Political Connections and Government Subsidies: State-level Evidence

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ABSTRACT

This paper examines whether corporate political connections are associated with government-awarded subsidies, and how this relation impacts subsidy effectiveness in spurring state future economic growth. Subsidies relate to foregone government revenues through income, sales, property, and payroll tax credits/abatements, and to government resource transfers through grants and cost reimbursement programs. Using novel datasets to identify state-awarded corporate subsidies and corporate contributions to state political candidates, we find that political contributions increase both the likelihood a company is awarded a state subsidy and the dollar value of subsidy awarded. Companies contributing to a greater number of candidates, to both Republican and Democratic Party candidates, and to both gubernatorial and legislative candidates reap the greatest subsidy benefits. Importantly, we find that subsidies are positively associated with a state's future intra-industry jobs growth, but only for subsidies awarded to politically unconnected companies. This finding suggests quid pro quo behavior in the state subsidy award process results in a less effective allocation of government resources.

I. INTRODUCTION

Prior research documents a positive relation between corporate political connections and firm value (e.g., Fisman, 2001; Faccio, 2006; Faccio and Parsley, 2009; Goldman et al., 2009; Cooper et al., 2010) and several benefits of being politically connected.[1] An emerging literature suggests that companies use political connections as a tax planning strategy to reduce corporate taxes paid. Studies in this area provide evidence that companies with federal political connections pay less income tax (e.g., Kim and Zhang, 2016; Brown et al., 2015; Chen et al., 2018). However, interpretations of this evidence have been limited largely due to the difficulty of identifying firm-specific tax benefits. Preferential tax treatment at the federal level is typically granted to specific industries or activities, not specific companies.[2] Since federal tax preferences are also enjoyed by peer firms, examining political connections at the federal level does not provide a direct link between firm-specific political activities and tax benefits, nor does it pinpoint to the exact mechanisms through which political connections reduce corporate taxes (Faccio, 2016).

To bridge this gap, we examine the relation between *state-level* corporate political connections and corporate subsidies. U.S. state governments have a long history of awarding financial subsidies to individual corporations. Multi-million dollar subsidies have been awarded to well-known U.S. companies like Amazon, Boeing, Exxon Mobil, and General Motors, as well as well-known foreign companies like Royal Dutch Shell, Sasol, Toyota, and Volkswagen. A New

[1] These benefits include better access to credit (Khwaja and Mian 2005; Houston, Jiang, Lin, and Ma 2014), government procurement contracts (Goldman, Rocholl, and So 2013), government financial assistance (Faccio, Masulis, and McConnell 2006; Duchin and Sosyura 2012), and weaker regulatory monitoring (Kroszner and Stratmann 1998, Yu and Yu 2011) and enforcement (Correia, 2014).

[2] Examples of corporate federal tax preferences include the income tax credit for qualified research and experimentation activities (available to corporations in all industries) and income tax deductions for domestic production activities (available to corporations with qualified manufacturing activities). Chen et al. (2018) identify 55 publicly traded firms that received firm specific federal tax benefits as the result of the 1986 Tax Reform Act. While such firm specific federal tax benefits are still possible, both the U.S. Senate and House have adopted procedural rules that make such provisions more difficult and generally politically unpalatable (Evans, 2008).

York Times article notes that "for local governments, [economic] incentives have become the cost of doing business with almost every business" (Story, 2012). The stated goal of these incentive programs is to create jobs and stimulate local economic growth. We consider the economic impact of political connections beyond the firm by studying how political connections impact subsidy effectiveness in spurring future economic growth within the state.

Proponents of state-provided corporate subsidies view the practice as a win-win for both taxpayers and shareholders. From a taxpayer's perspective, state-provided economic incentives encourage corporations to make investments in local human capital and infrastructure, which spur economic development and generates a larger future tax base (e.g., Cobb, 1993; Jenkins et al., 2006; Baybeck et al., 2011). From a corporation's perspective, state-provided subsidies lower the cost of doing business – generally with few strings attached.[3] Critics argue that state-provided corporate subsidies are one side of a quid pro quo relationship built on "insidious cronyism" (Brunori, 2014) and pay-to-play policies that favor those with political connections (e.g., Schlozman and Tierney, 1986; Baumgartner and Leech, 1998). For example, when a close friend of New Jersey Republican Governor Chris Christie oversaw the New Jersey Economic Development Authority, more than $1 billion of subsidies were awarded to 21 companies with close ties to Governor Christie and the Republican Party, while only one company with strong Democratic Party ties was awarded a subsidy (Swain, 2014).

It is not clear whether quid pro quo behavior in the subsidy granting process leads to more or less effective allocation of government resources. Some theoretical work suggests quid pro quo behavior in government results in ineffective allocation of taxpayer funds, as funds are not allocated on a project's merits (e.g., Stigler, 1971; Banerjee, 1997). In contrast, others suggest

[3] While many states have added "clawback" provisions to subsidies in recent years, the provisions are not strictly enforced in every state and program (Mattera et al., 2012).

political connections reduce information asymmetries between politicians and companies, which leads to better project and investment identifications and greater allocation effectiveness (e.g., Downs, 1957). Thus, whether awarding subsidies to politically connected companies a better or worse use of taxpayer money, relative to awarding subsidies to companies without political connections, is an empirical question.

We identify state-awarded corporate subsidies using a novel dataset from Good Jobs First, a national policy resource center promoting corporate and government accountability. Our sample is comprised of publicly traded companies that receive a subsidy from at least one state during 2000 through 2014. We find that the majority of state-awarded subsidies relate to foregone government revenues through income, sales, property, and payroll tax abatements and credits. Subsidies can also relate to resources transfers from the state government to the company through grants, low-cost loans, and employee training and other cost reimbursement programs. We measure political connections using state-level candidate campaign contributions by corporations and their corporate-sponsored political action committees (PACs). These data are obtained from the campaign finance watchdog agency National Institute of Money in State Politics.[4]

Our unit of observation is a company-year-state. We exploit the panel structure of our sample and employ an extensive set of fixed effects to strengthen identification. We include company-year fixed effects, which allow us to compare the relation between political contributions and subsidies *within a given company-year* across states. This means that anything about a company at a point in time that does not vary across states cannot affect our inferences. In addition, we include state-industry-year fixed effects, which address the concern that a state interested in

[4] A political action committee (PAC) is an organization that solicits contributions from individuals and corporations for use in supporting or opposing political candidates, ballot initiatives, and legislation. Corporate-sponsored PACs often solicit employees for personal financial contributions; these contributions are then used to support candidates with policies favorable to the corporation (Conlin and Lozada, 2015).

stimulating an industry at a point in time happens to award subsidies to a politically active industry. These two extensive sets of fixed effects not only reduce the likelihood that inferences are driven by correlated omitted variables, but also mitigate the concern that time-varying company-level control variables induce inconsistent estimates (Gormley and Matsa, 2014). Our final sample includes 545,345 company-year-state observations, of which 8,676 are classified as state subsidy awardees and 44,060 are classified as politically connected at the state level.

Our analyses reveal a robust positive relation between state-level corporate political connections and corporate subsidies. A corporation is more likely to receive a state-provided subsidy when the corporation (1) makes a financial contribution to political candidates in the state, (2) contributes a larger dollar amount to these state-level candidates, and (3) contributes to a greater number of state-level candidates. These three factors are also associated with receiving a larger subsidy amount. Companies contributing to a greater number of candidates, to both Republican and Democratic Party candidates, and to both gubernatorial and legislative candidates reap the greatest subsidy benefits. We exploit time-series variation in subsidies and political contribution within a company in a given state. We continue to find a positive association between corporate political contributions and state-awarded corporate subsidies. These findings are consistent with critics' concerns of cronyism and the pay-to-play nature of state government subsidies.

However, the positive relation between political contributions and state subsidies does not address whether awarding subsidies to politically connected firms harms taxpayers. Subsidy proponents argue that considering economic growth beyond the subsidy-receiving company paints a more complete picture in assessing subsidy effectiveness (e.g., Klein and Moretti, 2013; Dolan, 2015). We examine the relation between subsidy awards and industry jobs growth, and whether politically connected subsidy-receiving companies are more or less effective in contributing to this

growth. We find evidence that subsidies are positively associated with a state's future intra-industry jobs growth, but only for subsidies awarded to politically *unconnected* companies. This finding suggests that quid pro quo behavior in the subsidy award process results in a less effective allocation of government resources, consistent with taxpayers being harmed by pay-to-play cronyism.

Our findings have important implications for accounting standards setters. In recent years, both the Governmental Accounting Standards Board (GASB) and the Financial Accounting Standards Board (FASB) are grappling with what governmental entities and public companies should disclose regarding government-awarded corporate subsidies. In 2015, the FASB issued Proposed Accounting Standards Update (ASU) *'Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance*.' This proposed ASU would require companies to disclose the nature, significant terms and conditions, and financial statement impact of government subsidy awards (FASB, 2015).[5] Also in 2015, the GASB issued Statement No. 77 '*Tax Abatement Disclosures'* to increase public awareness of corporate subsidies granted by state and local governments. Although the standard requires state and local governments to disclose the annual *aggregate* dollar value of subsidies granted, recipient names and per-recipient amounts are not required to be disclosed (GASB, 2015). Critics argue that aggregate disclosure will fail to generate the transparency needed to discipline the subsidy-granting process, as taxpayers cannot determine which companies are receiving subsidies (and whether these companies are politically connected).[6] Our finding that subsidies awarded to politically connected firms are a less effective

[5] While in June 2016 the FASB decided to exclude income-tax related subsidies from the proposed ASU, the Board added income-tax related subsidy disclosure to an income-tax specific proposed ASU one month later (FASB, 2016).
[6] We find that more than half of the 301 comment letters in response to GASB Statement No. 77 recommend disclosure of per-recipient dollar amounts and/or recipient names.

use of government fund speaks to the importance of a more granular level of disclosure on the names of the companies receiving subsidies.

The remainder of this paper proceeds as follows. Second 2 provides institutional details regarding the state subsidy granting process and the potential effect of subsides on future economic growth. Section 3 discusses the data sources. Section 4 presents the analyses of the relation between state subsidies and political contributions and Section 5 the effectiveness of state subsidies. Section 6 concludes.

II. INSTITUTIONAL DETAILS

State subsidy granting process

While the subsidy granting process can differ by state, there are several common elements. State governments have commerce departments and/or economic development agencies focused on growing their state's economy, primarily by retaining existing and generating new jobs and businesses in their state. These departments and agencies can be part of the governor's office, or operate as a quasi-governmental agency overseen by the governor's office or state legislature. States often advertise their business-friendly practices through press releases and popular press interviews. For example, in March 2017 the Baltimore affiliate of CBS aired a story featuring Maryland Secretary of Commerce Mike Gill, the political appointee responsible for overseeing Maryland Governor Larry Hogan's economic growth agenda. Gill noted that "…the key to success in economic development is growth through retention…we gotta get out there and tell and sell the Maryland story" (CBS, 2017). Larger corporate economic incentive packages are often tailored to specific companies, and generally require special approval from a state's governor and/or legislature. An article by Ernst & Young notes that "to act more boldly and swiftly, governors and

economic development leaders increasingly have access to more closing funds, which can not only speed the process but also lead to some flexible or creative opportunities" (EY, 2016, p.6).

To illustrate, during Rick Perry' 15 year tenure as governor of Texas, he used the Texas Enterprise Fund to award more than $500 million in economic incentives to corporations interested in relocating to or expand operations within Texas. This fund was created in 2003 by the Texas state legislature at Perry's request and permitted Perry (with sign-off required by the lieutenant governor and state House speaker) to grant economic incentive packages to individual corporations. However, some allege that Perry used the fund as a "political slush fund, …The governor has collected millions of dollars in campaign contributions from … companies that have received Enterprise Fund awards…Perry's office has vehemently denied that such contributions influence the governor's decision-making" (Ura, 2014).

Companies seeking subsidies can also proactively contact state officials and economic development agencies (CBS, 2017). Companies interested in relocating or expanding their operations often hire site location consultants, who in turn solicit subsidy offers from states' economic development agencies.[7] A former General Motors real estate manager justifies the location-shopping practice by noting that "management owes it to their stockholders to try to get the best economic deal that they can" (Story, 2012).[8] Ultimately, the subsidy process is a two-way street, with Maryland Secretary of Commerce Gill noting that "economic development is a team sport, it takes everybody trying to go in the same direction to make things happen" (CBS, 2017).

[7] For more information on the role of site location consultants, see http://www.goodjobsfirst.org/corporate-subsidy-watch/site-location-consultants (last accessed March 10, 2017).

[8] On occasion even CEOs of companies that receive state subsidies acknowledge that the incentives are not a government's sharpest tool to stimulate long-term job growth. Hallmark is the recipient of more than $7 million in subsidies from Missouri and $1 million in subsidies from Kansas (GJF, 2013), and Hallmark CEO Donald Hall Jr. notes that "…this use of incentives is really transferring money from education to business" (Story, 2012).

Although the popular press emphasizes the quid pro quo behavior in the subsidy granting process, there are several reasons why we may fail to find a positive association between state subsidies and corporate political connections. First, laws regulating political campaign contributions are enacted to help attenuate the link between money and political influence (Witko, 2005). Second, politicians may want to avoid negative publicity related to perceived cronyism, and take steps so subsidies are not awarded to politically connected companies. Third, politicians may place greater value on the generally positive press associated with attracting new and retaining existing companies in their district than on financial contributions. To illustrate, when Wisconsin Governor Scott Walker attracted Foxconn to the state with a $3 billion subsidy package in 2017 (the largest corporate subsidy in Wisconsin's history), political pundits referred to the deal as "the pinnacle of Walker's time as governor" (AP, 2017a). Walker then announced his third-term re-election bid at a manufacturing plant 15 miles from the expected Foxconn location (AP, 2017b). Whether political contributions are systematically associated with a corporation receiving a state-awarded subsidy is an empirical question.

The relation between subsidies and future economic growth

Subsidy-related economic growth fueled by companies other than the subsidy-receiving company can take many forms. For example, if subsidies provide incentives to the recipient company to expand operations within a state, then this company's supply chain partners also have incentives to expand operations within the state. In addition, complementary businesses may flock to the region to better harness the subsidy-receiving company's products and industry knowledge. An article discussing the $3 billion subsidy Wisconsin awarded Foxconn illustrates this point: "Wooing Foxconn wasn't just about winning one factory….[it was about] Foxconn attracting new

companies working on developing applications for the LCD technology in medicine, security, and advanced manufacturing" (Zumbach, 2017).

Economic growth can also occur in industries completely unrelated to the subsidy-receiving company. For example, local stores and restaurants could expand their operations to meet the growing needs of additional or higher salary workers. As 2016 Kentucky gubernatorial candidate Drew Curtis notes "…when Toyota moved to central Kentucky, hundreds of other companies set up shop here as well. Magnified positive network effects are what I'm looking for if I'm going to offer tax incentives to a company" (Sonka, 2015). Similarly, an article discussing the $1.6 billion automotive plant that Toyota and Mazda are expected to build in Alabama notes that "….the impact of an auto assembly plant extends beyond its immediate economic impact, and that's why states offer robust incentives….it creates a halo effect that in turn helps attract other projects" (Shepardson and Woodall, 2018).

In spite of the anecdotal evidence, prior research provides mixed evidence on whether government subsidies or tax incentives provide a meaningfully positive impact on the local economy. For example, using California enterprise zone data, Neumark and Kolko (2008) find no evidence of increased employment, while Bostic and Prohofsky (2006) document at least a short-term positive impact on wages. Even though frequently used as a means to attract business, Buss (2001) noted that state and local governments rarely evaluate the cost and benefit tradeoffs in their subsidy packages. Most of the prior studies on the effectiveness of government subsidies focus on a single state program or type of program. We aim to extend the literature by examining a variety of subsidy types awarded across all states and distinguishing the effect based on whether the receiving companies are politically connected.

III. DATA SOURCES

Data on state subsidies to corporations

We obtain state-awarded subsidies to corporations from Good Jobs First (GJF), a national policy resource center promoting corporate and government accountability. GJF created the Subsidy Tracker 3.0 dataset ("the GJF data") by compiling subsidy-related information from (i) state and local government disclosures via reports and websites, (ii) direct data requests to government agencies through Freedom of Information Act (FOIA) requests, (iii) government and corporate press releases, (iv) newspaper articles, and (v) reports on specific projects by academics, government agencies, and non-profit organizations (GJF, 2013).[9] Since states may vary in their voluntary disclosure of company-specific subsidies, in our research design, we include state-industry-year fixed effects to mitigate potential bias from differences in disclosure across states, or within a state across time.

We focus our analyses on corporate subsidies awarded by state governments as opposed to municipalities, because subsidy data at the local municipality level is not as comprehensive as at the state level; more than half of the nation's 50 largest cities and counties fail to disclose the names of companies receiving locally provided subsidies.[10] More importantly, we are unaware of U.S. municipalities being subject to systematic campaign finance reporting requirements, or an organization that collects campaign contribution information across all U.S. municipalities. This data limitation prevents us from establishing a link between corporate campaign contributions and subsidy awards at the municipality level.

[9] A complete list of data sources GJF relied on when creating the Subsidy Tracker 3.0 dataset is available on the GJF website (http://www.goodjobsfirst.org/subsidy-tracker-state-data-sources; last accessed February 18, 2016).
[10] http://www.goodjobsfirst.org/blog/study-most-big-localities-still-fail-disclose-tax-break-recipients (last accessed January 30, 2018).

We start our sample period in 2000 because our state campaign contributions data are more reliable after 2000. We end the sample period in 2014 because the frequency of the subsidies is disproportionally low in 2015 and 2016, suggesting the data may be incomplete in these final two years.[11] As of January 25, 2016, the GJF data identifies 1,723 public and private parent companies associated with 31,904 unique state-awarded subsidies from 2000 through 2014.[12] Parent companies include 71 of the Fortune 100 and 653 of the Fortune 1000, suggesting an economically important group of companies receive government subsidies.

Subsidies can be awarded directly to the parent company or indirectly through its subsidiaries. We aggregate all the subsidies granted to the subsidiaries to the parent company level. We then link the GJF data to Compustat by parent company name. All possible matches were manually reviewed for accuracy. Of the 1,723 parent companies in the GJF dataset, we identify 1,194 as publicly traded companies with Compustat data. We focus on publicly traded companies because we require a measure of a state's economic importance to a company that relies on information in Form 10-K filed with the Securities Exchange Commission (SEC), which is unavailable for privately held companies. This measure is critical in our analyses, because a company is more likely to seek subsidies and establish political connections in states it has more extensive operations. Given that we draw our inferences by comparing a given company-year *across states*, not controlling for this variable can lead to an omitted variable problem. There are 25,261 state level subsidies awarded to these 1,194 public companies during our sample period.

[11] Subsidies awarded in 2015 and 2016 represent merely 2.6% of the sample. The version of the Subsidy Tracker dataset we obtained from the GJF is January 2016. The lower data frequency in 2015 and 2016 suggests that the data collected in these two years are likely not comprehensive.

[12] GJF notes that these parent companies "come from matching efforts involving all the companies on the following lists: the Fortune 1000, the Fortune Global 500, the companies listed on the New York Stock Exchange, the S&P 500, the Forbes list of the 224 largest private companies in the United States, the Uniworld list of the 1,000 largest foreign firms operating in the United States, and the Private Equity International list of the 50 largest private equity firms" (GJF, 2016).

One limitation of the GJF data is that it matches a subsidiary company that receives state subsidies in a given year to its ultimate parent company based on the parent-subsidiary ownership *as of 2014*. Thus, it is possible that a parent company actually did not own the subsidiary company when the subsidy was awarded. Since both state subsidies and corporate political activities are time varying, it is critical to precisely match a subsidy-receiving subsidiary company to its ultimate parent company *as of the award date*. To remedy this, we manually verify the parent-subsidiary relation for the 25,261 state subsidies for the 1,194 public companies, and remove 3,242 subsidies (13% of the sample) awarded to a subsidiary not owned by the identified parent company as of the award date. We find that the majority of these companies were privately held when the subsidy was awarded. For the remaining 22,019 state subsidies, we further remove 3,674 with missing subsidy values, leaving 18,345 subsidies representing 1,077 public companies in our final sample.

Table 1 shows that most state subsidies are in the form of tax incentives, including credits and rebates related to income, sales, property, and payroll taxes. The distribution of these incentives is highly skewed, with a mean value of $1.67 million, but a median of about $164,000.[13] The next frequent state subsidies are cost reimbursement programs, usually relating to training new or existing employees. The magnitude of these subsidies is relatively small, with a median value of approximately $29,000. Subsidies can also take the form of grants, either outright cash or forgivable loans. Although less frequent, the median dollar value of these grants is similar to that of tax incentives. The "Other" category consists of 13 unique cases, including tax increment financing programs, industrial revenue bonds, and infrastructure assistance programs. The large subsidy value in this category is attributable to the 8 industrial revenue bond offerings by

[13] Multi-year subsidies are recorded as the nominal amount, and not present-valued. Estimating discount rate for each company is subjective. We also do not have the data on the number of years the subsidy being awarded. We mitigate the influence of extreme values through winsorization and log transformation of the subsidy amount in our empirical analyses. However, we acknowledge that the subsidy amount is the upper bound of total subsidies a company received.

Wisconsin, Missouri, and Oklahoma. The proceeds of these offerings were awarded to companies for development purpose. Appendix A provides examples of state subsidies from the GJF database.

Figure 1 presents subsidy frequency and average dollar value by year (Panel A), by industry (Panel B), and by state (Panel C). Panel A shows that subsidy frequency has increased over time, from a low of 105 awards in 2001 to a high of 2,971 awards in 2013. The dollar value of subsidy awarded is high in the early years, but stabilizes to an average amount of around $1.2 million in 2007 and onwards. Panel B shows that companies across all industries receive state subsidies. The agricultural industry on average receives the largest amount of state subsidies, followed by the banking and other equipment & machinery industries. Panel C shows there is significant variation in subsidies awarded by state. All states excluding Hawaii and Wyoming award at least one subsidy to a publicly traded company during our sample period. The five states that on average award the largest subsidies are New Jersey, Connecticut, Michigan, Texas, and Georgia. These states differ significantly in terms of population, geographic location, industry concentration, political leanings, and corporate tax policies, illustrating that corporate subsidies are an economic lever used by many "types" of states. Overall, these panels highlight the importance of including state-industry-year fixed effects to control for all time-varying and time-invariant state and industry heterogeneity in the analyses.

Data on state political campaign contributions

Following the literature (e.g., Cooper et al., 2010; Wellman 2017; Chen et al., 2018), we rely on company campaign contributions to capture a firm's political connections. Financial contributions provide an observable proxy for the firm's *access* to politicians (Wellman 2017), and we are interested in whether this access enhances the firm's chance of obtaining subsidies from the government. Prior studies find that companies generally contribute below the contribution

limit, and suggest that establishing a meaningful political connection with politicians requires involvement beyond hard money campaign contributions (Ansolabehere et al. 2003; Cooper et al. 2010). However, these other activities are not systematically observable for all firms in all years. Following Cooper et al. (2010), we use the number of candidates (as opposed to dollar amount) the company contributes to as our primary proxy for the firm's political connections. As long as other types of political support are correlated with hard money campaign contributions, the number of candidates the firm contributes to captures the overall political connections of the company.

There is significant variation in the extent to which state campaign finance law regulates corporate direct and indirect political contributions to candidates pursuing a state government office. For interested readers, Appendix B provides a list of which states permit direct and indirect political contributions by corporations to candidates pursuing a state government office as of 2016.[14] Although the stringency varies across states, all states permit *indirect* corporate contributions to state office political candidates through corporate-sponsored PACs.[15] Thus, corporations can contribute either directly or indirectly through PACs to political candidates in all 50 states.[16]

[14] Source: NCSL state limits on Contributions to Candidate, 2015-2016 Cycle (http://www.ncsl.org/Portals/1/documents/legismgt/elect/ContributionLimitstoCandidates2015-2016.pdf; last accessed January 28, 2018).

[15] Corporate-sponsored PACs are only permitted to solicit voluntary financial contributions (up to $5,000 per year) from salaried employees with decision-making capacity, shareholders, and these two groups' families (Jacobs et al., 2016). All donors must be U.S. citizens or green card holders. The corporation is permitted to pay all of the PAC's administrative, legal, and solicitation costs so 100 percent of contributions can be used to support candidates with company-favorable policies. Employees are solicited via email and direct mail, and can receive small company perks for contributions. For example, British Petroleum employees who contribute at least 2.5 percent of their salary to the company's corporate-sponsored PAC receive choice parking spots, and Wal-Mart employees who contribute to the company's corporate-sponsored PAC receive a two-for-one match to Wal-Mart's internal social services program for employees in need (Conlin and Lozada, 2015).

[16] As of 2010, federal law permits corporations to make unlimited contributions to Super PACs, and state agencies and courts generally follow federal law on this issue (Covington, 2016). We do not study Super PACs because donations to Super PACs do not have to be disclosed (which is why Super PAC contributions are often referred to as a type of "dark money") (https://www.opensecrets.org/dark-money/basics; last accessed May 12, 2017).

We identify state-level political campaign contributions by corporations and corporate-sponsored PACs using data from the National Institute on Money in State Politics (NIMSP). NIMSP is a non-partisan organization that collects and organizes data from campaign finance reports required to be submitted to disclosure agencies in all 50 states by all candidates for state-wide office. While reporting requirements vary by state, all 50 states mandate some form of campaign contribution disclosure, and most states require annual reporting.[17] We include state-industry-year fixed effects in our analyses to alleviate concerns from potential differences in campaign disclosure rules across states, and within a state across industries and years. We link the NIMSP campaign contributions database to the GJF database by company name. Since a contribution can be made by a subsidiary, our matching algorithm incorporates both parent company and subsidiary company names.[18] Of the 1077 public companies that receive state aids, 549 (51%) companies made campaign contributions to state officials from 2000 to 2014.

Table 2 provides descriptive information on state-level campaign contributions. We have 22,846 firm-state-election cycle observations. Panel A shows that the average dollar value of total corporate contributions to state candidates in a state election cycle is $18,800. On average, Republicans receive slightly larger contributions than Democrats. House candidates receive on average $9,633 from each firm, while Senate candidates receive $5,996. To put these dollar values in context, winning candidates in state Senate elections in 2010 raised an average of $188,105 (Osorio, 2012). Therefore, these contributions should be large enough to capture state politicians' attention.

[17] See details on each state's reporting and disclosure requirements on the National Conference of State Legislatures (http://www.ncsl.org/research/elections-and-campaigns/disclosure-and-reporting-requirements.aspx) and the Campaign Finance Institute (http://www.cfinst.org/law/stateLinks.aspx) websites (last accessed March 3, 2017).
[18] We thank Greg Schneider at NIMSP for help with this matching procedure.

Panel B shows that on average a firm supports a total of 18 state candidates, 11 Republicans and 7 Democrats, in an election cycle. The high standard deviation suggests large variation in the number of candidates a firm supports. Untabulated analysis suggests that the minimum number of candidates a firm supports is 1, while the maximum is 124. On average a firm contributes slightly above $1,000 (=$18,799.92/18) to each candidate in an election cycle.

Panel C presents average contribution dollar amount per candidate per election cycle by state, along with each state's campaign finance limits on corporate PAC contributions.[19] Consistent with prior research examining federal-level political connections (Ansolabehere et al., 2003; Cooper et al. 2010), we find that state corporate political contribution limits are not binding on corporate donations. This finding suggests that political contribution is a proxy for overall political connection, which likely includes unobserved interaction between the firm and politician.

Data on state-level future jobs growth

We obtain annual total employment and annual payroll within an industry for each of the 50 states from the Census Bureau's County Business Patterns (CBP) database. We focus on outcomes related to labor growth because most state subsidies aim to create jobs. The CBP database provides aggregated industry-level data on all businesses with paid employees within the U.S. Industries are defined using six-digit NAICS values.[20]

[19] These limits are as of the 2015-2016 election cycle. Source: NCSL state limits on Contributions to Candidate, 2015-2016 Cycle (http://www.ncsl.org/Portals/1/documents/legismgt/elect/ContributionLimitstoCandidates2015-2016.pdf; last accessed January 28, 2018). Limits are per election cycle, unless otherwise stated.

[20] CBP data undergo automated and analytical edits that remove anomalies and validate geographic coding, addresses, and industry classification. CBP excludes (and therefore our analyses omit) the following NAICS industries: crop and animal production; rail transportation; National Postal Service; pension, health, welfare, and vacation funds; trusts, estates, and agency accounts; private households; and public administration. In addition, CBP excludes most establishments reporting government employees. CBP data can be accessed at https://www.census.gov/programs-surveys/cbp/data/datasets.html (last accessed 1/29/2018)

IV. POLITICAL CONNECTIONS AND STATE SUBSIDIES

Research design

Our empirical strategy consists of studying differences in state-awarded subsidies for a specific company in a given year in states where the company makes political contributions relative to states where the company makes no (or less) political contributions. Using a firm-year as its own control mitigates the concern that firm-year heterogeneity is driving the results. The model takes the following form:

$$\boldsymbol{Sub}_{jtk} = \alpha + \beta_1 \boldsymbol{PoliticalContrib}_{jtk} + \beta_2 \boldsymbol{StateImportance}_{jtk} + \boldsymbol{FixedEffects} + \varepsilon_{jtk} \quad \textbf{[1]}$$

where j indexes the company, t indexes the year, and k indexes the state. Our unit of analysis is at the company-year-state level, so all subsidies awarded to company *j* in year *t* by state *k* are aggregated into one observation. We measure *Sub* using two variables. *Subsidy* is an indicator set equal to one if state *k* awards a subsidy to company *j* in year *t*, and zero otherwise. *SubsidyAmt* is the natural log of one plus the dollar amount of subsidy state *k* awards to company *j* in year *t*. We log transform the variable because Table 1 shows that subsidy dollar value is highly skewed. Collectively, *Subsidy* and *SubsidyAmt* capture whether and to what extent a company receives a subsidy from a state in a given year.

PoliticalContrib is one of three variables (*Contrib, ContribAmt, ContribCandCnt*) that measures corporate contributions to state-level political candidates. Since companies often seek to establish long-term relationships with politicians (Snyder 1992), we follow Cooper et al. (2010) and use a five-year window to measure corporate contributions. Because state election cycles are every two or four years (depending on the state and office), a five-year measurement window also ensure each *PoliticalContrib* variable captures all corporate contributions related to the most recent

election cycle. *Contrib* is an indicator set equal to one if company *j* contributes to a state *k* political candidate in years *t*-4 through *t*, and zero otherwise. *ContribAmt* is the natural log of one plus the dollar amount that company *j* contributes to state *k* political candidates in years *t*-4 through *t*. Given that campaign contribution amount does not capture the total support a company provides for a candidate, we caution readers from interpreting the coefficient magnitude of *ContribAmt* as a "return on political investment." To capture the extent of a company's relationship-building, we follow Cooper et al. (2010) and consider the number of political candidates a company contributes to. *ContribCandCnt* is the natural log of one plus the number of state *k* political candidates that company *j* contributes to in years *t*-4 through *t*.

It is possible that a company is more likely to contribute to a political candidate and more likely to seek a subsidy in a state that is economically important to the company. To control for a state's economic importance, we follow Garcia and Norli (2012) and count the number of times a state is mentioned in the company's Form 10-K.[21] The intuition is that the more times a state is mentioned, the more likely the company has operations in the state. We consider a state to be economically important to a company if the state's percentage of mentions is more than 50 percent of all U.S. state mentions in the company's Form 10-K. *StateImportance* is measured as the number of years state *k* is an economically important state to company *j* during years *t*-4 through *t.*

We include fixed effects for each company-year combination and each state-industry-year combination, where industry is defined according to the Fama-French 12 industry classifications. Including company-year fixed effects allows us to compare the relation between political contributions and subsidies for a given company-year across states. Including state-industry-year

[21] See Garcia and Norli (2012) for details on the methodology. We thank Diego Garcia and Oyvind Norli providing us with this measure for years before 2008. We estimate the measure following the procedure in Garcia and Norli (2012) for the remaining sample period.

fixed effects addresses the concern that a state awards subsidies to companies in an industry for reasons unrelated to political activity (e.g., the state is interested in stimulating a specific industry in a given year). These two extensive sets of fixed effects control for all time-varying and time-invariant company, state, and industry characteristics with the potential to affect the contribution-subsidy relation, making it unlikely that our inferences are affected by correlated omitted variables.

We estimate equation [1] using an OLS regression.[22] We cluster standard errors by company and state to correct for possible correlations across observations of a given company and of a given state. Appendix C lists detailed variable definitions.

Main Results

Our sample is comprised of publicly traded companies that receive a subsidy from at least one state during our 15-year sample period (2000 through 2014), yielding a final sample of 545,345 company-year-state observations. We require our sample firms receive at least one subsidy from one state to mitigate the concern that we compare companies selected to receive a subsidy to companies unlikely to be selected by any state to receive a subsidy due to factors that are unobservable or difficult to measure. In addition, we ensure that the same parent-subsidiary matches in the GJF data are used to identify state-level corporate political contributions by NIMSP. That is, we similarly identified parent-subsidiary relations when creating both our dependent variable (state-awarded subsidies) and our independent variable of interest (corporate contributions to state political candidates).

Table 3 panel A shows that 1.6 percent of the sample (8,676 observations) receives a state subsidy in the year, and 8.1 percent of the sample (44,060 observations) makes a contribution to a

[22] Equation [1] has an extensive set of fixed effects. Greene (2004) illustrates that estimating a nonlinear model such as logit or probit model with an extensive set of categorical variables (e.g., fixed effects) can lead to biased inferences.

state politician in the recent five years. Untabulated analysis suggests that the average dollar value of subsidy awarded for the 8,676 firm-state-year observations is $2.3 million, and the average number of candidates the 44,060 observations make contribution to in the recent 5 years is 35. Both the likelihood of receiving a state subsidy (*Subsidy*) and the subsidy amount (*SubsidyAmt*) are positively correlated with the three contribution variables (*Contrib, ContribAmt, ContribCandCnt*) at the one percent level.

Table 3 panel B presents the regression results on the relation between the likelihood of receiving state subsidies and political contributions. We find that in a given year when a company contributes to a state political candidate, the company is four percent more likely to receive a subsidy from that state, relative to all the other states the company does not make campaign contributions (Column 1). Larger contribution amounts (Column 2) and contributing to a greater number of candidates (Column 3) also increase the probability of receiving a subsidy.

Panel C shows that the presence of a political contribution, the dollar value of contributions, and the number of candidates supported are all associated with receiving a large amount of state subsidy. The coefficient estimate on column [3] indicates that a one percent increase in the number of candidates a firm contributes to in the recent 5 years increases current year subsidy amount by 0.236%. Given that the average number of candidates a firm contributes to in the recent 5 years is 35 and the average subsidy value for a given firm-state-year is $2.6 million, the estimate suggests that a firm can approximately obtain additional $18,000 by contributing to one additional state politicians in a 5-year window.[23]

Overall, these results support our prediction that political connections a company establishes with state officials are positively associated with the likelihood and amount of subsidies

[23] One additional candidate is about a 3% increase in the average number of candidates a firm makes campaign contributions in the recent 5 years. 0.236%*3*$2.6M = $18,408

the company receives from the state government. We further find that companies are more likely to be awarded a subsidy in states in which they have material operations. The coefficient on *StateImportance* is positive and significant across all columns in both panels.

Robustness checks and additional analyses

Government incentive packages sometimes require companies commit to generate a certain number of jobs and make a certain amount of capital investment once the subsidy is awarded. If large, politically active companies are more likely to be awarded with subsidies with these requirements, we have an omitted variable problem. To address this issue, we limit our sample to state subsidies awarded in the current year (i.e., the 8,676 observations with *Subsidy*=1), because subsidy characteristics are only relevant when a subsidy is awarded. We then regress the subsidy amount on our political contribution variables, controlling for job and capital requirements.

We define *CommitJobs* (*CommitCapital*) as the natural log of one plus the number of jobs (capital investment dollars) a company commits to in exchange for a state subsidy. Frequently, the subsidy disclosure fails to include information about specific jobs and capital requirements. In this case, we set *CommitJobs* (*CommitCapital*) equal to zero and the indicator variable *CommitJobsMissing* (*CommitCapitalMissing*) equal to one. Due to limited variation within each company-year in this sub-sample, we replace the company-year fixed effects with three time-varying company characteristics: total assets (*Size)*, leverage (*Leverage*), and cash effective tax rate (*CashETR*). These company characteristics are chosen because prior research finds they are associated with tax planning and the majority of subsidies relate to tax abatements and credits.

Table 4 shows that the three contribution variable coefficients continue to be positive and significant – larger subsidy values are awarded when a company makes political contributions, makes larger political contributions, and contributes to a greater number of candidates. We again

find larger subsidy awards for larger companies, and in states that are economically important to the companies receiving the award, as indicated by the positive coefficients on Size and StateImportance. The *CommitJobs* and *CommitCapital* coefficients are positive and significant in all three columns, consistent with states awarding larger subsidies when companies are willing to commit to greater human and capital investment. Importantly, these results show that political contributions are incremental to jobs and capital commitment.[24]

Our next set of analyses consider time-series variation in the relation between a company's political contributions and subsidies *within* a given state. To exploit this variation, we replace the company-year fixed effects with company-state fixed effects to control for any stationary attributes of a company's relation with state officials. We include *Size*, *Leverage*, and *CashETR* to capture time-varying company characteristics.

Table 5 reports the results. We find that the presence of political contributions, the amount contributed, and the number of candidates supported are all associated with a higher likelihood of a company being awarded a state subsidy (panel A) and a higher subsidy amount (panel B). The control variables are not significant, suggesting these variables have little variation across years. This time-series within-state evidence suggests that our earlier finding is not simply a "headquarter effect." That is companies do not just seek government subsidies using political connections in the headquarter state.

We conduct two additional sets of analyses. To conserve space, we do not tabulate these results; all results are available upon request. First, we check whether our results are sensitive to the extent a firm operates in a state. We repeat our analyses on two subsamples. The first subsample

[24] Over half (three-fourths) of the subsidies have missing jobs (capital investment) commitment information. Limiting the sample to the 1,799 observations with non-missing *CommitJobs* and *CommitCapital* continues to indicate that larger subsidy amounts are positively associated with larger political contributions, jobs commitments, and capital commitments (untabulated).

focuses on states where a company is more likely to have operations by dropping states where the company never mentioned in prior year 10-K. This requirement reduces the sample to 123,928 observations. The second subsample focuses on states where a company is more likely to have material operations by requiring the state comprising ten percent of the state mentions in a company's prior year 10-K.[25] This requirement reduces the sample to 27,131 observations. We continue to find a positive relation between our three political contribution variables (*Contrib, ContribAmt, ContribCandCnt*) and the likelihood of receiving a state subsidy, as well as the subsidy amount. Importantly, the coefficient estimates of the political contribution variables are of similar magnitude of those reported in Table 3. The fact that the magnitude estimates do not vary across state presence requirements suggests our full sample results are not driven by a spurious relation due to no state presence.

The analyses thus far measure political contributions over a five year period (*t*-4 through *t*). In the second analysis we measure contributions by year during the five year period to test for a "recency" effect. We find highly significant coefficients for each of the five annual contribution variables in all specifications. The magnitude of these coefficient estimates is not statistically different from each other. This result is consistent with a long-term political connections strategy (e.g., Snyder, 1992; Brown et al. 2015) in securing state subsidies.[26]

Considering type of political contribution

We next consider how cross-sectional variation in the type of political contributions affects the likelihood of being awarded a subsidy and the dollar value of the awarded subsidy. We first examine if a company that contributes to only a few candidates has the same likelihood of receiving

[25] Results are robust to requiring that the company mention a state above the sample median state mentions of 3.3%.
[26] Inferences are also robust to including future political contributions measured from *t*+1 through *t*+4 (untabulated).

a subsidy or receives a subsidy of similar size as a company that contributes to many more candidates. We divide observations with *ContribCandCnt*=1 into four mutually exclusive groups. *ContribCand1* is an indicator variable set equal to one if a company makes political contributions to only one candidate in a state in years *t*-4 through *t*, and zero otherwise. Analogously, *ContribCand2-5* (*ContribCand6-10*) [*ContribCand11*] is an indicator variable set equal to one if a company supports two to five (six to ten) [11 or more] state candidates, and zero otherwise. All four variables are set equal to zero when *ContribCandCnt*=0. This analysis tells us whether there is an incremental advantage (or disadvantage) of making contributions beyond a certain number of candidates.

Table 6 panel A reveals that supporting any number of candidates – even only one – increases the likelihood of being awarded a subsidy and the subsidy value. Within each column, coefficient values monotonically increase as the number of candidates supported increases. F-statistics confirm that coefficient values between adjacent groups (i.e., *ContribCand1* versus *ContribCand2-5; ContribCand2-5* versus *ContribCand6-10;* and *ContribCand6-10* versus *ContribCand11*) are statistically different. These findings indicate that while contributing to only one political candidate is beneficial, showering many candidates with contributions is most advantageous.

We next consider the impact of candidates' political affiliation on subsidy outcomes. Panel B shows that supporting only Democratic Party candidates *(ContribDemOnly*=1*)* or only Republican Party candidates *(ContribRepubOnly*=1*)* is positively associated with subsidy outcomes. F-tests indicate that the *ContribDemOnly* and *ContribRepubOnly* coefficients are statistically indistinguishable from one another in both columns [1] and [2]. Thus, contributing to candidates from only one political party yields similar benefits, regardless of which political party

is supported. This finding suggests that both major political parties engage in similar amounts of quid-pro-quo cronyism regarding corporate subsidy awards. Contributing to candidates from both political parties *(ContribDem&Repub*=1*)* is also positively associated with subsidy outcomes. F-tests reveal that the *ContribDem&Repub* coefficient is statistically larger than the *ContribDemOnly* or *ContribRepubOnly* coefficient in both columns. This finding suggests that showering candidates from both political parties with financial contributions is most advantageous in securing state subsidies.

Our final analyses consider the impact of candidates' branch of government on subsidy outcomes. Panel C shows that contributing to only gubernatorial candidates (*ContribGubOnly*=1) or only legislative candidates (*ContribLegOnly*=1) is positively associated with subsidy outcomes. F-tests indicate that the *ContribGubOnly* and *ContribLegOnly* coefficients are statistically indistinguishable from one another in both columns. This finding suggests that both branches of government engage in similar amounts of quid-pro-quo cronyism in the subsidy award process. We further find that contributing to both gubernatorial and legislative candidates (*ContribGub&Leg*) yields the greatest payoff. F-tests indicate that the *ContribGub&Leg* coefficient is statistically larger than the *ContribGubOnly* or *ContribLegOnly* coefficient in each column.

V. STATE SUBSIDIES AND FUTURE JOB GROWTH

Research design

Our second research question examines the relation between a state's subsidy awards and future jobs growth, and whether subsidies awarded to politically connected companies are more or less effective in contributing to this growth. We focus on future jobs growth because the goal of

most state incentive packages is to stimulate local jobs. If politicians use subsidies solely to advance their political careers, companies awarded subsidies are not selected on merit, but through political patronage. In this case, subsidies awarded to politically connected companies will generate low or insignificant jobs growth, a result consistent with politically motivated subsidy awards being a less useful allocation of taxpayer funds.

Information asymmetry is the key reason for why resource allocations or investment decisions could be inefficient (Myers and Majluf 1984). Information asymmetry exists between politicians and firms competing for state subsidies, hindering politicians from identifying the most competent companies to receive state incentive packages. If political connections mitigate the adverse effect of information asymmetry, they would facilitate politicians to better identify the projects suitable for the state. In addition, given that only large firms can afford being politically active (Cooper et al. 2010), political connections may serve as a signal, helping politicians to identify firms more capable of stimulating local economy. Under these scenario, awarding subsidies to politically connected companies should generate more jobs growth relative to awarding subsidies to politically unconnected companies.

We employ the following regression model to investigate whether political connections affect the effectiveness of state subsidies in stimulating future jobs growth:

$$\boldsymbol{JobsGrowth}_{\mathbf{kit+n}} = \boldsymbol{\alpha} + \boldsymbol{\beta}_1\boldsymbol{StateSub}_{\mathbf{kit}} + \boldsymbol{FixedEffects} + \boldsymbol{\varepsilon}_{\mathbf{kit+n}} \quad \textbf{[2a]}$$

$$\boldsymbol{JobsGrowth}_{\mathbf{kit+n}} = \boldsymbol{\alpha} + \boldsymbol{\beta}_1\boldsymbol{StateSub\_NoContrib}_{\mathbf{kit}} + \boldsymbol{\beta}_2\boldsymbol{StateSub\_Contrib}_{\mathbf{kit}} + \boldsymbol{FixedEffects} + \boldsymbol{\varepsilon}_{\mathbf{kit+n}} \quad \textbf{[2b]}$$

where k indexes the state, i indexes the industry, and t indexes the year. The dependent variable *JobsGrowth* is measured as the one, two, and three-year percentage change in employees (*%ΔEmployees*) or payroll (*%Δpayroll*) within state *k* and industry *i*. The variable *StateSub* in equation [2a] captures total subsidies awarded within an industry in the state. We measure *StateSub*

using two variables. *StateSubAmt* is the natural log of one plus the total dollar amount of subsidies awarded by state *k* within industry *i* in year *t*; and *StateSubCnt* is the total number of subsidies awarded by state *k* within industry *i* in year *t*.

In equation [2b], we separately measure the amount and number of subsidies awarded to non-politically connected (*StateSub_NoContrib*) and politically connected (*StateSub_Contrib*) firms. *StateSubAmt_NoContrib* (*StateSubAmt_Contrib*) is defined as the natural log of one plus the total dollar amount of subsidies awarded by state *k* within industry *i* in year *t* to not politically connected (politically connected) firms. The variable *StateSubCnt_NoContrib* (*StateSubCnt_Contrib*) is defined as the total number of subsidies awarded by state *k* within industry *i* in year *t* to not politically connected (politically connected) firms.

We include industry-year and state-year fixed effects in equations [2a] and [2b] to control for all time-varying and time-invariant factors at the state and industry level that could affect employee and payroll growth. We cluster standard errors by industry and by state to correct for possible correlations across observations within an industry and within a state.

Results

Table 7 panel A shows that on average the growth in employees hired within an industry is decreasing over a one, two, and three-year windows in our sample period. The growth in payroll is negative in a one year window, but positive in a three-year window. Panels B and C report regression results from estimating equations (2a) and (2b). These panels show that, on average, there is a positive relation between the dollar amount of subsidies a state grants within an industry and future intra-industry jobs growth. *StateSubAmt* is positively associated with both future employee growth (Panel B) and wage growth (Panel C). However, when subsidies are decomposed into those awarded to politically connected versus politically unconnected companies, we find that

only subsidies awarded to politically *un*connected companies contribute to this positive jobs growth. We fail to find any relation between subsidies awarded to politically connected companies and future intra-industry employee growth (Panel B) or wage growth (Panel C). In Table 8 we repeat these analyses using the number of subsidies awarded instead of the amount of subsidies awarded, and obtain similar inferences.

The fact that subsidies awarded to politically connected firms do not generate future job growth suggests that the quid pro quo nature of state subsidy awards results in a less effective use of taxpayer funds.

VI. CONCLUSION

This paper examines whether corporate contributions to politicians are associated with a corporation receiving a government subsidy, and how the relation affects taxpayers. We test our research question in the U.S. state setting. State-level analyses provide rich variation in corporate political contributions and the amount of governmental subsidies awarded. We find robust evidence that corporate political contributions increase both the likelihood a company is awarded a state subsidy and the dollar value of subsidy awarded. Corporations contributing to more candidates, to both Republican and Democratic Party state candidates, and to both gubernatorial and state legislative candidates, reap the greatest benefits. Additional tests provide evidence that subsidies are positively associated with a state's future intra-industry jobs growth, but only for subsidies awarded to politically unconnected companies.

Our findings are consistent with concerns that cronyism and pay-to-play policies result in taxpayer funds being disproportionately transferred to politically connected companies, and that this practice is detrimental to taxpayers. The fact that politically motivated state subsidies do not lead to jobs growth suggests that the criticisms about the quit pro quo behavior in the subsidy

granting process need to be reconsidered. Our findings also have important implications for the GASB and FASB as they consider the extent to which government-related subsidy awards are disclosed by governmental entities and public companies.

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APPENDIX A

State Subsidy Examples

Part I: Examples of subsidies of various types

1. In 2010, Washington awarded a $183,352 subsidy to ELDEC, a Crane Co. subsidiary, through the state's "High Technology Business & Occupation Tax Credit" program. The subsidy incentivizes research and development activities in Washington in the fields of advanced computing, advance materials, biotechnology, electronic device technology, and environmental technology.

2. In 2014, Pennsylvania awarded a $183,052 subsidy to Comcast through the state's "Research & Development Tax Credit" program. The subsidy incentivizes research and development activities.

3. In 2011, California reimbursed Sears $29,240 through its "Employment Training Panel" program. The program provides financial assistance to business to support employee training.

4. In 2013, North Carolina granted Caterpillar $162,000 through its "One North Carolina Fund," a cash grant program targeting competitive job-creation projects.

Part II: Examples of larger subsidies. Holding state constant (Ohio) and varying the presence of corporate political connections.

1. In 2008, Ohio awarded NetJets (a subsidiary of Berkshire Hathaway) a subsidy package valued at more than $37 million. NetJets sells fractional ownership interests in private business jets. The company had a presence in Columbus, Ohio and wanted to expand operations by building a new aviation campus for another Berkshire subsidiary, FlightSafety International. FlightSafety is the world's largest provider of aviation training in the US and Canada. The state of Ohio provided NetJets with a $37.4 million economic expansion incentive package that included workforce development, job credits, tax abatements, and other forms of direct assistance. The city of Columbus and Franklin County contributed an additional $22 million, and the Columbus Regional Airport Authority contributed another $8.2 million. In exchange for this incentive package, NetJets committed to constructing a $200 million aviation campus and generating 810 new jobs. Upon completion, the new aviation campus is expected to house the largest concentration of flight simulators in the US. In 2008, Berkshire Hathaway donated to two Ohio House of Representatives and two Ohio Senate candidates.

2. In 2011, Ohio awarded American Greetings Card (AGC) a subsidy package valued at more than $146 million. AGC is a self-described "creator and manufacturer of innovative social expression products." It was a Fortune 1000 firm with its headquarters in Brooklyn, Ohio (within the Cleveland metropolitan area) since the 1960s. On Jan 6, 2010 AGC announced interest in moving its headquarters, and was considering locations both within and outside of Ohio. Cities and states began competing for the new headquarter location, and the Ohio legislature and Ohio Department of Development began discussing an incentive package to keep AGC in Ohio. Ohio House Bill 58 offered AGC a variety of economic incentives, including a multi-year refundable jobs retention tax credit, a low-interest loan, and grants earmarked for construction costs and infrastructure improvements. In exchange for this incentive package, AGC committed to keeping the equivalent of 1,750 full-time jobs at its Ohio headquarters. AGC ended up moving its headquarters 15 miles down the road to Westlake, Ohio (also within the Cleveland metropolitan area). AGC did not make political contributions to any Ohio state political candidates prior to the incentive package being offered and accepted.

APPENDIX B

State Limits on Corporate Contributions to State Political Candidates

Direct Contributions			Indirect Contributions (via PACs)	
Unlimited (6)	**Limited (23)**	**Prohibited (21)**	**Unlimited (14)**	**Limited (36)**
Alabama	Arkansas	Alaska	Alabama	Alaska
Missouri	California	Arizona	Indiana	Arizona
Nebraska	Delaware	Colorado	Iowa	Arkansas
Oregon	Florida	Connecticut	Mississippi	California
Utah	Georgia	Iowa	Missouri	Colorado
Virginia	Hawaii	Kentucky	Nebraska	Connecticut
	Idaho	Massachusetts	New Hampshire	Delaware
	Illinois	Michigan	North Dakota	Florida
	Indiana	Minnesota	Oregon	Georgia
	Kansas	Montana	Pennsylvania	Hawaii
	Louisiana	North Carolina	South Dakota	Idaho
	Maine	North Dakota	Texas	Illinois
	Maryland	Ohio	Utah	Kansas
	Mississippi	Oklahoma	Virginia	Kentucky
	Nevada	Pennsylvania		Louisiana
	New Hampshire	Rhode Island		Maine
	New Jersey	South Dakota		Maryland
	New Mexico	Texas		Massachusetts
	New York	West Virginia		Michigan
	South Carolina	Wisconsin		Minnesota
	Tennessee	Wyoming		Montana
	Vermont			Nevada
	Washington			New Jersey
				New Mexico
				New York
				North Carolina
				Ohio
				Oklahoma
				Rhode Island
				South Carolina
				Tennessee
				Vermont
				Washington
				West Virginia
				Wisconsin
				Wyoming

APPENDIX C

Variable Definitions

Variable	Definition
CashETR	Tax paid (Compustat variable *txpd*) ÷ (pre-tax book income (*pi*) less special items (*spi*)). Requires (*pi* – *spi*) > 0, and truncated at a lower (upper) bound of zero (one).
CommitCapital	Natural log of one plus the amount of capital investment company *j* commits to make in state *k* when awarded a subsidy in state *k*. Set to zero when company *j* does not make an identifiable capital commitment to state *k* when receiving a subsidy from state *k*.
CommitCapitalMissing	Indicator set to one when company *j* does not make an identifiable capital commitment to state *k* when receiving a subsidy from state *k*, and to zero otherwise.
CommitJobs	Natural log of one plus the number of jobs company *j* commits to generate in state *k* when awarded a subsidy in state *k*. Set to zero when company *j* does not make an identifiable jobs commitment to state *k* when receiving a subsidy from state *k*.
CommitJobsMissing	Indicator set to one when company *j* does not make an identifiable capital commitment to state *k* when receiving a subsidy from state *k*, and set to zero otherwise.
Contrib	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes to a state *k* political candidate in years *t*-4 through *t*, and zero otherwise
ContribAmt	Natural log of one plus the dollar amount that company *j* (or its corporate-sponsored PAC) contributes to state *k* political candidates in years *t*-4 through *t*.
ContribCandCnt	Natural log of one plus the number of state *k* political candidates that company *j* (or its corporate-sponsored PAC) contributes to in years *t*-4 through *t*
ContribCand1	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes to only one state *k* political candidate in years *t*-4 through *t*, and zero otherwise
ContribCand2-5	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes to two to five state *k* political candidates in years *t*-4 through *t*, and zero otherwise
ContribCand6-10	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes to six through ten state *k* political candidates in years *t*-4 through *t*, and zero otherwise
ContribCand11	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes to eleven or more state *k* political candidates in years *t*-4 through *t*, and zero otherwise
ContribDemOnly	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes only to state *k* political candidates from the Democratic Party in years *t*-4 through *t*, and zero otherwise

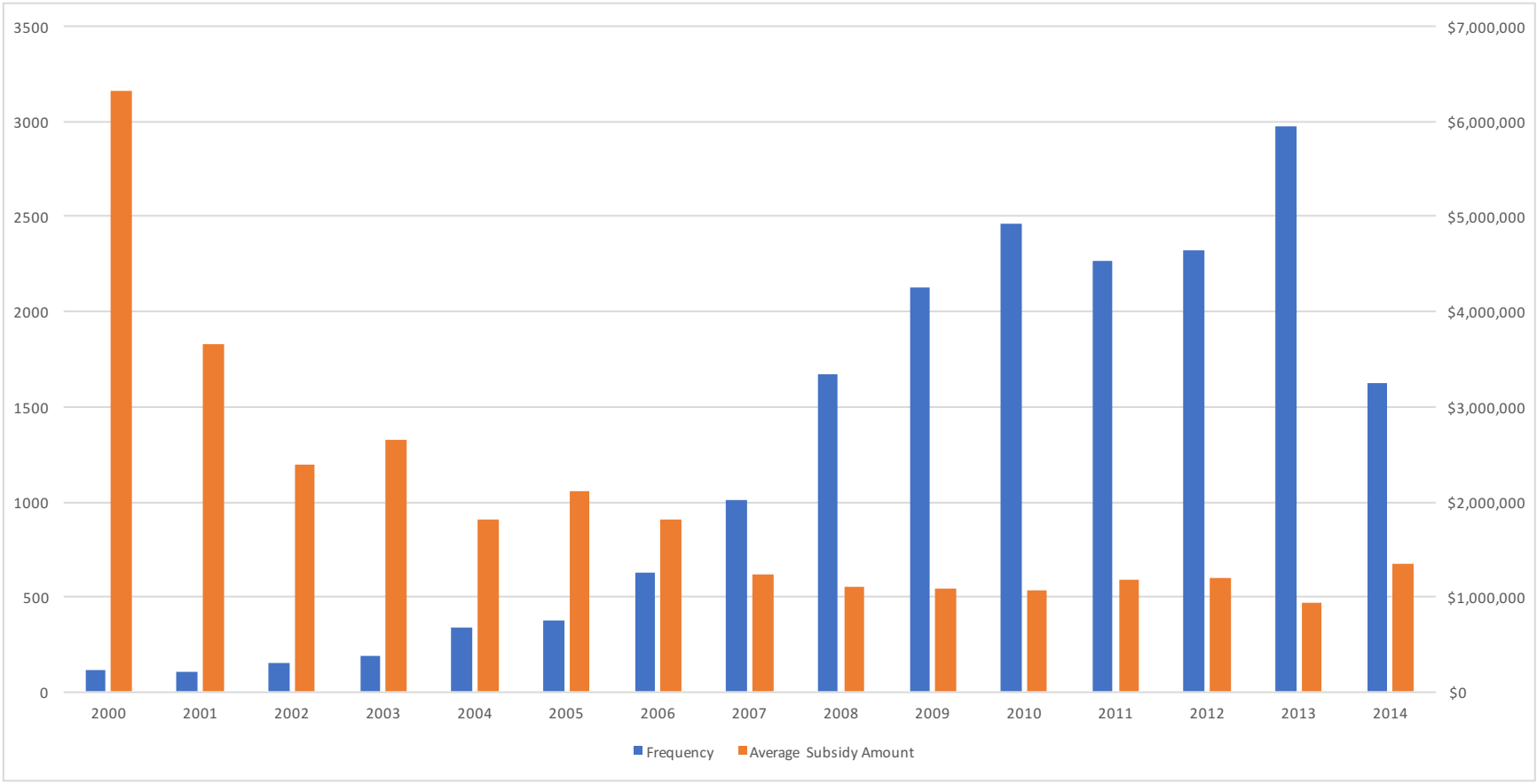
ContribDem&Repub	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes to state *k* political candidates from the Democratic Party and Republican Party in years *t*-4 through *t*, and zero otherwise
ContribRepubOnly	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes only to state *k* political candidates from the Republican Party in years *t*-4 through *t*, and zero otherwise
ContribGubOnly	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes only to state *k* gubernatorial political candidates in years *t*-4 through *t*, and zero otherwise
ContribGub&Leg	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes to state *k* gubernatorial and legislature political candidates in years *t*-4 through *t*, and zero otherwise
ContribLegOnly	Indicator set equal to one if company *j* (or its corporate-sponsored PAC) contributes only to state *k* legislative political candidates (house or senate) in years *t*-4 through *t*, and zero otherwise
JobsGrowth	One of two state economic growth variables: *%Δemployees* or *%Δpayroll*
Leverage	Total long-term debt (Compustat variable *dltt*) ÷ total assets (*at*)
PoliticalContrib	One of three corporate political contributions-related variables: *Contrib*, *ContribAmt*, or *ContribCandCnt*
Size	Natural log of one plus total assets (Compustat variable *at)*
StateImportance	Number of years mentions of state *k* are more than 50 percent of all U.S. stat mentions in company *j* Form 10-K (Item 1: Business, Item 2: Properties, Item 6: Consolidated Financial Data, and Item 7: Management Discussion and Analysis) during years *t*-4 through *t.*
StateSubAmt	Natural log of 1 + the amount of subsidies awarded by state *k* in year *t* and industry *i*
StateSubAmt_NoContrib	Natural log of 1 + the amount of subsidies awarded by state *k* in year *t* and industry *i* to politically unconnected firms
StateSubAmt_Contrib	Natural log of 1 + the amount of subsidies awarded by state *k* in year *t* and industry *i* to politically connected firms
StateSubCnt	Total number of subsidies awarded by state *k* in year *t* and industry *i*
StateSubCnt_NoContrib	Total number of subsidies awarded by state *k* in year *t* and industry *i* to firms not politically connected
StateSubCnt_Contrib	Total number of subsidies awarded by state *k* in year *t* and industry *i* to firms politically connected.

Sub	One of two subsidy-related variables: *Subsidy* or *SubsidyAmt*
Subsidy	Indicator set equal to one if company *j* receives a subsidy in year *t* from state *k*, and zero otherwise
SubsidyAmt	Natural log of one plus the dollar amount of subsidy received by company *j* in year *t* from state *k*
%Δemployees	Percentage change in the number of business establishment employees in state *k* and industry *i* from year *t* to year $\underline{t}+n$
%Δpayroll	Percentage change in the annual amount of business establishment payroll in state *k* and industry *i* from year *t* to year $\underline{t}+n$

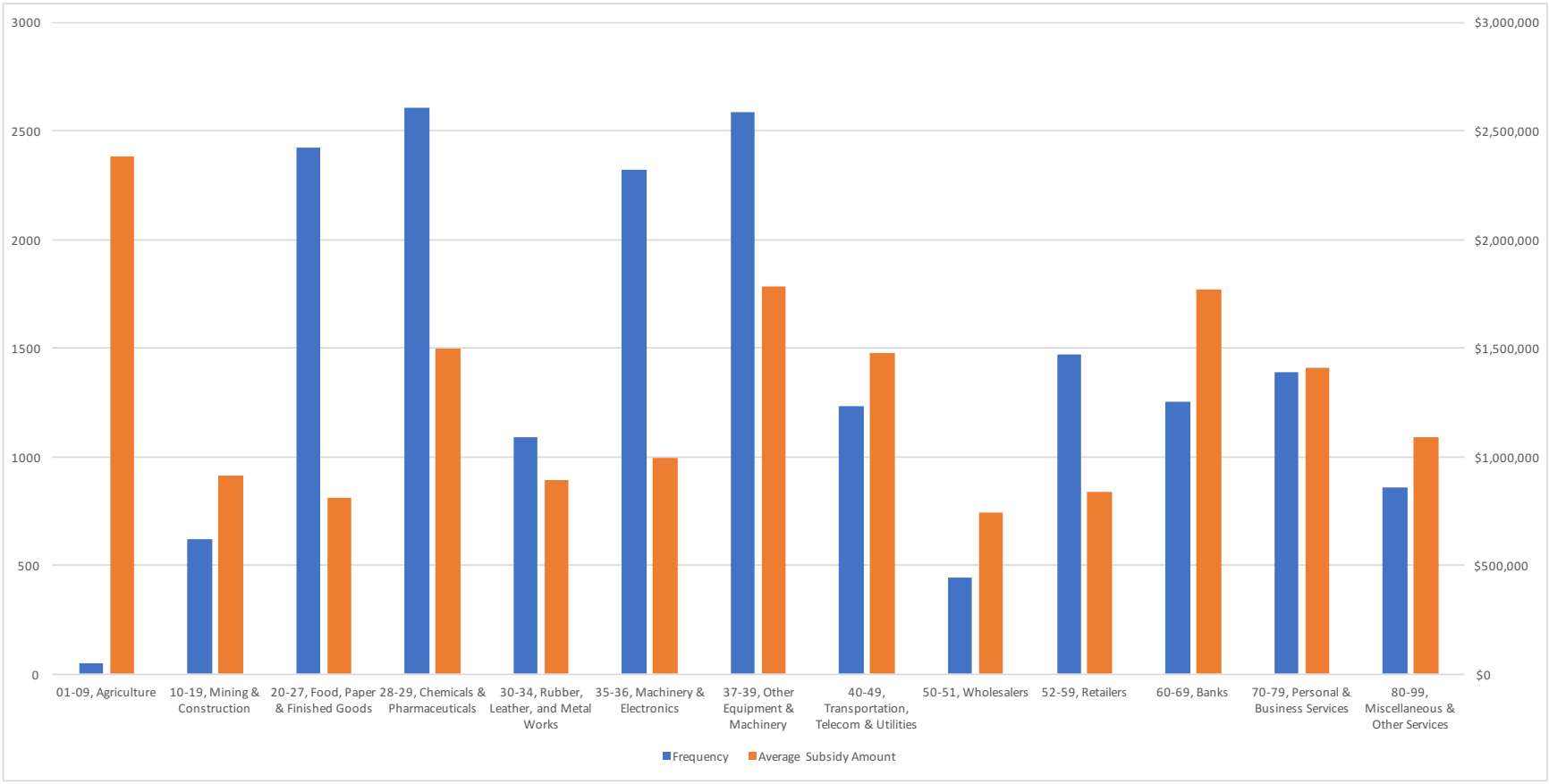
FIGURE 1: State subsidy frequency and average dollar value

This figure presents state subsidy frequency and average dollar value by year (Panel A), by industry (Panel B), and by state (Panel C).

Panel A: State subsidy frequency and average amount by year



Panel B: State subsidy frequency and average amount by industry



Panel C: State subsidy average dollar value (in thousands) by state

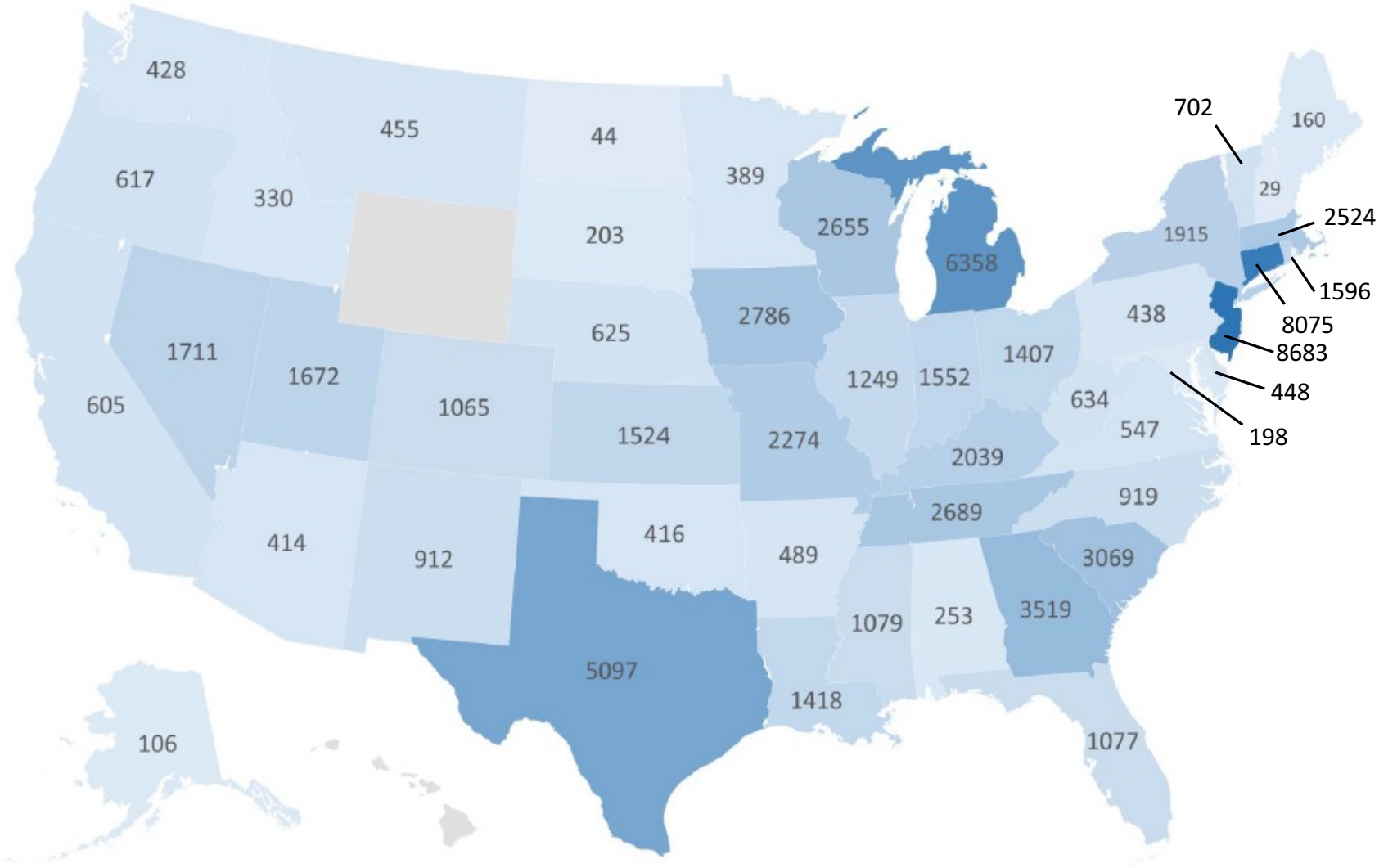


Table 1: Descriptive statistics on state subsidies

This table provides descriptive information on state awarded subsidies from 2000 to 2014 for publicly traded companies with Compustat data.

Type	n	Mean	Median	Std Dev
Tax Incentives	10,945	1,665,793	164,126	5,782,937
Cost reimbursements	4,025	194,690	28,500	951,251
Grants	3,362	1,131,314	160,885	3,657,120
Other	13	9,750,528	4,000,000	11,597,650

Table 2: Descriptive statistics on corporate campaign contributions to state candidates

This table presents descriptive information on corporate campaign contributions to state candidates for our sample firms. The sample include 22,846 firm-state-election cycle contributions. Panel A reports information on contribution dollar amount, Panel B on the number of candidates a firm contributes to, and Panel C on average contribution amount per candidate across states.

Panel A: Corporate campaign contribution amount per state-election cycle

	Mean	Median	Std Dev
Total contributions	$18,799.92	5,550	35,229.22
Contribution by party			
Democrats	7,591.81	1,500	16,708.75
Republicans	10,853.46	3,000	20,455.83
Other	32.51	0	189.83
Contribution by race			
Gubernatorial	2,770.40	0	7,195.56
Senate	5,996.32	1,500	11,741.02
House	9,633.14	2,075	19,759.84

Panel B: The number of candidates a firm contributes to per state-election cycle

	Mean	Median	Std Dev
Total number of supported candidates	18	7	24.70
Number of candidates by party			
Democrats	7	2	11.32
Republicans	11	4	15.30
Other	0	0	0.27
Number of candidates by race			
Gubernatorial	1	0	0.91
Senate	5	2	7.35
House	12	4	18.41

Panel C: Average contribution dollar amount per candidate per state-election cycle

State	Average contribution amount per candidate	PAC contribution limit
Alabama	$1133.94	Unlimited
Alaska	599.42	$1,000/office/year Contributions from out-of- state PACs prohibited
Arizona	372.33	$5,000/statewide or legislative candidate/year
Arkansas[a]	683.41	$2,700/candidate/election
California[a]	2441.08	$28,200/gubernatorial candidate $7,000/other statewide candidate $4,200/legislative candidate
Colorado[a]	656.31	$575/statewide candidate $200/legislative candidate Limits double for a candidate who accepts voluntary spending limits if his/her opponent has not accepted the limits *and* has raised more than 10% of the limit.
Connecticut[a]	304.49	$5,000/gubernatorial candidate $3,000/other statewide candidate $1,500/Senate candidate $750/House candidate
Delaware	524.23	$1,200/statewide candidate $600/other candidate
Florida[a]	593.75	$3,000/statewide candidate $1,000/legislative
Georgia[a]	1147.39	$6,300/statewide candidate $2,500/legislative candidate
Hawaii	1034.40	$6,000/statewide candidate $4,000/Senate candidate $2,000/House candidate
Idaho[a]	1004.19	$5,000/statewide candidate $1,000/legislative candidate
Illinois	1497.39	$53,900 per election cycle
Indiana	1308.94	Unlimited
Iowa	952.25	Unlimited
Kansas[a]	658.04	$2,000/statewide candidate $1,000/Senate candidate $500/House candidate
Kentucky[a]	761.99	$1,000/candidate

Louisiana[a]	1250.70	Regular PACs: $5,000/statewide candidate $2,500/legislative candidate "Big" PACs[b]: Double the amount of the limits
Maine[a]	431.97	$1,575/gubernatorial candidate $375/legislative candidate
Maryland	1138.39	$6,000/candidate
Massachusetts	418.23	Regular PAC or People's Committee:8 $500/candidate *Amounts per calendar year.*
Michigan	656.63	$6,800/statewide candidate $2,000/Senate candidate $1,000/House candidate
Minnesota[c]	293.16	Election segment limits: $4,000/gubernatorial candidate $1,000/legislative candidate Nonelection segment limits: $2,000/gubernatorial candidate $1,000/Senate candidate n/a for House candidates
Mississippi	1035.90	Unlimited
Missouri	874.74	Unlimited
Montana[a]	255.07	$650/gubernatorial slate $170/legislative candidate
Nebraska	1814.68	Unlimited
Nevada[a]	1448.10	$5,000/candidate
New Hampshire[a]	1063.08	$1,000/candidate to candidates not agreeing to abide by spending limits; Unlimited to candidates who agree to expenditure limits
New Jersey[a]	1119.25	$8,200/candidate
New Mexico[a]	1427.21	$5,400/candidate
New York	1437.73	Primary: $6,500-$19,700/statewide $6,500/Senate candidate $4,100/Assembly candidate General: $41,100/statewide candidate $10,300/Senate candidate $4,100/Assembly candidate

North Carolina[a]	1005.30	$5,000/candidate
North Dakota	1302.05	Unlimited
Ohio[a]	1320.22	$12,532.52/candidate
Oklahoma	900.80	$5,000/candidate/campaign
Oregon	1342.88	Unlimited
Pennsylvania	1489.66	Unlimited
Rhode Island	390.25	$1,000/candidate/ year
South Carolina	1097.69	$11,500/statewide candidate $7,600/legislative candidate
South Dakota	387.27	Unlimited
Tennessee[a]	905.69	$11,200/statewide candidate $11,200/Senate candidate $7,400/other candidates
Texas	1551.56	Unlimited
Utah	940.26	Unlimited
Vermont	834.27	$4,000/statewide candidate $1,500/State Senate $1,000/State House
Virginia	1436.59	Unlimited
Washington[a]	770.47	$1,900/gubernatorial candidate $950/legislative candidate
West Virginia[a]	710.51	$1,000/candidate
Wisconsin	1029.20	$43,128/gubernatorial candidate $1,000/Senate candidate $500/Assembly candidate
Wyoming[a]	552.48	$7,500/statewide candidate $3,000/other candidate

Notes:

a. The limit on contribution amount applies to each election. Primary and general elections are considered separate elections, so the amount limit is doubled for an election cycle with primary and general elections.

b. A "Big PAC" is defined as a PAC with more than 250 members who each contributed over $50 to the PAC in the preceding calendar year.

c. In 2013, Minnesota divided its election cycles into two-year "election segments," and contribution limits are per election segment. For candidates serving a four- or six-year term, limits are higher in the two-year period during which an election is held.

Table 3: Relation between state subsidies and corporate political contributions

This table presents analysis on the relation between state subsidies and corporate political contributions. Panel A reports sample descriptive statistics, Panel B reports regression results on the likelihood of receiving state subsidies, and Panel C on the amount of state subsidies. All variables are defined in Appendix C. Reported in brackets are t-statistics calculated based on White heteroscedastic consistent standard errors and adjusted for clustering by firm and by state. ***, **, * represent a 1 percent, 5 percent, and 10 percent level of significance, respectively (two-tailed tests).

Panel A: Descriptive statistics

Variables	N	Mean	Std. Dev.	Median
Subsidy	545,345	0.016	0.125	0
SubsidyAmt	545,345	0.193	1.548	0
Contrib	545,345	0.081	0.273	0
ContribAmt	545,345	0.703	2.423	0
ContribCandCnt	545,345	0.191	0.751	0
StateImportance	545,345	0.029	0.316	0

Panel B: Regression results on the likelihood of receiving state subsidies

	Dependent variable = Subsidy		
Variables	**[1]**	**[2]**	**[3]**
Contrib	0.041***		
	[7.470]		
ContribAmt		0.005***	
		[7.637]	
ContribCandCnt			0.018***
			[7.654]
StateImportance	0.018***	0.017***	0.016***
	[4.085]	[4.052]	[3.966]
Observations	545,345	545,345	545,345
Adjusted R^2	0.094	0.095	0.095
Company-Year FE	Y	Y	Y
State-Industry-Year FE	Y	Y	Y

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Panel C: Regression results on the amount of state subsidies received

	Dependent variable = SubsidyAmt		
Variables	**[1]**	**[2]**	**[3]**
Contrib	0.537***		
	[7.295]		
ContribAmt		0.071***	
		[7.433]	
ContribCandCnt			0.236***
			[7.459]
StateImportance	0.229***	0.219***	0.215***
	[4.170]	[4.138]	[4.051]
Observations	545,345	545,345	545,345
Adjusted R^2	0.093	0.094	0.095
Company-Year FE	Y	Y	Y
State-Industry-Year FE	Y	Y	Y

Table 4: Relation between state subsidies and corporate political contributions: job and capital requirements

This table presents analysis on the relation between state subsidies and corporate political contributions, controlling for job and capital requirements. All variables are defined in Appendix C. Reported in brackets are t-statistics calculated based on White heteroscedastic consistent standard errors and adjusted for clustering by firm and by state. ***, **, * represent a 1 percent, 5 percent, and 10 percent level of significance, respectively (two-tailed tests).

	Dependent variable = SubsidyAmt		
Variables	**[1]**	**[2]**	**[3]**
Contrib	0.507***		
	[7.167]		
ContribAmt		0.058***	
		[7.338]	
ContribCandCnt			0.185***
			[6.364]
CommitJobs	0.553***	0.551***	0.552***
	[5.118]	[5.129]	[5.191]
CommitCapital	0.438***	0.437***	0.438***
	[6.377]	[6.377]	[6.362]
CommitJobsMissing	2.306***	2.287***	2.280***
	[3.759]	[3.744]	[3.765]
CommitCapitalMissing	5.418***	5.405***	5.431***
	[4.696]	[4.694]	[4.696]
StateImportance	0.178***	0.173***	0.167***
	[4.849]	[4.760]	[4.639]
Size	0.157***	0.152***	0.150***
	[4.687]	[4.628]	[4.641]
Leverage	0.15	0.144	0.146
	[0.585]	[0.555]	[0.560]
CashETR	-0.209*	-0.205	-0.21
	[-1.714]	[-1.667]	[-1.665]
Observations	8,676	8,676	8,676
Adjusted R^2	0.568	0.569	0.57
Company-Year FE	N	N	N
State-Industry-Year FE	Y	Y	Y

Table 5: Relation between state subsidies and corporate political contributions: time-series variation within a state

This table presents analysis on the relation between state subsidies and corporate political contributions within a given state over time. Panel A reports regression results on the likelihood of receiving state subsidies, and Panel B on the amount of state subsidies received. All variables are defined in Appendix C. Reported in brackets are t-statistics calculated based on White heteroscedastic consistent standard errors and adjusted for clustering by firm and by state. ***, **, * represent a 1 percent, 5 percent, and 10 percent level of significance, respectively (two-tailed tests).

Panel A: Regression results on the likelihood of receiving state subsidies

	Dependent variable = Subsidy		
Variables	[1]	[2]	[3]
Contrib	0.007**		
	[2.071]		
ContribAmt		0.001**	
		[2.580]	
ContribCandCnt			0.005**
			[2.362]
StateImportance	-0.002	-0.002	-0.002
	[-1.089]	[-1.090]	[-1.082]
Size	0.001	0.001	0.001
	[0.654]	[0.620]	[0.607]
Leverage	0.005	0.005	0.005
	[1.380]	[1.371]	[1.370]
CashETR	0	0	0
	[0.170]	[0.163]	[0.175]
Observations	545,345	545,345	545,345
Adjusted R^2	0.297	0.297	0.297
Company-State FE	Y	Y	Y
State-Indury-Year FE	Y	Y	Y

Panel B: Regression results on the amount of state subsidies received

	Dependent variable = SubsidyAmt		
Variables	[1]	[2]	[3]
Contrib	0.082*		
	[1.915]		
ContribAmt		0.017**	
		[2.405]	
ContribCandCnt			0.064**
			[2.168]
StateImportance	-0.036	-0.036	-0.036
	[-1.105]	[-1.106]	[-1.099]
Size	0.011	0.011	0.01
	[0.823]	[0.789]	[0.780]
Leverage	0.064	0.063	0.063
	[1.461]	[1.452]	[1.452]
CashETR	0.007	0.007	0.007
	[0.503]	[0.497]	[0.510]
Observations	545,345	545,345	545,345
Adjusted R^2	0.297	0.297	0.297
Company-State FE	Y	Y	Y
State-Industry-Year FE	Y	Y	Y

Table 6: Relation between state subsidies and corporate political contribution type

This table presents cross-sectional analyses on the relation between state subsidies and corporate political contributions. Panel A reports regression results based on the number of candidates, Panel B based on candidate political affiliations, and Panel C based on candidate branch of government. All variables are defined in Appendix C. Reported in brackets are t-statistics calculated based on White heteroscedastic consistent standard errors and adjusted for clustering by firm and by state. ***, **, * represent a 1 percent, 5 percent, and 10 percent level of significance, respectively (two-tailed tests).

Panel A: Number of candidates

Variables	Dependent variable = Subsidy [1]	Dependent variable = SubsidyAmt [2]
ContribCand1	0.022***	0.276***
	[4.469]	[4.517]
ContribCand2-5	0.031***	0.399***
	[5.657]	[5.563]
ContribCand6-10	0.043***	0.544***
	[6.393]	[6.277]
ContribCand11	0.062***	0.822***
	[7.551]	[7.356]
StateImportance	0.017***	0.219***
	[4.009]	[4.096]
F-statistics		
ContribCand1 = ContribCand2-5	4.018**	4.895**
ContribCand2-5 = ContribCand6-10	4.626**	4.288**
ContribCand6-10 = ContribCand11	7.466***	8.778***
Observations	545,345	545,345
Adjusted R^2	0.0952	0.0941
Company-Year FE	Y	Y
State-Industry-Year FE	Y	Y

Panel B: Candidate political affiliation

Variables	Dependent variable = Subsidy [1]	Dependent variable = SubsidyAmt [2]
ContribDemOnly	0.021***	0.270***
	[4.163]	[4.362]
ContribRepubOnly	0.024***	0.304***
	[5.367]	[5.294]
ContribDem&Repub	0.056***	0.740***
	[7.775]	[7.563]
StateImportance	0.017***	0.222***
	[4.034]	[4.119]
F-statistic		
ContribDemOnly = ContribRepubOnly	0.44	0.506
ContribDem&Repup = ContribDemOnly	30.68***	34.67***
ContribDem&Repub = ContribRepubOnly	33.17***	34.69***
Observations	545,345	545,345
Adjusted R^2	0.095	0.094
Company-Year FE	Y	Y
State-Industry-Year FE	Y	Y

Panel C: Candidate branch of government

Variables	Dependent variable = Subsidy [1]	Dependent variable = SubsidyAmt [2]
CandGubOnly	0.026***	0.321***
	[4.133]	[4.214]
CandLegOnly	0.028***	0.366***
	[7.133]	[7.112]
CandGub&Leg	0.059***	0.783***
	[7.309]	[7.093]
StateImportance	0.017***	0.222***
	[4.080]	[4.168]
F-statistic		
CandGubOnly = CandLegOnly	0.114	0.524
CandGub&Leg = CandGubOnly	22.62***	26.01***
CandGub&Leg = CandLegOnly	27.14***	27.26***
Observations	545,345	545,345
Adjusted R^2	0.095	0.094
Company-Yr FE	Y	Y
State-Ind-Yr FE	Y	Y

Table 7: Relation between state subsidies amounts and future intra-industry jobs growth

This table presents analyses on the relation between state subsidies amounts and future jobs growth within the industry. Panel A reports descriptive information, Panel B reports regression results on the growth in number of employees, and Panel C on the growth in payrolls. All variables are defined in Appendix C. Reported in brackets are t-statistics calculated based on White heteroscedastic consistent standard errors and adjusted for clustering by industry and by state. ***, **, * represent a 1 percent, 5 percent, and 10 percent level of significance, respectively (two-tailed tests).

Panel A: Descriptive statistics

Variables	N	Mean	Std. Dev.	Median
$\%\Delta Employees_{t+1}$	138,297	-0.071	0.34	-0.009
$\%\Delta Employees_{t+2}$	125,828	-0.076	0.412	-0.018
$\%\Delta Employees_{t+3}$	113,250	-0.074	0.472	-0.029
$\%\Delta Payroll_{t+1}$	144,253	-0.028	0.351	0.02
$\%\Delta Payroll_{t+2}$	130,905	0.001	0.456	0.038
$\%\Delta Payroll_{t+3}$	117,461	0.037	0.551	0.054
StateSubAmt	144,253	0.42	2.286	0
StateSubAmt_NoContrib	144,253	0.313	1.963	0
StateSubAmt_Contrib	144,253	0.128	1.301	0
StateSubCnt	144,253	0.041	0.26	0
StateSubCnt_NoContrib	144,253	0.03	0.204	0
StateSubCnt_Contrib	144,253	0.011	0.129	0

Panel B: Regression results on growth in future employees

	Dependent variable = %ΔEmployees					
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**
Variables	***t* to *t*+1**	***t* to *t*+1**	***t* to *t*+2**	***t* to *t*+2**	***t* to *t*+3**	***t* to *t*+3**
StateSubAmt	0.001***		0.001***		0.001*	
	[3.077]		[2.778]		[1.773]	
StateSubAmt_NoContrib		0.001***		0.002**		0.002*
		[3.045]		[2.558]		[1.876]
StateSubAmt_Contrib		0.000		0.000		-0.000
		[0.632]		[0.447]		[-0.199]
Observations	138,297	138,297	125,828	125,828	113,250	113,250
Adjusted R^2	0.163	0.163	0.199	0.199	0.227	0.227
State-Year FE	Y	Y	Y	Y	Y	Y
Industry-Year FE	Y	Y	Y	Y	Y	Y

Panel C: Regression results on growth in future payrolls

	Dependent variable = %ΔPayroll					
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**
Variables	***t* to *t*+1**	***t* to *t*+1**	***t* to *t*+2**	***t* to *t*+2**	***t* to *t*+3**	***t* to *t*+3**
StateSubAmt	0.001**		0.001**		0.002**	
	[2.061]		[2.305]		[2.558]	
StateSubAmt_NoContrib		0.001**		0.001**		0.002**
		[2.068]		[2.478]		[2.336]
StateSubAmt_Contrib		-0.000		-0.000		-0.000
		[-0.081]		[-0.578]		[-0.179]
Observations	144,253	144,253	130,905	130,905	117,461	117,461
Adjusted R^2	0.156	0.156	0.184	0.184	0.211	0.211
State-Year FE	Y	Y	Y	Y	Y	Y
Industry-Year FE	Y	Y	Y	Y	Y	Y

Table 8: Relation between state subsidies counts and future intra-industry jobs growth

This table presents analyses on the relation between state subsidies counts and future jobs growth within the industry. Panel A reports regression results on the growth in number of employees, and Panel B on the growth in payrolls. All variables are defined in Appendix C. Reported in brackets are t-statistics calculated based on White heteroscedastic consistent standard errors and adjusted for clustering by industry and by state. ***, **, * represent a 1 percent, 5 percent, and 10 percent level of significance, respectively (two-tailed tests).

Panel A: Regression results on growth in future employees

	Dependent variable = %ΔEmployees					
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**
Variables	***t* to *t*+1**	***t* to *t*+1**	***t* to *t*+2**	***t* to *t*+2**	***t* to *t*+3**	***t* to *t*+3**
StateSubCnt	0.009***		0.008*		0.009	
	[2.780]		[1.971]		[1.582]	
StateSubCnt_NoContrib		0.013***		0.013*		0.015*
		[2.744]		[1.971]		[1.737]
StateSubCnt_Contrib		0.002		-0.001		-0.004
		[0.477]		[-0.164]		[-0.556]
Observations	138,297	138,297	125,828	125,828	113,250	113,250
Adjusted R^2	0.163	0.163	0.199	0.199	0.227	0.227
State-Year FE	Y	Y	Y	Y	Y	Y
Ind-Year FE	Y	Y	Y	Y	Y	Y

Panel C: Regression results on growth in future payrolls

	Dependent variable = %ΔPayroll					
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**
Variables	***t* to *t*+1**	***t* to *t*+1**	***t* to *t*+2**	***t* to *t*+2**	***t* to *t*+3**	***t* to *t*+3**
StateSubCnt	0.004		0.006		0.011*	
	[1.666]		[1.554]		[1.878]	
StateSubCnt_NoContrib		0.007*		0.012**		0.020**
		[1.697]		[2.622]		[2.265]
StateSubCnt_Contrib		0		-0.008		-0.007
		[-0.021]		[-1.449]		[-0.671]
Observations	144,253	144,253	130,905	130,905	117,461	117,461
Adjusted R^2	0.155	0.155	0.184	0.184	0.211	0.211
State-Year FE	Y	Y	Y	Y	Y	Y
Ind-Year FE	Y	Y	Y	Y	Y	Y