification. See Online Appendix Section G.

Alternative Mechanisms

Reputational Effects of Corruption Scandals

We discuss the possibility that the effects might be driven by the fact that the ban was enacted after the major Car Wash (Lava-Jato) corruption scandal rather by the ban itself. Indeed, corruption scandals might affect campaign contributions through a reputational, "scare-off" effect, making campaign donations more subject to public scrutiny or less legitimate, thus depressing the overall amount of money in politics. Note, however, that this would only explain our results if scandals affected family and non-family firms differentially, with family firms still being able to substitute individual for corporate contributions. We address this possibility in Online Appendix Section F using a previous major corruption scandal — popularly known as Mensalão — as a placebo. Considering national elections, this scandal did not increase the probability of contributions by family members. For municipal elections, the probably of contribution increased by less than 1 percentage point, an effect much smaller than the one induced by the 2015 ban.³⁵ Importantly, the *Mensalão* scandal did not affect the amount of firms that contributed (Figure F.2), which dropped to zero after the 2015 ban, nor did it decrease the amounts contributed by firms and their leadership (Figure F.3). Overall, this analysis suggests that our results are not driven by a reputational effect of corruption scandals, but by the fact that the 2015 ban on corporate contributions was, in fact, effective at achieving its goal.

³⁵This small estimate, however, should be taken with a grain of salt since the parallel trends assumption does not hold before this event (Figure F.1).

Preference Homogeneity

Non-family firms' failure to counteract the ban on corporate contributions could potentially stem from frictions among board member, for example, if they have more heterogeneous preferences or looser social norms—compared to family members. Preference homogeneity or tight norms could, thus, be an alternative mechanism behind our results. Note that if preferences or social norms differed systematically between family and non-family firms, we would expect such differences to exert a relatively constant effect on political behavior. Instead, our theory posits the activation of cooperative behavior within family firms in the presence of a collective action problem. We present three pieces of evidence against this interpretation. First, the estimates in Table 3 show that peer effects arise only after the ban, but not before, as a preference-based explanation would predict. Second, preference homogeneity may result in a greater similarity of contributions in family firms. We study whether the contributions of family members are more similar to each other compared to those by non-family members. To do so, we compute the mean cosine similarity, a measure of the degree of similarity between contribution portfolios. Contributions by family members are not more similar in general, as a preference-based explanation would predict (Online Appendix Table E.1). We also fail to find evidence that contributions become more similar after the ban, which would be the case if the ban promoted some kind of coordination on the same parties or candidates. In sum, the evidence suggests that family ties help solve the collective action problem induced by the ban by increasing the probability of contributions, not by changing their target (see Online Appendix Section E for more details).

Authority Structure within the Controlling Family

Families are characterized by authority. While there is significant variation in family structures, older generations are typically endowed with some degree of authority over younger generations (Todd, 1985; Bates, Greif and Singh, 2004; Bau and Fernández, 2021). As a consequence, In-

fluence among family members could be directional, with older generations issuing commands followed by younger ones.³⁶ By contrast, our theory of familial cooperation does not entail directional influence, but posits that family firms solve the collective action problem posed by the ban by virtue of their capacity to furnish cooperative behavior. An alternative mechanism that would be consistent with our results is that families are simply able to solve the collective action problem posed by the ban by command.

To study this possibility, we first examine whether the substitution effect is driven by the older or the younger generation, when more than one generation is present in the firm. After the ban, older and younger generations seem to contribute in roughly equal proportions in hitherto politically active firms seem (Online Appendix Table I.1). Second, we replicate the peer effects analysis by partitioning the family in different generations defined by the levels of the family tree, thus classifying ties as upward (from lower to higher generations), downward (from higher to lower generations), and horizontal (between members of the same generation). We re-estimate Equation 3, looking at the effect of each type of family tie. Post-ban peer effects in the IV specification appear to be driven by upward ties—i.e., flowing from the younger to the older generation—consistent with substitution from higher generations being slightly larger (Online Appendix Table I.2). All told, while tentative, these results provide evidence against the idea that family firms solving the collective action problem by command.

³⁶This would be consistent with overlapping generation (OLG) models, with contributions being akin to investments by older generations who, in turn, oblige or persuade younger generations to continue contributing. Intergenerational interactions feature prominently in studies of family CEO appointment and performance (Bennedsen et al., 2007; Pérez-González, 2006).

Conclusion

This article analyzed the effects of campaign finance regulation seeking to curtail the political influence of business. Our results reveal that while the Brazilian ban on corporate contributions was effective at reducing the total amount of money in politics, it created a bifurcation in the political behavior across firm types. In particular, we showed that family firms—the most prevalent corporate structure in the developing world and a politically active economic actor in the context we study—are more capable of circumventing their intended effect. Exploiting a recent reform in Brazilian electoral law and employing previously untapped data on family ties within firms, we provided causal evidence consistent with the hypothesis that family firms are more capable of substituting individual for corporate contributions. After the ban, members of controlling families in leadership positions in hitherto politically active firms increased their probability of contributing to politics by 4.8 percentage points—a 77 percent increase. By estimating a peer effects model we provided evidence that contribution decisions are influenced by those of relatives in the same family network. The adaptation capacity conferred by family ties might explain the remarkable persistence of family firms in Latin America—and of what has been dubbed "hierarchical capitalism" in the region (Schneider, 2009, 2013).

Should states ban corporate campaign contributions? Despite its intention to curtail the political influence of business, the ban on corporate contributions effectively empowered family firms. Thus, our findings shed light on the mechanisms underpinning institutional weakness. Our findings contribute to the idea that state capacity should be construed in relational terms, acknowledging that state policies from above may meet societal resistance from below (Migdal, 1988; Brinks, Levitsky and Murillo, 2019). We add to our understanding of this rationale for institutional weakness by providing micro-level evidence on a previously overlooked factor: how the internal features of the organizations whose behavior laws seek to affect enable them to circumvent their intended goal. In particular, collective action capacity within organizations

can limit the effectiveness of reforms seeking to limit political influence. Our findings thus reveal an unexpected obstacle for the success of campaign finance reform. In doing so, they contribute to a broader debate about whether policy interventions can change underlying social institutions. While some recent work documents that policy interventions can, in fact, affect cultural norms—and, in particular, kinship practices (Ashraf et al., 2020; Bau, 2021)—our findings offer a more cautionary tale about the capacity of programmatic policy to trump underlying structures.

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Online Appendix

Contents

| A | Full Regression Results |
|---|--|
| В | Difference-in-differences: Heterogeneity by number of family ties in the firm . A3 |
| C | Discussion of the Peer Effects Model |
| D | Ownership Concentration as a Potential Confounder |
| E | Similarity of Contributions by Family Members |
| F | Placebo Treatment: The Mensalão Corruption Scandal |
| G | Peer Effects Robustness: Placebo Ties |
| Н | Instrumental Variables Diagnostics |
| I | Disaggregating the family |
| J | Additional Results |
| K | State-subsidized Loans and Campaign Contributions |
| L | Dataset on Family Ties |
| M | Descriptive Statistics and Variables Definitions |

A. Full Regression Results

TABLE A.1: SUBSTITUTION OF CONTRIBUTIONS BY THE FIRM (FULL CONTROLS)

| | Contributions by the Leadership in 2018 (log) |
|---|---|
| Contributions by the Firm in 2014 (log) | -0.027 |
| • | (0.060) |
| × Family Firm | 0.237** |
| • | (0.099) |
| Contributions by the Leadership in 2014 (log) | 0.282*** |
| | (0.056) |
| Family Firm | 0.278 |
| | (0.966) |
| Assets (log) | 0.274* |
| | (0.162) |
| Income (log) | 0.008 |
| | (0.100) |
| Age (log) | -0.247 |
| | (0.470) |
| Foreign | -0.023 |
| | (1.553) |
| State-Owned | 1.330 |
| | (1.006) |
| Ordinary Shares Owned | 2.369** |
| by Natural Person (%) | (1.025) |
| Concentration of Ordinary | 1.298 |
| Shares (Herfindahl) | (1.055) |
| Ordinary Shares in Free Float | 2.910* |
| | (1.502) |
| Preferential Shares (dummy) | -0.589 |
| | (0.627) |
| Largest Shareholder Gap | 0.621 |
| | (1.611) |
| Observations | 292 |
| Adjusted R ² | 0.214 |
| Industry FE | ✓ |

 $\it Notes$: Estimates from an OLS model with heteroskedasticity-robust standard errors. The unit is a firm. See Table M.3 for the exact variable definitions. We discuss these results in Section .

^{***}p < 0.01; **p < 0.05; *p < 0.1

B. Difference-in-differences: Heterogeneity by number of family ties in the firm

We repeat the specification in Equation 1 adding the number of family ties of the individual as an additional variable which is interacted with the post ban indicator. This coefficient should be interpreted as the marginal increase of an additional family member in a leadership position in the firm on the average increase in the probability of making a campaign contribution by an individual as after the ban. The estimates in Table B.1 imply that an additional family tie in the firm increases the effect of the ban on the probability that members of the family make a contribution by 2.6 percentage points.

TABLE B.1: DIFFERENCE-IN-DIFFERENCES – HETEROGENEITY BY NUMBER OF FAMILY TIES IN THE FIRM

| | Probability of Contribution | | |
|---|-----------------------------|--------------|--|
| | (1) | (2) | |
| Number of Family Ties × Post 2015 | 0.026*** | | |
| • | (0.010) | | |
| × The Firm Contributed Before the Ban | | 0.026** | |
| | | (0.010) | |
| × The Firm Did Not Contribute Before the Ban | | 0.017 | |
| | | (0.020) | |
| Family Member × Post 2015 | 0.019 | | |
| | (0.014) | | |
| × The Firm Contributed Before the Ban | | 0.022 | |
| | | (0.015) | |
| × The Firm Did Not Contribute Before the Ban | | 0.003 | |
| | | (0.025) | |
| Manager × Post 2015 | 0.005 | 0.002 | |
| | (0.009) | (0.009) | |
| Manager and in Board of Directors × Post 2015 | 0.020 | 0.025 | |
| | (0.016) | (0.018) | |
| Politician × Post 2015 | 0.033 | 0.029 | |
| | (0.046) | (0.047) | |
| Worked in Public Sector × Post 2015 | 0.020 | 0.006 | |
| | (0.023) | (0.022) | |
| Fraction of Voting Shares Owned × Post 2015 | 0.108** | 0.148** | |
| | (0.046) | (0.068) | |
| Observations | 38192 | 30621 | |
| Adjusted R ² | 0.421 | 0.395 | |
| Firm × Year FE | \checkmark | \checkmark | |
| Individual FE | \checkmark | \checkmark | |

Notes: Estimates from Equation 1 using OLS and adding Number of Family Ties. Units are individuals in leadership positions in one of the firms in the sample. All models include firm-year and individual-level fixed effects. Standard errors clustered at the individual level included in parentheses. See Table M.4 for variables definitions. We discuss these results in Section .

C. Discussion of the Peer Effects Model

Table C.1 below reports the full regression presented in Section .

 $^{^{***}}p < 0.01; ^{**}p < 0.05; ^{*}p < 0.1$

TABLE C.1: PEER EFFECTS ESTIMATES (FULL CONTROLS)

| | OLS | | 2SI | LS |
|-----------------------------------|----------------|---------------|----------------|---------------|
| | Before 2015 | After 2015 | Before 2015 | After 2015 |
| Contributions by Family Peers | 0.011 | 0.094*** | 0.036 | 0.077*** |
| | (0.014) | (0.014) | (0.036) | (0.024) |
| Contributions by Firm Peers | 0.002^{***} | 0.005^{***} | 0.004^{**} | -0.001 |
| | (0.001) | (0.001) | (0.002) | (0.001) |
| Family Member | 0.028^{**} | 0.052^{**} | 0.018 | 0.058^{***} |
| | (0.012) | (0.020) | (0.012) | (0.021) |
| Manager | 0.029^{***} | 0.017^{**} | 0.029^{***} | 0.013 |
| | (0.007) | (0.008) | (0.007) | (0.008) |
| Manager and in Board of Directors | -0.041^{***} | -0.025 | -0.036^{***} | -0.008 |
| | (0.010) | (0.017) | (0.010) | (0.015) |
| Fraction of Voting Shares Owned | 0.050^{**} | 0.160^{***} | 0.085*** | 0.219^{***} |
| | (0.025) | (0.048) | (0.025) | (0.050) |
| Worked in Public Sector | 0.055^{***} | 0.038*** | 0.032^{***} | 0.020 |
| | (0.013) | (0.014) | (0.012) | (0.015) |
| Politician | 0.129*** | 0.120*** | 0.100*** | 0.099*** |
| | (0.028) | (0.037) | (0.028) | (0.036) |
| Age (log) | 0.048*** | 0.063*** | 0.061*** | 0.075^{***} |
| | (0.010) | (0.013) | (0.011) | (0.015) |
| Observations | 23380 | 10955 | 23380 | 10955 |
| Adjusted R ² | 0.068 | 0.088 | 0.095 | 0.132 |
| Year FE | \checkmark | \checkmark | \checkmark | \checkmark |
| Firm FE | | | \checkmark | \checkmark |

Notes: Estimates from Equation 3. "Contributions by Family Peers" is \mathbf{gy} , i.e., the number of members of the individual's family who contributed to campaigns in the current election cycle. The coefficient on this variable captures spillovers of political behavior in the family network. "Contributions by Family Peers" is $\mathbf{g}^{\text{firm}}\mathbf{y}$, i.e., the number of members of the firm's leadership who contributed to campaigns in the current election cycle. The coefficient on this variable captures spillovers of political behavior in the firm's leadership network. Columns 1 and 2 are estimated using OLS, which is biased and inconsistent if peer effects are not null. Columns 3 and 4 are estimated using \mathbf{gx} and $\mathbf{g}^{\text{firm}}\mathbf{x}$, i.e., the sum of the exogenous characteristics of peers, as instruments for \mathbf{gy} and $\mathbf{g}^{\text{firm}}\mathbf{y}$. All specifications include year fixed effects and columns 3 and 4 include firm fixed effects. Standard errors clustered at the individual level included in parentheses. We discuss these results in Section .

***p < 0.01; **p < 0.05; *p < 0.1

Table C.2 displays the results of estimating Equation 3 using the average contribution decision by peers instead of the sum of peer contributions. The results are consistent, although the

coefficient of interest (ρ after the ban) is positive but indistinguishable from zero in the IV spec-

ification. However, the fact that the OLS estimate is positive and highly significant suggests that there are in fact peer effects, even though the 2SLS does not yield reliable estimate—otherwise, OLS would be consistent and yield a null result.

TABLE C.2: PEER EFFECTS ESTIMATES (EFFECT OF MEAN PEER OUTCOME)

| | OLS | | 2SI | LS |
|------------------------------------|---------------|---------------|--------------|---------------|
| | Before 2015 | After 2015 | Before 2015 | After 2015 |
| Mean Contributions by Family Peers | 0.131* | 0.438*** | 0.516 | 0.150 |
| | (0.069) | (0.055) | (0.429) | (0.149) |
| Mean Contributions by Firm Peers | 0.274^{***} | 0.360^{***} | 0.471^{**} | -0.122 |
| | (0.028) | (0.039) | (0.193) | (0.292) |
| Family Member | -0.015 | 0.062^{**} | -0.008 | 0.084^{***} |
| | (0.034) | (0.029) | (0.030) | (0.030) |
| Observations | 23380 | 10955 | 23380 | 10955 |
| Adjusted R ² | 0.078 | 0.100 | 0.055 | 0.134 |
| Year FE | \checkmark | \checkmark | \checkmark | \checkmark |
| Firm FE | | | \checkmark | \checkmark |

Notes: Estimates from Equation 3, taking $\mathbf{g}\mathbf{y}$ and $\mathbf{g}^{\text{firm}}\mathbf{y}$ to be the *mean* of y_i for peers i instead of the sum, as in Table . Columns 1 and 2 are estimated using OLS, which is biased and inconsistent if peer effects are not null. Columns 3 and 4 are estimated using $\mathbf{g}\mathbf{x}$ and $\mathbf{g}^{\text{firm}}\mathbf{x}$, i.e., the mean of the exogenous characteristics of peers, as instruments for $\mathbf{g}\mathbf{y}$ and $\mathbf{g}^{\text{firm}}\mathbf{y}$. All specifications include year fixed effects and columns 3 and 4 include firm fixed effects. Standard errors clustered at the individual level included in parenthesis.

^{***}p < 0.01; **p < 0.05; *p < 0.1

D. Ownership Concentration as a Potential Confounder

| | Contributions by the Leadership in 2018 (log) |
|---|---|
| Contributions by the Firm in 2014 (log) | -0.011 |
| | (0.070) |
| × Family Firm | 0.234** |
| | (0.099) |
| × Ownership Concentration | -0.082 |
| - | (0.149) |
| Contributions by the Leadership in 2014 (log) | 0.280*** |
| , , , | (0.056) |
| Observations | 292 |
| Adjusted R ² | 0.212 |
| Industry FE | \checkmark |

Notes: Estimates from an OLS model with standard errors clustered at the firm level. The model includes firm-level controls (whether the firm is a holding, foreign or state-owned, assets, income, and age) and corporate governance controls (percent of ordinary shares owned by natural persons, concentration of ordinary shares in the hand of a firm's ultimate owners, percent of shares in free float, and largest shareholder gap). See Table M.3 for the exact variables definitions.

E. Similarity of Contributions by Family Members

We study whether contributions by family members are more similar compared to those by individuals unrelated by family ties. To do so, we compute the cosine similarity between contribution portfolios, a measure recently used by Bertrand et al. (2020) to study convergence in contribution patterns after acquisitions. For each firm and each year, we consider two groups: family members (if the firm is a family firm) and the rest of the individuals in leadership positions. For each of these groups, we consider those individuals who made contributions in a given year, and compute the cosine similarity between their contribution portfolios, defined as follows. If individual i contributed x_{ij} dollars to party j, for $j = 1, \ldots, P$, and we let $y_{ij} = \log(x_{ij} + 1)$, then the cosine similarity between the contributions by individuals u and v

^{***}p < 0.01; **p < 0.05; *p < 0.1

is defined as:

Cosine Similarity_{uv} =
$$\frac{\sum_{j=1}^{P} y_{uj} y_{vj}}{\sqrt{\sum_{j=1}^{P} y_{uj}^2 \sum_{j=1}^{P} y_{vj}^2}}.$$

This measure captures the degree of similarity between contribution portfolios. It takes the value 0 if the individuals contributed to disjoint sets of parties, and 1 if they contributed to the same parties in the same proportion (in log scale). To measure the degree of similarity in the contributions by each group's members, we compute the average of the cosine similarities for each pair of members of the group. We call this magnitude the *mean cosine similarity* of the group.

We study whether contributions by individuals linked by family ties within a firm exhibit a higher degree of similarity relative to those by individuals unrelated by family ties and whether the ban on corporate contributions induced a higher degree of similarity among contributions by family members, which would be evidence of a coordination mechanism.

Table E.1 shows a regression of the mean cosine similarity (computed separately for family and non-family members) for each firm and year in our sample on an indicator of the type of group (defined by family ties or not) and an indicator of the post-ban period. Column 1 reports estimates from a pooled OLS model, while Column 2 includes firm and year fixed effects, estimating the difference between members with and without family ties in given firm in a given year. There is no evidence that family members' contributions are more similar nor that similarity increased after the ban.

TABLE E.1: SIMILARITY OF CONTRIBUTIONS WITHIN FIRMS, BY TYPE OF TIE

| | Mean Cosine Similarity | | |
|----------------------------|------------------------|--------------|--|
| | (1) | (2) | |
| Family Members × Post 2015 | -0.029 | -0.086 | |
| | (0.091) | (0.078) | |
| Family Members | 0.051 | 0.108 | |
| | (0.074) | (0.081) | |
| Post 2015 | -0.043 | | |
| | (0.035) | | |
| Observations | 509 | 509 | |
| Adjusted R ² | -0.002 | 0.186 | |
| Firm FE | | \checkmark | |
| Year FE | | \checkmark | |

Notes: Standard errors clustered at the firm level.

Table E.2 reports the average of the mean cosine similarity by type of tie and year. While in general family members' contributions are slightly more similar than those of unrelated firm members, the difference is small and, as reported above, statistically insignificant.

TABLE E.2: SIMILARITY OF CONTRIBUTIONS WITHIN FIRMS, BY TYPE OF TIE AND YEAR

| Mean Cosine Similarity | | | | | | |
|-----------------------------------|------|------|--|--|--|--|
| Year Family Members Other Individ | | | | | | |
| 2010 | 0.54 | 0.47 | | | | |
| 2012 | 0.47 | 0.38 | | | | |
| 2014 | 0.36 | 0.35 | | | | |
| 2016 | 0.32 | 0.37 | | | | |
| 2018 | 0.49 | 0.36 | | | | |

F. Placebo Treatment: The Mensalão Corruption Scandal

We consider the possibility that the effects might be driven by the fact that the ban was enacted after the major Car Wash (*Lava-Jato*) corruption scandal. Corruption scandals could affect

^{***}p < 0.01; **p < 0.05; *p < 0.1

campaign contributions through a "scare-off" effect, depressing the amount of money in politics. Note, however, that this would only explain our results if scandals affected family and non-family firms differentially, with family firms still being able to substitute individual for corporate contributions.

We address this possibility using a prior major corruption scandal—known as *Mensalão*—as a placebo. Considering national elections, the scandal did not increase the probability of contributions by individual family members (Table F.1). For municipal elections, the probably of contribution increased by less than 1 percentage point, an effect much lower than the one induced by the 2015 ban. This small estimate, however, should be taken with a grain of salt since the parallel trends assumption does not hold before this event (Figure F.1).

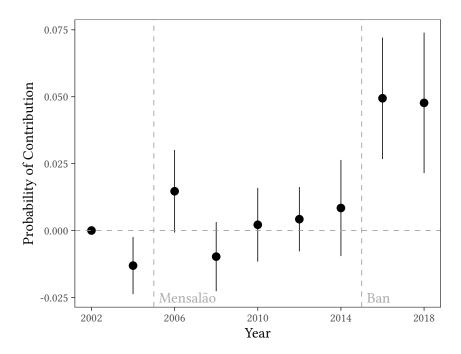
TABLE F.1: DIFFERENCE-IN-DIFFERENCES SPECIFICATION USING MENSALÃO AS A PLACEBO TREATMENT

| | Including Municipal | | Excluding Municipa | |
|--|---------------------|--------------|--------------------|--------------|
| | Mensalão | Ban | Mensalão | Ban |
| Family Member × Post Shock | 0.009** | 0.046*** | 0.009 | 0.041*** |
| | (0.004) | (0.010) | (0.006) | (0.014) |
| Manager × Post Shock | 0.009 | 0.005 | -0.001 | 0.012 |
| | (0.006) | (0.009) | (0.008) | (0.014) |
| Manager and in Board of Directors × Post Shock | -0.018** | 0.021 | -0.018 | 0.019 |
| | (0.009) | (0.016) | (0.012) | (0.022) |
| Politician × Post Shock | -0.018 | 0.043 | -0.037 | 0.049 |
| | (0.033) | (0.044) | (0.041) | (0.081) |
| Worked in Public Sector × Post Shock | -0.007 | 0.017 | -0.015 | 0.045 |
| | (0.015) | (0.023) | (0.019) | (0.040) |
| Fraction of Voting Shares Owned × Post Shock | -0.020 | 0.092** | -0.055 | 0.112* |
| | (0.026) | (0.044) | (0.045) | (0.067) |
| Observations | 53952 | 53396 | 30703 | 30510 |
| Adjusted R ² | 0.345 | 0.371 | 0.395 | 0.437 |
| Firm × Year FE | \checkmark | \checkmark | \checkmark | \checkmark |
| Individual FE | \checkmark | \checkmark | \checkmark | \checkmark |

Notes: Mensalão regressions comprise years 2002-2014. Ban regressions comprise years 2006-2018.

^{***}p < 0.01; **p < 0.05; *p < 0.1

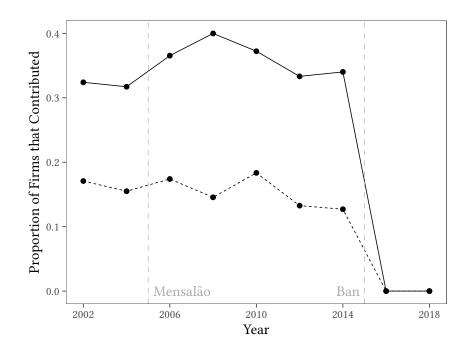
FIGURE F.1: DYNAMIC EFFECTS PLOT, WITH 2002 AS BASE YEAR



Notes: Estimates from Equation 2, taking 2002 as base year. Bars are 95 percent confidence intervals. The β_t represent departures from firm-specific parallel trends for family members.

Importantly, the *Mensalão* scandal did not affect the proportion of firms that contributed (Figure F.2), which dropped to zero after the 2015 ban nor did it decrease the amounts contributed by firms and their leadership (Figure F.3). Overall, this exercise suggests that our results are not due to reputational or normative considerations after corruption scandals, but due to the fact that the 2015 ban was, in fact, effective.

FIGURE F.2: PROPORTION OF CONTRIBUTING FIRMS, 2002-2014



Firm Type — Family Firm ---- Non-Family Firm

Notes: Proportion of Contributing Firms, 2002-2014. Solid line: Family firms. Dotted line: Non-Family firms.

Mensalão

Mensalão

Ban

Courtingntions phásico success a serie de la company de la co

FIGURE F.3: AVERAGE CONTRIBUTIONS BY FIRMS + LEADERSHIP (2002-2018)

Notes: Average Contributions by Firms + Leadership (2002-2018). The vertical dotted lines denote the *Mensalão* scandal and the 2015 ban on corporate contributions.

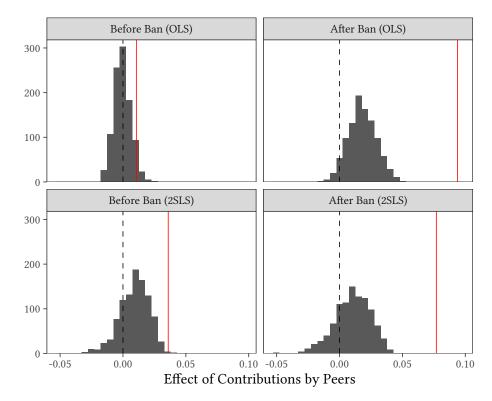
G. Peer Effects Robustness: Placebo Ties

In this section we address the possibility that the peer effect estimates could be mechanically generated by *any* ties—not just family ties. As a placebo test, for each firm and year, we generate random ties among a random subset of individuals (of roughly the same size of families) in leadership positions in family firms (thus controlling for between-firm variation). We reestimate Equation 3 using these random ties and report the estimates of 1,000 random networks (Figure G.1) and the associated p-values (Table G.1).

The results reject the null hypothesis that the effect of the family ties is indistinguishable from that of random ties (in a network of the same size) after the ban on corporate contributions.

This exercise strongly suggest that our results do not arise mechanically — family ties have a distinctive amplifying effect on political behavior after the ban.

FIGURE G.1: PEER EFFECTS PLACEBO: RANDOM PEERS



Notes: Histograms show the distribution of estimates obtained from 1,000 random networks. The red line indicates the estimate from the family network reported in Table 3. The top row displays OLS estimators before and after the ban. The bottom row displays the IV estimators before and after the ban.

TABLE G.1: PEER EFFECTS PLACEBO: RANDOM PEERS—HYPOTHESIS TESTS

| Column | Estimator | Period | <i>p</i> -value |
|--------|-----------|------------|-----------------|
| 1 | OLS | Before Ban | 0.110 |
| 2 | OLS | After Ban | 0.000 |
| 3 | IV | Before Ban | 0.005 |
| 4 | IV | After Ban | 0.000 |

Notes: The *p*-values show the results of two-sided hypotheses tests, where the null hypothesis is that the effect of the contributions by family peers is as small (in absolute value) as the effect of contributions by random peers, and the test statistic is the estimator of peer effects from Equation 3.

Since individuals belong to multiple—potentially overlapping—networks, we reestimate Equation 3 using other networks that we can reconstruct with our data. First, we consider the network of public sector peers, defined by individuals who were employed in the public sector at some point according to the biographical sketches in the CVM data. While OLS coefficients are positive before and after the ban, in the preferred IV specification there are no peer effects after the ban (Table G.2). Second, we consider higher education peers—individuals who obtained a degree from the same university. Again, there are no positive peer effects before or after the ban in the IV specification. Third, we consider the network of individuals linked by reporting having experience in private equity (according to the biographical sketches in the CVM data). Again, there are no positive peer effects before or after the ban in the IV specification.

Note that as in Table 3, the coefficient on firm peers in the IV specification is negative (and in the first two panels significant), which gives further credence to the notion that the ban activates a collective action problem, making contributions by firm peers strategic substitutes.

TABLE G.2: PEER EFFECTS PLACEBO: OTHER NETWORKS

| | OLS | | 2SI | LS |
|---|--------------|--------------|--------------|---------------|
| | Before 2015 | After 2015 | Before 2015 | After 2015 |
| First Placebo: Public Sector Peers | | | | |
| Contributions by Public Sector Peers | 0.018*** | 0.019** | 0.005 | 0.009 |
| | (0.005) | (0.008) | (0.005) | (0.008) |
| Contributions by Firm Peers | 0.002*** | 0.006*** | 0.003** | -0.002^* |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Public Sector | 0.077*** | 0.040 | 0.044 | 0.042 |
| | (0.028) | (0.029) | (0.028) | (0.027) |
| Second Placebo: Higher Education Peers | 3 | | | |
| Contributions by Higher Education Peers | 0.001 | 0.009** | 0.001 | 0.002 |
| • 0 | (0.002) | (0.003) | (0.003) | (0.003) |
| Contributions by Firm Peers | 0.002** | 0.005*** | 0.003^{*} | -0.002^{**} |
| • | (0.001) | (0.001) | (0.002) | (0.001) |
| Higher Education | 0.016*** | 0.014^{*} | 0.014** | 0.012^{*} |
| _ | (0.006) | (0.007) | (0.006) | (0.007) |
| Third Placebo: Private Equity Peers | | | | |
| Contributions by Private Equity Peers | -0.002 | -0.019 | -0.034 | 0.011 |
| | (0.005) | (0.016) | (0.030) | (0.049) |
| Contributions by Firm Peers | 0.002*** | 0.006*** | 0.003** | -0.001 |
| • | (0.001) | (0.001) | (0.002) | (0.001) |
| Private Equity | 0.038 | 0.053 | 0.000 | -0.001 |
| | (0.042) | (0.047) | (0.027) | (0.031) |
| Observations | 23380 | 10955 | 23380 | 10955 |
| Year FE | \checkmark | \checkmark | \checkmark | \checkmark |
| Firm FE | | | \checkmark | \checkmark |

Notes: Estimates from Equation 3. All specifications include year fixed effects and Columns 3 and 4 include firm fixed effects. Standard errors clustered at the individual level in parentheses.

H. Instrumental Variables Diagnostics

Table H.1 presents a battery of diagnostics concerning the validity of the instrumental variables estimation. The F-test, Wald, and Cragg-Donald tests for weak instruments strongly reject the

 $^{^{***}}p<0.01;\,^{**}p<0.05;\,^{*}p<0.1$

null hypothesis for both endogenous variables (Contributions by Family Peers, and by Firm Peers) in the two 2SLS models we estimate (Table 3). The Wu-Hausman test for endogeneity rejects the null, suggesting that 2SLS is indeed necessary to obtain consistent estimators. The Sargan test for the exclusion restriction rejects the null in both regressions, suggesting that the peers' characteristics influence contributions directly (Manski's reflection problem).

TABLE H.1: VALIDITY OF 2SLS USED IN THE PEER EFFECTS ESTIMATION

| Test | Endogenous Variable | Test Statistic | <i>p</i> -value |
|--------------|-------------------------------|----------------|-----------------|
| Before Ban | | | |
| F-test | Contributions by Family Peers | 316.2 | < 2.2e-16 |
| Wald | Contributions by Family Peers | 4.2579 | 1.408e-7 |
| F-test | Contributions by Firm Peers | 1,768.8 | < 2.2e-16 |
| Wald | Contributions by Firm Peers | 87.5 | < 2.2e-16 |
| Cragg-Donald | | 316.2 | |
| Wu-Hausman | | 86.1 | < 2.2e-16 |
| Sargan | | 62.4 | 8.303e-9 |
| After Ban | | | |
| F-test | Contributions by Family Peers | 238.3 | < 2.2e-16 |
| Wald | Contributions by Family Peers | 7.5176 | 5.719e-16 |
| F-test | Contributions by Firm Peers | 710.9 | < 2.2e-16 |
| Wald | Contributions by Firm Peers | 33.4 | < 2.2e-16 |
| Cragg-Donald | | 249.7 | |
| Wu-Hausman | | 8.6618 | 1.743e-4 |
| Sargan | | 58.8 | 3.737e-8 |

Notes: IV diagnostic tests.

I. Disaggregating the family

When more than one generation is present in the family we can disaggregate between the oldest generation and the younger members. In Table I.1 we report the effect of the ban on the probability of making a contribution for different generations.

TABLE I.1: DIFFERENCE-IN-DIFFERENCE SPECIFICATION

| | Probability of | Contribution |
|--|------------------------|-------------------------|
| | (1) | (2) |
| Family (Old Generation) × Post 2015 | 0.108** (0.049) | |
| \times The Firm Contributed Before the Ban | , | 0.135^{**} (0.059) |
| × The Firm Did Not Contribute Before the Ban | | -0.036 (0.043) |
| Family (Young Generation) × Post 2015 | 0.104*** (0.026) | |
| \times The Firm Contributed Before the Ban | , | 0.112^{***} (0.029) |
| × The Firm Did Not Contribute Before the Ban | | 0.070 (0.044) |
| Family (Only Generation) \times Post 2015 | 0.059^{**} (0.028) | |
| \times The Firm Contributed Before the Ban | | 0.037 (0.036) |
| × The Firm Did Not Contribute Before the Ban | | 0.082** (0.038) |
| Manager \times Post 2015 | 0.006 (0.009) | 0.004 (0.009) |
| Manager and in Board of Directors × Post 2015 | 0.021 (0.016) | 0.025 (0.019) |
| Politician × Post 2015 | 0.033 (0.047) | 0.029 (0.048) |
| Worked in Public Sector \times Post 2015 | 0.019 (0.023) | 0.005 (0.022) |
| Fraction of Voting Shares Owned \times Post 2015 | 0.122^{**} (0.050) | 0.166** (0.076) |
| Observations | 38192 | 30621 |
| Adjusted R ² | 0.420 | 0.394 |
| Firm × Year FE Individual FE | √ √ | √ √ |

Notes:

We partition families into generations given by levels in the family tree (so, a father is

^{***}p < 0.01; **p < 0.05; *p < 0.1

exactly one generation above his sons and daughters). We thus classify family ties as downward (from higher to lower generations, e.g., from father to son), upward (from lower to higher generations), and horizontal (among two members of the same generation, e.g., two brothers). We re-estimate Equation 3 disaggregating the family network into these three sub-networks in order to estimate the effect of each type of family tie. The results are reported in Table I.2.

TABLE I.2: PEER EFFECTS FROM VERTICAL TIES

| | OL | LS | 2SI | LS |
|--|---------------|---------------|--------------|--------------|
| | Before 2015 | After 2015 | Before 2015 | After 2015 |
| Contributions by Family Peers | -0.114*** | -0.091** | -0.042 | -0.034 |
| From Higher Generations | (0.035) | (0.041) | (0.091) | (0.072) |
| Contributions by Family Peers | -0.034 | -0.029 | 0.070 | 0.133*** |
| From Lower Generations | (0.025) | (0.031) | (0.047) | (0.037) |
| Contributions by Family Peers | 0.123^{***} | 0.175^{***} | 0.016 | 0.036 |
| From The Same Generation | (0.032) | (0.030) | (0.090) | (0.061) |
| Contributions by Firm Peers | 0.002*** | 0.005*** | 0.003** | -0.001 |
| | (0.001) | (0.001) | (0.002) | (0.001) |
| Family Member | 0.019 | 0.061*** | 0.016 | 0.049^{*} |
| | (0.013) | (0.023) | (0.014) | (0.026) |
| Observations | 23380 | 10955 | 23380 | 10955 |
| Year FE | \checkmark | \checkmark | \checkmark | \checkmark |
| Firm FE | | | \checkmark | \checkmark |
| First Stage F-stat for Contributions by Family Peers | | | 355.639 | 235.503 |
| From Higher Generations | | | | |
| First Stage F-stat for Contributions by Family Peers | | | 306.243 | 246.382 |
| From Lower Generations | | | | |
| First Stage F-stat for Contributions by Family Peers | | | 244.971 | 201.935 |
| From The Same Generation | | | | |
| First Stage F-stat for Contributions by Firm Peers | | | 889.352 | 370.958 |

Notes:

J. Additional Results

To show that family firms are more likely to contribute to political campaigns, we estimate a linear probability model:

Contribution_{it} =
$$\beta$$
 Family Firm_{it} + $\gamma^{\top} \mathbf{X}_{it} + u_t + v_j + \epsilon_{it}$ (A.1)

 $^{^{***}}p<0.01;\,^{**}p<0.05;\,^*p<0.1$

where i denotes firms, t denotes election cycles, Contribution $_{it}$ is an indicator that takes the value 1 if a firm contributed in a given election cycle and 0 otherwise, \mathbf{X}_{it} is a vector of time-varying firm-level covariates, v_j are industry fixed effects, and u_t are year fixed effects. The coefficient β captures the effect of family firm status on the probability of making a campaign contribution.

TABLE J.1: FAMILY FIRMS AND CAMPAIGN CONTRIBUTIONS

| | | Prob | ability of Contribution | ı by |
|-------------------------------|--------------|--------------|-------------------------|-----------------------|
| | Firm (1) | Firm (2) | Firm + Subsidiaries (3) | Firm + Leadership (4) |
| Family Firm | 0.201*** | 0.147*** | 0.159*** | 0.113*** |
| | (0.035) | (0.043) | (0.044) | (0.033) |
| Assets (log) | , , | 0.015** | 0.024*** | 0.023*** |
| | | (0.007) | (0.008) | (0.009) |
| Income (log) | | 0.011*** | 0.021*** | 0.019** |
| | | (0.004) | (0.004) | (0.007) |
| Age (log) | | 0.044** | 0.016 | -0.012 |
| | | (0.019) | (0.020) | (0.019) |
| Foreign | | 0.129 | 0.116 | -0.076 |
| | | (0.099) | (0.088) | (0.078) |
| State Owned | | -0.109** | -0.209*** | 0.200*** |
| | | (0.054) | (0.056) | (0.061) |
| Ordinary Shares Owned | | -0.055 | 0.008 | 0.007 |
| by Natural Person (%) | | (0.060) | (0.064) | (0.054) |
| Concentration of Ordinary | | 0.064 | 0.049 | -0.022 |
| Shares (Herfindahl) | | (0.059) | (0.062) | (0.063) |
| Ordinary Shares in Free Float | | 0.211^{**} | 0.221^{**} | 0.180^{**} |
| | | (0.088) | (0.091) | (0.076) |
| Preferential Shares (binary) | | 0.007 | -0.005 | -0.012 |
| | | (0.041) | (0.042) | (0.039) |
| Largest Shareholder Gap | | 0.238** | 0.306^{***} | 0.201^{**} |
| | | (0.106) | (0.102) | (0.099) |
| Control Outcome Mean | 0.148 | 0.179 | 0.263 | 0.570 |
| Observations | 1355 | 1095 | 1095 | 1773 |
| Adjusted R ² | 0.053 | 0.188 | 0.232 | 0.132 |
| Year FE | \checkmark | \checkmark | \checkmark | \checkmark |
| Industry FE | | \checkmark | \checkmark | \checkmark |

Notes: Estimates from Equation A.1. All specifications are estimated using OLS and include year fixed effects. Column 1 includes no controls. Column 2 includes firm-level controls. Column 3 includes contributions by the firms and its subsidiaries. Column 4 includes contributions by the firm, its subsidiaries, and its leadership (board members and management). Columns 2-4 include industry fixed effects. Standard errors clustered at the firm level included in parentheses. The smaller sample in columns 2-3 reflects the availability of controls. The larger sample in Column 4 reflects adding contributions by a firm's leadership in years 2016 and 2018.

To show that family members are more likely to make indidividual campaign contributions,

^{***}p < 0.01; **p < 0.05; *p < 0.1

we estimate the following linear probability model:

Contribution_{it} =
$$\beta$$
 Family Member_{it} + $\gamma^{\mathsf{T}} \mathbf{X}_{it} + v_{jt} + \epsilon_{it}$ (A.2)

where i denotes individuals, t denotes election cycles, \mathbf{X}_{it} is a vector of individual-level covariates, and v_{jt} firm-year fixed effects. The coefficient of interest, β , captures the effect of being a family member on the probability of making a contribution. This estimate thus represents the difference in the political behavior between individuals with and without family ties in the same firm in a given election cycle.

TABLE J.2: PRIVATE CONTRIBUTIONS BY INDIVIDUALS

| | I | Probability of | f Contribut | ion |
|-----------------------------------|----------|----------------|-------------|----------------|
| | (1) | (2) | (3) | (4) |
| Family Member | 0.088*** | 0.069*** | 0.045*** | 0.025 |
| | (0.012) | (0.011) | (0.016) | (0.016) |
| Number of Family Ties | | | 0.018*** | 0.019*** |
| | | | (0.007) | (0.006) |
| Manager | | -0.015^{***} | | -0.015^{***} |
| | | (0.005) | | (0.005) |
| Manager and in Board of Directors | | 0.021** | | 0.020** |
| | | (0.008) | | (0.008) |
| Fraction of Voting Shares Owned | | 0.127^{***} | | 0.128*** |
| | | (0.029) | | (0.029) |
| Worked in Public Sector | | 0.049*** | | 0.049*** |
| | | (0.010) | | (0.010) |
| Age (log) | | 0.075^{***} | | 0.075^{***} |
| | | (0.010) | | (0.010) |
| Control Outcome Mean | 0.064 | 0.062 | 0.064 | 0.062 |
| Observations | 38192 | 34335 | 38192 | 34335 |
| Adjusted R ² | 0.088 | 0.094 | 0.089 | 0.095 |
| Firm × Year FE | ✓ | ✓ | ✓ | ✓ |

Notes: Estimates from Equation A.2. All specifications are estimated using OLS and include firm-year fixed effects. All specifications employ a binary outcome. Columns 2 and 4 include individual-level controls. The restricted sample size in columns 2 and 4 reflect the availability of controls. Standard errors clustered at the firm-year and individual level included in parentheses.

^{***}p < 0.01; **p < 0.05; *p < 0.1

K. State-subsidized Loans and Campaign Contributions

To study whether family firms engage in higher rent-seeking behavior, we focus on preferential access to state-subsidized credit by Brazil's National Development Bank (BNDES), a form of rent-seeking in financial markets. We estimate the following linear probability model:

BNDES Loan Post_{it} =
$$\beta_1$$
 Family Firm_{it}+ β_2 Contribution_{it}+ β_3 Contribution_{it}×Family Firm_{it}

$$+ \gamma^{\mathsf{T}} \mathbf{X}_{it} + v_j + u_t + \epsilon_{it} \quad (A.3)$$

where i denotes firms, t denotes election cycles, \mathbf{X}_{it} is a vector of time-varying firm-level covariates, v_j are industry fixed effects, and u_t are year fixed effects. The coefficient of interest, β_3 , captures the differential effect of contributions by family firms of the probability of receiving a BNDES loan in the two-year period following an election.

TABLE K.1: CAMPAIGN CONTRIBUTIONS AND BNDES LOANS

| | Probabil | ity of Loan |
|-------------------------|---------------|--------------|
| | (1) | (2) |
| Contributed | 0.072** | 0.004 |
| | (0.029) | (0.039) |
| × Family Firm | | 0.154*** |
| | | (0.059) |
| Family Firm | | -0.074*** |
| • | | (0.023) |
| Assets (log) | 0.014^{***} | 0.015*** |
| _ | (0.005) | (0.005) |
| Income (log) | 0.003 | 0.003 |
| | (0.003) | (0.003) |
| Age (log) | 0.037^{***} | 0.040*** |
| | (0.013) | (0.013) |
| State-Owned | 0.039 | 0.017 |
| | (0.061) | (0.061) |
| Control Outcome Mean | 0.090 | 0.115 |
| Observations | 737 | 734 |
| Adjusted R ² | 0.122 | 0.131 |
| Year FE | \checkmark | \checkmark |
| Industry FE | \checkmark | \checkmark |

Notes: Estimates from Equation A.3. All specifications are estimated using OLS and include industry and year fixed effects. Columns 2 includes firm-level controls. Standard errors clustered at the firm level included in parentheses.

L. Dataset on Family Ties

In Brazil, listed companies are mandated to disclose information on their financial information and corporate governance documentation to the country's securities regulator, known as *Comissão de Valores Mobiliários* (CVM). The CVM provides more detailed information relative to standard sources such as Bureau van Dijk and Capital IQ. This information is available on the CVM website and can be queried under the following link: http://sistemas.cvm.gov.br/.

^{***}p < 0.01; **p < 0.05; *p < 0.1

Among the information firms disclose are structured reports (*Formulários de Referência*). Additional information is contained in *Formulários Cadastrais*, which contain additional company data. The information contained in these reports includes, but is not limited to:

- 1. Basic accounting data: main sector of activity, assets, profits, and debt.
- 2. Ownership structure: proportion of shares traded in public markets, individuals and legal entities who own a block of voting shares, and, for legal entities, their ownership structure (recursively).
- Data on members of the board of directors and top management: their names, position, professional experience (for example, whether they served in elected office or worked in the bureaucracy).
- 4. Family ties among individuals in leadership positions (directors, top executives, blockholders).

We wrote a web-scraping algorithm to construct a novel dataset with this information. Overall, we collected 6,219 *Formulários de Referência* (structured reports) and 6,424 Formulários Cadastrais, comprising a total of 593 public companies between 2010 and 2018. We also wrote an interactive web application to better visualize the data:

https://familyfirms.shinyapps.io/contributions/.

The disclosure of family relationships allows us to measure family ties with higher precision than studies relying on rough measures such as shared last names.

M. Descriptive Statistics and Variables Definitions

TABLE M.1: BRAZIL'S TOP TEN CONTRIBUTING FIRMS IN 2014

| Donor Name | Industry | Amount ¹ | Assets ¹ | Govt. Bank Loans ¹ |
|----------------------|------------------------------|---------------------|---------------------|-------------------------------|
| $\overline{JBS^2}$ | Meat processing | 76.109 | 82,044 | 0 |
| Gafisa | Real estate | 25.083 | 7,206 | 0 |
| Vale ² | Metals and mining | 17.756 | 309,415 | 7,049 |
| Braskem ² | Petrochemical | 15.176 | 49,422 | 1,608 |
| BTG Pactual | Financial services | 14.970 | 157,712 | 0 |
| Ambev | Brewing | 13.766 | 72,143 | 1,554 |
| Gerdau | Steel | 11.088 | 63,042 | 88 |
| Itaú Unibanco | Private sector banking | 11.007 | 1,208,702 | 0 |
| Cosan | Bioethanol, sugar and energy | 9.900 | 27,104 | 0 |
| Hypera | Pharmaceuticals | 6.326 | 13,888 | 30 |

¹ Million US dollars.

Notes: The table shows the ten largest donors during the 2014 election cycle in our sample. The amount contributed is the sum of all contributions by the firm and its subsidiaries. Government bank loans is the total value of discretionary loans by Brazil's National Development Bank (BNDES) received by the firm since the last national election.

² BNDES is a major shareholder.

TABLE M.2: SAMPLE MEANS OF MAIN VARIABLES BY FAMILY-FIRM STATUS

| | Samp | le Means |
|---------------------------------|--------------|------------------|
| | Family Firms | Non-family Firms |
| Firms that Contributed (%) | 42.5 | 18.7 |
| Contributions by the Firm | 662,578.9 | 247,287.4 |
| | (5,248,639) | (1,292,055) |
| Contributions by the Firm | 1,601,370 | 779,957.7 |
| + Leadership | (7,819,550) | (3,311,885) |
| Age | 41.6 | 32.3 |
| | (28.8) | (29.1) |
| Number of Individuals with Ties | 3.3 | 0.3 |
| | (2.2) | (1.4) |
| Board + Top Management Size | 12.6 | 13.5 |
| - | (6.8) | (10.2) |
| Assets (log) | 20.4 | 19.4 |
| - | (2.8) | (4.5) |
| Income (log) | 19.8 | 19.1 |
| | (3.1) | (4.6) |
| Ordinary Shares Owned | 61.6 | 25.1 |
| by Natural Person (%) | (28.5) | (34.4) |
| Number of Firms | 237 | 356 |

Note: Standard deviations in parentheses.

TABLE M.3: FIRM-LEVEL VARIABLES DEFINITIONS

| Variable | Description | Support S | Source Ol | Observations | Minimum | Maximum | Median | Mean | Std Dev |
|--|---|------------------|------------|--------------|---------|--------------------------|--------|------------------------|------------------------|
| Family Firm | An individual or family is the ultimate owner of a plurality of voting shares and at least one family member who is not the only owner has a top executive position. | {0, 1} C | CVM | 2,155 | 0 | 1 | 0 | 0.3 | 0.5 |
| Number of Individuals with Ties | Number of individuals in the top management and the board of directors who have family ries to members of the controlling family. | Z | CVM | 2,148 | 0 | 21 | 0 | 1.7 | 2.5 |
| Contributions by the Firm Contributions by the Firm + Subsidiaries | We add the value (in 2020 US dollars) of all contributions by the firm. Same as above, but including contributions by firms controlled by the firm. | Д Т Т | TSE TSE | 1,360 | 0 | 75,660,952 86,455,935 | 0 | 260,928.9 623,889.2 | 2,563,135 4,014,461 |
| Contributions by the Firm + Leadership | Same as above, but including contributions by individuals in the firm's top management or board of directors | R ₊ T | TSE | 2,160 | 0 | 86,541,811 | 545.7 | 447,921.6 | 3,222,365 |
| Number of Parties to which the Firm Contributes | Number of parties to which the firm, its subsidiaries or the members of its leadership contributed. | T Z | TSE | 2,160 | 0 | 23 | 1 | 2 | 3.4 |
| Effective Number of Parties to which the Firm Contributes | If the firm contributed x_i US dollars to party $i=1,\ldots,n$, the effective number of parties is $(\sum_{i=1}^n x_i)^2/\sum_{i=1}^n x_i^2$, or 0 if the firm did not make any contribution. | Д + | TSE | 2,160 | 0 | 10.3 | 1 | 1.2 | 1.5 |
| BNDES Loans (binary) | why common received loans from the BNDES in the period between two election verses. | {0, 1} E | BNDES | 2,160 | 0 | 1 | 0 | 0.1 | 0.3 |
| BNDES Loans / Assets | The combined value of all loans received in the period between two elections (or 0 if no loans were received) divided by the book value of the firm's assets (both in 2020 US dollars). | [0,1] E | BNDES | 2,020 | 0 | 0.3 | 0 | 0 | 0 |
| Assets (log) | Assets (book value). | | CVM | 2.025 | 5.2 | 28.1 | 21 | 20.3 | 3.6 |
| Income (log) | Gross income (net of sales taxes). | | CVM | 1.783 | 0 | 26.6 | 20.5 | 19.8 | 3.8 |
| Age (log) | Number of years since the firm was founded. | | CVM | 2,160 | 0 | 5.3 | 3.4 | 3.2 | |
| Foreign | A firm defined as foreign in the CVM data. | 1} | CVM | 2,160 | 0 | - | 0 | 0 | 0.2 |
| State-Owned | A firm defined as state-owned in the CVM data. | | CVM | 2,160 | 0 | 1 | 0 | 0.1 | 0.3 |
| Industry | Industries are grouped according to the highest aggregation level in the National Classification of Economic Activities (CNAE), with two exceptions: (1) Services, an indicator combining all industries in non-financial services, and (2) Holdings, an indicator for multi-industry holdings (considered separately from the CNAE financial services, adeconv | orical | CNPJ | 2,160 | | | | | |
| Ordinary Shares Owned by Natural Person (%) | Fraction of shares owned by natural persons (the rest are owned by insti- tutional investors or traded in public markets). | [0,1] C | CVM | 2,155 | 0 | 1 | 0.3 | 0.4 | 0.4 |
| Concentration of Ordinary Shares (Herfindahl) | If the ultimate owners $i=1,\ldots,n$ hold (perhaps indirectly) a fraction $x_i\in [0,1]$ of the voting shares, the Herfindahl index of concentration is | [0, 1] C | CVM | 2,155 | 0 | 1 | 0.1 | 0.5 | 0.3 |
| Ondinom: Chonce in Euro Elect | $\sum_{i=1}^{n} x_i^2$. Example 3 the constant fact and topology in the multiple modules. | | 7475 | 2 1 55 | | - | - | C | 0 |
| Ordinary Shares III Free Froat Preferential Shares (binary) | Fraction of the young shares that are traced in the public market. Whether the firm has issued a class of shares without full voting rights | [0, 1] {0 1} | CVM | 2,133 | | | 0.1 | 0.5 | 0.5 |
| Largest Shareholder Gap | Difference between the fraction of shares with full voting rights owned by | _ | CVM | 2,155 | -0.8 | 0.7 | 0 | 0.1 | 0.2 |
| | the largest shareholder minus the fraction of all shares owned by her. If there are no dual-class shares, this number is 0. Otherwise it measures the gan between control riohts and cash-flow riohts by the largest shareholder. | | | | | | | | |
| Institutional Ownership | Fraction of voting shares owned by legal persons or traded freely in the stock market. | [0,1] C | CVM | 2,155 | 0 | 1 | 0.7 | 9.0 | 0.4 |
| | | | | | | | | | |

TABLE M.4: INDIVIDUAL-LEVEL VARIABLES DEFINITIONS

| Variable | Description | Support | Source | Support Source Observations Minimum Maximum Median Mean Std Dev | Minimum | Maximum | Median | Mean | Std Dev |
|-----------------------------------|---|------------|--------|---|---------|------------|--------|---------|------------------|
| Family Member | Indicator of membership in the family that controls the firm. | {0,1} | | 38,192 | 0 | 6 | 0 | 0.1 | 9.0 |
| Number of Family Ties | Number of family ties to individuals in leadership positions at firms in the sam- | | CVM | 38,192 | 0 | 13 | 0 | 0.2 | 0.8 |
| | ple. | | | | | | | | |
| Campaign Contributions | We add the value (in 2020 US dollars) of all contributions by an individual. | # | TSE | 38,192 | 0 | 10,414,802 | 0 | 3,390.2 | 3,390.2 87,590.4 |
| Manager | Indicator of top management position, e.g., CEO or COO. | $\{0, 1\}$ | CVM | 38,192 | 0 | 1 | 0 | 0.4 | 0.5 |
| Manager and in Board of Directors | Manager and in Board of Directors Indicator of top management position and seat in the firm's board of directors. | $\{0, 1\}$ | CVM | 38,192 | 0 | 1 | 0 | 0.1 | 0.3 |
| Fraction of Voting Shares Owned | Fraction of the firm's voting shares that the individual owns. We have data on | [0,1] | CVM | 38,192 | 0 | 1 | 0 | 0 | 0.1 |
| | ultimate ownership of shares, so we capture ownership through, e.g., societies. | | | | | | | | |
| Politician | Whether the individual held elected office according to her biography. | $\{0, 1\}$ | CVM | 38,192 | 0 | 1 | 0 | 0 | 0.1 |
| Worked in Public Sector | Whether the individual worked in the government according to her biography. | $\{0, 1\}$ | CVM | 38,192 | 0 | 1 | 0 | 0.1 | 0.3 |
| Age (log) | Natural logarithm of age. | # | CVM | 34,335 | 2.9 | 4.5 | 4 | 3.9 | 0.2 |