


ORIGINAL ARTICLE

# Do campaign contributions buy favorable policies? Evidence from the insurance industry

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## Abstract

To learn about the effects of corporate campaign contributions, we study the potential influence of the insurance industry in US state politics. The insurance industry is one of the biggest players in state politics, and we have collected new data on objective measures of the industry's performance in each state over time. We exploit within-state changes in campaign finance regulations which can significantly restrict the ability of corporate contributors to give money and potentially influence elected officials. Across a range of outcomes and campaign finance reforms, we find little evidence that the ability to make corporate campaign contributions benefits the insurance industry in a state. Some results suggest that the ability to make campaign contributions may benefit the insurance industry in states with elected insurance commissioners, but overall, campaign contributions appear to have a little distortionary effect even in a setting where we would most expect to find it.

**Key words:** American politics; comparative politics: political institutions; elections and campaigns; political economy; state and intergovernmental politics

The role of corporate money in politics is a topic of significant debate and concern among scholars, pundits, and reformers. Many observers believe that corporate campaign contributions significantly distort public policy and benefit those industries that are able to contribute the most, but there is little compelling evidence about what (if anything) would be different if corporations lacked the ability to make campaign contributions. We attempt to contribute to this debate by studying the influence of the insurance industry in state elections.

If corporate campaign contributions meaningfully distort public policy, we should see it clearly in this setting. The insurance industry is a concentrated corporate interest that is heavily regulated by US state governments. For example, the specific products that insurance companies can offer in a given state and even the premiums that they can charge are typically determined by the state's legislation and the regulatory decisions made by the state's insurance department. Not surprisingly, then, the insurance industry is one of the biggest campaign contributors in state elections. According to data on campaign contributions by industry from FollowTheMoney.org, insurance is among the leading contributing industries in state elections, with contribution amounts on par with real estate and healthcare and exceeding energy, banking, automotive, and liquor. On average, individuals and groups connected to the insurance industry give about 100 dollars per 1000 residents in state elections in a given two-year election cycle. Furthermore, Fournaies and Hall (2018) find that political donors connected to the insurance industry are more responsive to committee membership—meaning they give more to state legislators after they join the committee regulating their industry—than any other industry, suggesting that the insurance industry is particularly savvy and strategic, even relative to other corporate interests in state politics.

Additionally, unlike other industries where the effects of corporate campaign contributions might be canceled out by contributions from another industry with conflicting interests, the insurance industry often benefits to the detriment of consumers with diffuse interests and little political organization.<sup>1</sup>

Our focus on state politics is also beneficial because we can leverage changes in campaign finance laws which meaningfully restrict the extent to which corporate interests can contribute to candidates and influence elections. Specifically, various states have, at different points in time, placed legal limits on individual contributions, corporate contributions, and independent expenditures, and they have offered public funding options for legislative and gubernatorial elections. We utilize an index of these regulations already established in the literature, and we test whether this index influences the downstream performance of the insurance industry in those states.

Our study improves upon several shortcomings of the existing literature on the returns to corporate campaign contributions. First, we often have a few objective outcomes that measure the extent to which corporations benefit from government policy. In this case, we have several useful measures of the extent to which state policy benefits the insurance industry in each state and year. Second, many studies suffer from low statistical power because they often focus on the US federal government, and the effects of government regulation might be small relative to other idiosyncratic factors that influence the performance of a firm or industry. We study state governments, increasing our sample size and giving us more relevant variation. We also study the industry that is arguably the most affected by state regulations, improving the power of our tests. Third, it is often hard to know what would have happened in the counterfactual world with no campaign contributions, but our study exploits within-state changes in campaign finance law using a differences-in-differences design, allowing us to estimate the effect of money in politics with weaker and more defensible assumptions than is typical in this literature.

Our design allows us to estimate the benefits accruing to a corporate interest as a result of having the *opportunity* to make campaign contributions. This is useful because to the extent that corporate money plays a role in politics, it might be “off the equilibrium path” (e.g., Chamon and Kaplan 2013). For instance, suppose a well-funded and well-organized industry commits to campaigning against any incumbent that does not support the industry’s goals. That industry might get what they want even if, in equilibrium, they never contribute. If this phenomenon is pervasive, existing studies might understate the influence of corporate interests in the political process. Our design, however, captures this effect because we exploit variation in the ability of corporate interests to contribute money rather than exploiting variation in their actual contributions.

Despite the dramatic extent to which campaign finance regulations change the ability of corporations to influence politics, most of our results are null. Campaign finance regulations have a little detectable effect on the total value of property and casualty premiums, the premium tax rate, guaranty fund net assessments, minimum requirements for automotive insurance, the career backgrounds of insurance commissioners, or the number of insurance companies operating in the state. Furthermore, our estimated effects are generally not statistically different in states with elected insurance commissioners or in states where the insurance industry contributes more in the absence of campaign finance regulations, although we discuss a few exceptions. Specifically, we do find suggestive evidence that the ability to make campaign contributions might allow the insurance industry to achieve more favorable premium tax rates, guaranty fund assessments, and auto insurance requirements in states with elected insurance commissioners. We have attempted to test for the effects of corporate campaign contributions in the

<sup>1</sup>In the context of health insurance, there could be other powerful interest groups (e.g., doctors, hospitals, pharmaceutical companies) that advocate against the interests of the insurance industry on certain policy questions. However, in the context of property and casualty insurance—the domain within which many of our outcomes are focused—there are typically no such competing interest groups. For example, consumers might prefer lower premiums and greater guarantees against insolvency, but they are not organized to advocate for these outcomes in the way that the insurance industry is organized to advocate against them.

place where we would most expect them, and on the whole, we find little evidence that corporate money distorts policy.

## 1. Related literature

Concerns about the disproportionate influence of corporate interests in the political process are widespread in public and academic discourse. For example, Gilens and Page write, “[M]ajorities of the American public actually have little influence over the policies our government adopts... [I]f policymaking is dominated by powerful business organizations and a small number of affluent Americans, then America’s claims to being a democratic society are seriously threatened” (2014: 577). But despite widespread concerns, there is little compelling evidence that corporate interests do have a disproportionate influence. Correlational evidence from Gilens and Page suggests that corporate interests do predict which policies are subsequently implemented, but this does not necessarily mean that corporations exert disproportionate influence. We do not know which policies would have been implemented if corporations had no involvement in the political process.

To the extent that corporations do influence the political process, the literature has primarily focused on two paths—corporate campaign contributions and lobbying. Although corporations appear to devote more money and time to lobbying, corporate campaign contributions are potentially more troubling from a normative perspective. When corporations inform lawmakers about the complexities of their industries, this could potentially lead to better policy and does not necessarily subvert the will of the public. But if corporations can buy more favorable policies by contributing to a lawmaker’s reelection campaign, this would challenge the foundation of our democracy. This paper largely ignores lobbying and focuses on corporate campaign contributions, although we briefly discuss the relationship between the two in the conclusion.

Many correlational studies have found that legislators who receive campaign contributions from a corporate interest group are more likely to vote in line with that group’s preferences. But this could be the result of interest groups targeting legislators with whom they already agree, and studies that investigate within-legislator changes in contributions typically find a little effect (see Ansolabehere *et al.*, 2003 for a review).

Corporate contributors do appear to give strategically, as if they believe money influences policy (e.g., Wright, 1989; Fourinaies and Hall, 2014, 2016; Barber, 2016; Powell and Grimmer, 2016; Barber *et al.*, 2017; Richter and Werner, 2017; Berry and Fowler, 2018). For example, elected officials who join or become chair of a committee can expect a meaningful increase in contributions from firms regulated by that committee. These findings lead many to conclude that these contributions must buy something, even if we cannot directly observe the benefits.

Fowler *et al.* (2020) attempt to assess those benefits by examining changes in stock prices of firms that contribute to political candidates, and they find no evidence that firms benefit from having an additional candidate to which they contributed in office. Similarly, Ansolabehere *et al.* (2004) examine stock prices and test whether firms that previously made more contributions are differentially affected when new regulations were (surprisingly) passed that restricted these contributions, and they find no effect. However, null results like these could arise because the studies pooled data across many settings and failed to focus on those where we would most expect to see an effect of corporate political activity. Furthermore, if the *opportunity* to contribute is more beneficial to firms than their actual contributions, these previous studies would be unable to assess this possibility.

## 2. Data and design

To assess the extent to which campaign finance reforms affect the performance of the insurance industry and state policies that affect the insurance industry, we have collected data on several

measures of the success of the insurance industry in each state and year. Unless otherwise noted below, our insurance-related data, including information on whether insurance commissioners are elected or appointed, come from *The Insurance Fact Book*, published annually by the Insurance Information Institute. Perhaps because of the importance of state regulations for their industry, insurance organizations maintain and report rich data at the state level. For other industries, it would be difficult to obtain these kinds of objective outcomes reflecting the performance of that industry and the extent to which state policies affect that industry in each state and year. The specific outcomes we examine were constrained by the information available in *The Insurance Fact Book* and informed by conversations with those in the insurance industry, including the vice president of government relations for a major insurance company.

Our first outcome of interest is property and casualty premiums. We have data on the total value of property and casualty premiums written in each state and year from 1966 to 2017. Property and casualty insurance includes, among other things, insurance for private and commercial automobiles, homeowners, farm owners, workers compensation, medical malpractice, product liability, fire, theft, and machinery. We adjust for inflation and divide by population to measure 2017 dollars per capita. All else equal, insurance companies would like to write more premiums. Unfortunately, we do not have data on liabilities or profitability, but more premiums should, on average, correspond with more profit, and state policies and regulations could meaningfully affect the value of premiums written in each state and year. Most notably, the state insurance department can approve or deny the sale of specific products at specific prices, so favorable legislation and regulation can meaningfully affect revenue for insurance companies operating in the state.

Next, we analyze the premium tax rate from 1966 through 2017, which we calculate by simply dividing the total value of premium taxes paid to the state by the total value of premiums written. Premium taxes are an obvious mechanism through which state policies affect the insurance industry, and, all else equal, the industry would presumably like these taxes to be as low as possible. Insurance executives report that this is a major, long-term policy to which their government-relations teams devote significant attention, and they confirm that they would like these rates to be as low as possible.

Third, we study guaranty fund net assessments from 1985 through 2017. Unfortunately, these data are not available for 2009, 2010, or 2016 or for the state of New York. State governments administer guaranty funds that protect policyholders in the event that an insurance company defaults on payments or becomes insolvent. States will regularly assess insurance companies operating in the state in order to maintain these funds. When the fund is healthy, states can refund money to insurance companies, meaning that the net assessments in some years are negative. Presumably, insurance companies would like these net assessments to be as low as possible. Again, government relations offices for insurance companies devote significant attention to these net assessments, and insurance executives confirm that this is a good measure of a favorable regulatory environment for several reasons. First, companies would prefer not to have to pay extra money to the state, and second, low assessments are a sign that the insurance industry is solvent in that state. Therefore, we might expect a positive effect of campaign finance regulation on guaranty fund net assessments, and we might expect that this effect is more positive in states with elected insurance commissioners or with higher levels of baseline giving.

Fourth, we study automotive insurance requirements from 1970 through 2017. State governments place legal requirements on the minimum amount of auto insurance that each car owner must purchase. States have separate minimum requirements for the amount of coverage a car owner must purchase for both bodily injury and property damage. For simplicity, we take the sum of these two minimum requirements, which indicates the total amount of coverage each car owner must have, and we adjust for inflation. Because of several apparent data errors and because of the unusualness of the state's auto liability laws, Hawaii is excluded from this analysis. Insurance companies would presumably like these minimum requirements to be as high as

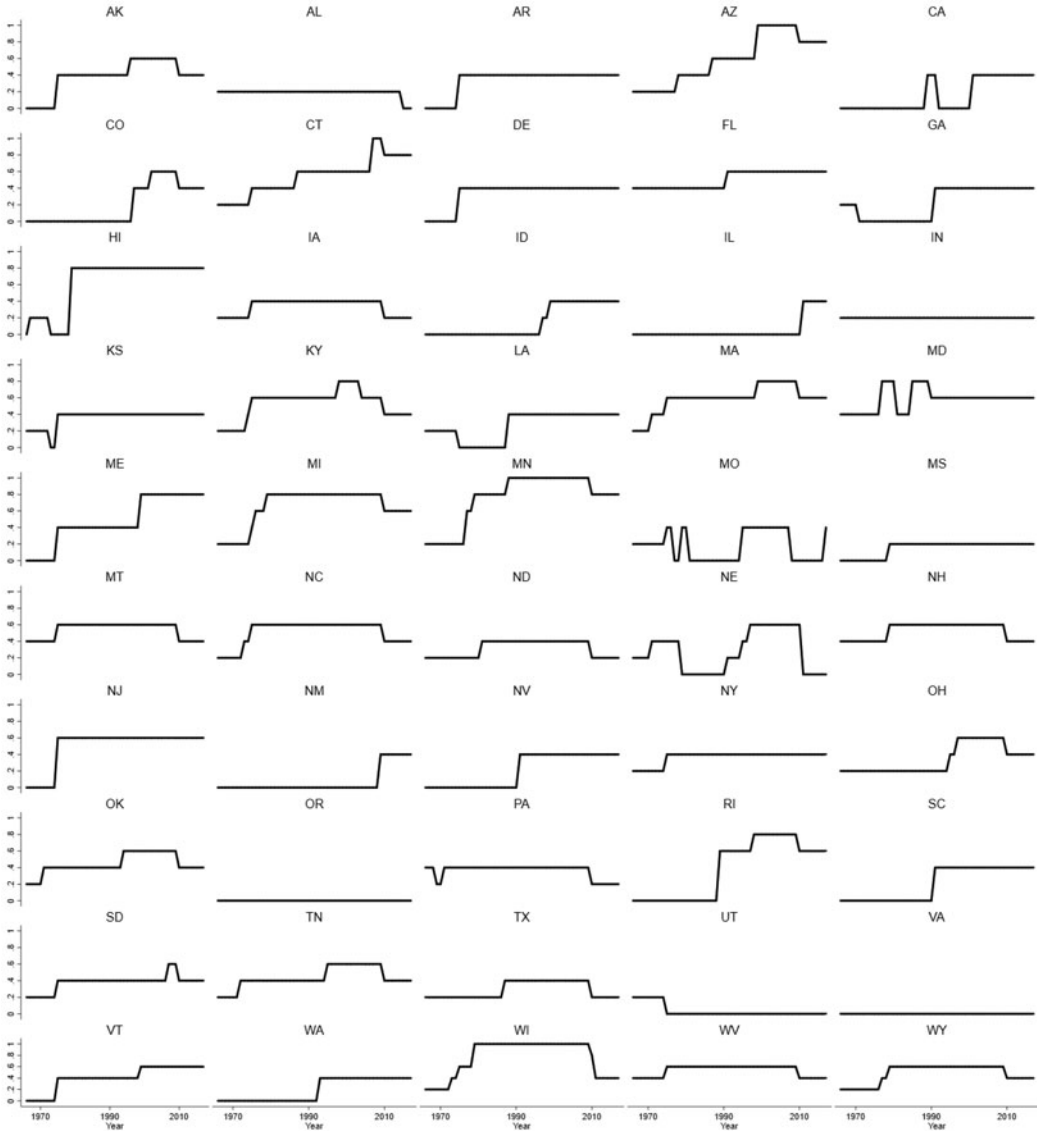
possible since higher minimums correspond with more business. Therefore, we might expect campaign finance regulations to decrease these minimums. However, higher minimums could, in some cases, coincide with premium caps, which would be undesirable for insurance companies, and unfortunately, we do not have data on these premium caps.

Fifth, we study the career backgrounds of state insurance commissioners. As previously discussed, these commissioners have significant discretion and could enact policies and regulations that benefit the insurance industry relative to consumers, or *vice versa*. The insurance industry might prefer to have a commissioner who came from the industry and might be more sympathetic to their interests. Therefore, we have obtained the names and dates of service for every state insurance commissioner from the National Association of Insurance Commissioners, and we have searched newspaper archives for information about the career backgrounds of each commissioner and coded each person as having a career background in the private insurance industry or not, and we utilize this variable as an outcome of interest. We exclude the rare cases for which the career background of the commissioner could not be ascertained from newspaper archives. Insurance executives confirm that virtually everyone in the industry would prefer to have commissioners who have experience working for private insurance companies.

Lastly, we examine the number of insurance companies operating in each state and in each year. Initially, we were reluctant to include this measure because the sign of a potential effect was, to us, theoretically ambiguous. On one hand, more companies might be a sign of a favorable regulatory environment, but on the other hand, firms already operating in a state might want to increase barriers to entry and reduce competition. However, our conversations with insurance executives convinced us to include this measure. They believe that more companies operating in a state is a very good indicator of the health of the industry in that state, and they believe that the industry actively advocates for regulatory changes that would lead more companies to enter that state's market. Therefore, we include this outcome measure with the expectation that, if the insurance industry benefits from its ability to make campaign contributions, increased campaign finance regulations should decrease the number of firms operating in a state.

Note that each of our outcome measures, while informative, is imperfect. Ideally, we would measure whatever it is that these firms are trying to maximize—for example, total profits. Unfortunately, we cannot directly measure state-specific profits since most insurance companies operate in multiple states and do not publicly disclose revenues and costs by state. We do, however, measure several important inputs into profit, and we also measure several policy levers that states can manipulate that directly affect the bottom line of insurance companies operating in that state. We have tried to assemble as many available outcomes that state policy could plausibly affect and for which insurance companies operating in that state would clearly like those outcomes to be as large or small as possible.

To classify campaign finance regulations, we rely upon an index created by Jeff Milyo and used in several applied studies including Primo and Milyo (2006), Cordis and Milyo (2013), and Milyo (2016). The index combines five indicators for the presence of limits on corporate contributions, limits on individual contributions, public funding for gubernatorial candidates, public funding for state legislative candidates, and a ban on independent expenditures. All five indicators are added together, creating six possible values, and we rescale the index so that it ranges from 0 to 1, with 1 indicating the greatest extent of campaign finance regulations. Figure 1 shows the within-state changes in this index over time for all states. States have tended to expand campaign finance regulations over time, but there are many cases in which these regulations have been repealed. After *Citizens United*, no state could continue to ban independent expenditures (see Klumpp *et al.*, 2016). Interestingly, and fortunately for the purposes of our subsequent analyses, there are no obvious patterns that emerge from the figure. It is not as if all states from one region changed their campaign finance laws at the same time. For example, the states that had all five reforms in place at some point—Arizona, Connecticut, Minnesota, and Wisconsin—did so at different times and in different political contexts.



**Figure 1.** Within-state changes in the campaign finance index over time. The figure shows our key independent variable over time for all states.

To estimate the effect of campaign finance regulations on insurance-related outcomes, we run differences-in-differences regressions of the following form:

$$\text{Outcome}_{it} = \beta_1 * CF_{it} + \gamma_i + \delta_t + \varepsilon_{it}, \tag{1}$$

where  $CF_{it}$  indicates the value of the campaign finance index in state  $i$  and year  $t$ , and  $\gamma_i$  and  $\delta_t$  represent state and year fixed effects, respectively. The state and year fixed effects account for time trends and any constant differences across states. In other words, we implicitly control for any unobserved covariates that do not vary within state or within year. This regression will yield



unbiased estimates of the effect of campaign finance regulations under parallel trends assumptions. Specifically, we assume that within-state changes in the campaign finance index do not systematically correspond with changes in the underlying performance of the insurance industry—independent of campaign finance.

Although the parallel trends assumption cannot be tested directly, we assess its credibility by also running regressions that allow for state-specific trends over and above the state and year fixed effects. In other words, these specifications parametrically relax the parallel trends assumption and allow states to have trends that differ from one another in a linear way. For all analyses, we include specifications with and without state-specific trends, and the estimates are never statistically or substantively different from each other, lending additional credibility to the parallel trends assumption. We also find no evidence of leading effects of campaign finance regulations, suggesting that trends were, on average, parallel before changes in campaign finance regulations.

To test whether the effects of campaign finance regulation are greater in states where we might expect them, we also run several interactive regressions of the following form:

$$\text{Outcome}_{it} = \beta_2 * \text{CF}_{it} + \beta_3 * \text{Elected}_{it} + \beta_4 * \text{CF} * \text{Elected}_{it} + \gamma_i + \delta_t + \varepsilon_{it}, \quad (2)$$

$$\text{Outcome}_{it} = \beta_5 * \text{CF}_{it} + \beta_6 * \text{CF} * \text{Baseline}_i + \gamma_i + \delta_t + \varepsilon_{it}, \quad (3)$$

where  $\text{Elected}_{it}$  is an indicator for elected insurance commissioners and  $\text{Baseline}_i$  is a scale ranging from 0 to 1 that indicates how much the insurance industry contributes to that state in the absence of campaign finance regulations. This latter variable is measured by regressing total campaign contributions per capita (as reported by FollowTheMoney.org) on the campaign finance index, state fixed effects, and election-cycle fixed effects, and then ranking the state fixed effects and rescaling so the lowest contribution state is 0 and the highest contribution state is 1.  $\text{Elected}_{it}$  rarely changes within a state, so  $\beta_3$  will be imprecisely estimated and  $\beta_4$  can be approximately interpreted as the extent to which the effect of campaign finance regulations is greater in states with elected insurance commissioners.  $\text{Baseline}_i$  never changes within a state, so the main effect of this variable is subsumed by the state fixed effects, and  $\beta_6$  can be interpreted as the extent to which the effects of campaign finance regulations change as we go from states where insurance contributes the least to states where insurance contributes the most in the absence of campaign finance regulations.

The states with elected insurance commissioners are Delaware, Georgia, Kansas, Louisiana, Mississippi, Montana, North Carolina, North Dakota, Oregon, Washington, California after 1991, and Florida before 2003. Although there have been too few within-state changes in this institution to credibly estimate the effect of electing versus appointing insurance commissioners, this between-state variation allows us to test whether the role of corporate money is greater when the most important regulator is elected versus appointed.

### 3. Campaign finance regulations significantly affect contributions

Before showing our main results on the policy consequences of campaign finance regulations, we first demonstrate that our campaign finance index meaningfully inhibits campaign contributions. For every state and every two-year election cycle, we compute the total campaign contributions flowing from donors connected to the insurance industry (as coded by FollowTheMoney.org) to candidates for office in state elections (e.g., governors, state legislatures, insurance commissioners). We adjust for inflation and calculate the log of 2015 dollars plus 1, and we regress that on our campaign finance index, state fixed effects, and cycle fixed effects. We also run a specification including state by election type fixed effects where election type is a binary indicator for

**Table 1.** Campaign contributions from the insurance industry, 1990–2016

	DV = log(dollars + 1)			
	(1)	(2)	(3)	(4)
CF index	−0.930 (0.455)	−1.05 (0.539)	−0.948 (0.469)	−1.14 (0.521)
State FE	X	X		
State×election type FE			X	X
Cycle FE	X	X	X	X
State trends		X		X
exp( $\hat{\beta}$ ) − 1	−0.605	−0.652	−0.613	−0.681
Observations			540	

State-clustered standard errors in parentheses. The table presents estimates of the effect of campaign finance regulations on campaign contributions from the insurance industry. The dependent variable measures the log of inflation-adjusted dollars plus one from the insurance industry in state elections in a two-year election cycle. Data on campaign contributions are available from 1990 to 2016. CF index combines five different indicators of campaign finance regulations and has been coded to range from 0 to 1. Election type indicates whether there was a gubernatorial election in that two-year cycle for which we have campaign contribution data. Therefore, when we include state by election-type fixed effects, we allow for the possibility that spending is different in gubernatorial cycles and we allow that difference to vary across states.

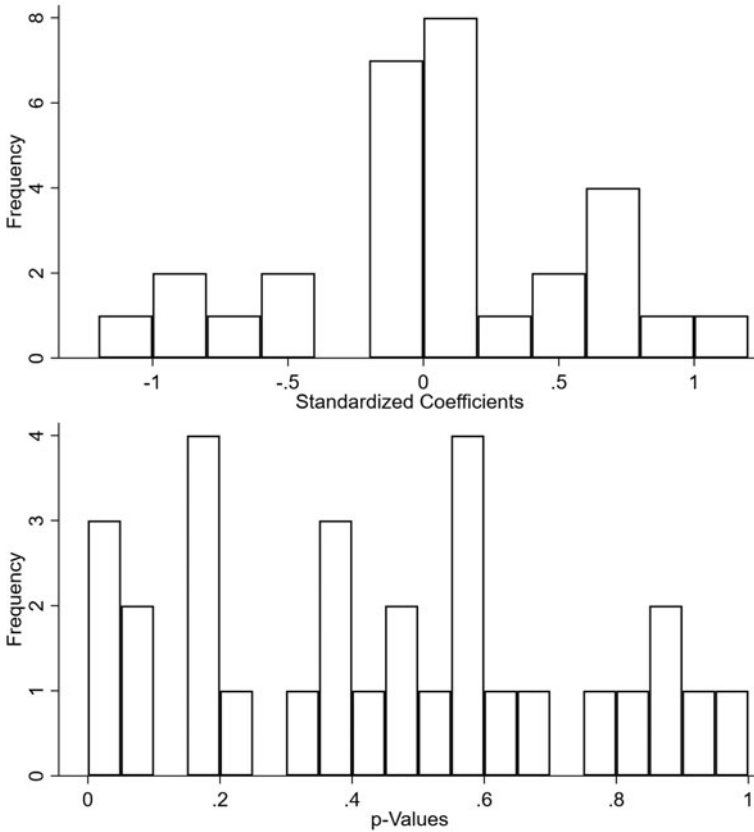
the presence of a gubernatorial election in that two-year cycle. And we show results for each of those specifications with and without state-specific trends. [Table 1](#) shows the results.

As the CF index goes from its lowest to its highest value, log(dollars + 1) decreases by about 1. The implied proportional effect,  $\exp(\hat{\beta}) - 1$ , suggests that going from no campaign finance regulation to all four campaign finance regulations decreases campaign contributions from the insurance industry by 61–68 percent. As mentioned above, the insurance industry typically contributes over \$100 per 1000 state residents to state-level candidates in each two-year election cycle in states with no campaign finance regulations, so in an average state and average election cycle, the implementation of the full slate of campaign finance regulations used in our index would remove about half a million dollars of contributions from the insurance industry alone. Furthermore, this estimate likely understates the effect of campaign finance regulations because bans on independent expenditures are included in the index but this analysis does not include independent expenditures made by insurance companies. Clearly, state-level campaign finance regulations are binding, and our index captures meaningful variation in the extent to which corporate interests can influence elections and potentially curry favor with elected officials.

#### 4. Results

We now discuss our main results, assessing the effect of campaign finance regulations on insurance premiums, premium tax rates, guaranty fund net assessments, auto insurance requirements, backgrounds of state insurance commissioners, and the number of companies operating in a state. All regression results are available in the [Appendix](#), and virtually all estimates of interest are null. [Figure 2](#) provides a visualization of the results across all specifications and outcome variables. We standardize all the outcome variables—subtracting the mean and dividing by the standard deviation, and we multiply by  $-1$  in the cases of premiums, automotive requirements, commissioner backgrounds, and the number of companies such that in every case, a positive coefficient would be consistent with the conjecture that the insurance industry benefits from campaign contributions. For each of the six outcomes, we run the regressions described in [Equations 1–3](#) separately with and without state-specific trends—36 different regression in total. [Figure 2](#) plots the distribution of the standardized coefficients of interest from each of those regressions along with the one-sided p-values. We see that there is a unimodal distribution of coefficients, roughly centered around 0, and there are roughly as many negative estimates as positive estimates. We also see that the distribution of p-values is close to uniform with comparable numbers of low and high





**Figure 2.** Distribution of estimates across specifications. The top panel shows the distribution of standardized coefficients across all specifications. Only the coefficients of substantive interest are included, and all coefficients are scaled such that positive estimates suggest that the insurance industry benefits from corporate campaign contributions. The bottom panel shows the distribution of one-sided p-values.

p-values. Aggregating across all specifications and outcomes, there is little evidence that the insurance industry benefits from the ability to make corporate campaign contributions.

Three of our 36 estimated coefficients of interest are statistically significant (one-sided p-value < 0.05). To assess the possibility that these three significant estimates emerged by chance while accounting for the non-independence of these tests, we have implemented random permutation tests. Specifically, we randomly permuted the treatment variables across states, keeping each state together as a block, re-run all of the regressions on the new permuted data set, and record how many estimates are significant. We obtain at least three significant results in 28.5 percent of the permutations, meaning that even under the null hypothesis of no effect for any outcome or specification, we would not be surprised to find three or more significant estimates.

These permutations also allow us to conduct a global hypothesis test across all outcomes and specifications. The average standardized coefficient of interest across all of our outcomes and specifications is 0.009. The average standardized coefficient is greater than 0.009 in 48.4 percent of the random permutations. This means that we cannot reject the sharp null hypothesis of no effect for any of our outcomes or specifications.

Lastly, these random permutations allow us to say something about our statistical power. The 95<sup>th</sup> percentile of the average standardized coefficients arising from the random permutations is approximately 0.243, meaning that the true effect of the campaign finance index would have to be

about one-quarter of a standard deviation in these outcomes in order for our global test to be likely to reject the null. A hypothetical effect of this size would be substantively meaningful, but if corporate campaign contributions meaningfully benefit an industry, it is not unreasonable to expect an effect of this magnitude or greater.

Nevertheless, the few significant results could suggest an interesting phenomenon because in all three cases, the significant coefficient is associated with the interaction between the CF index and an indicator for an elected insurance commissioner. While these significant estimates are not robust in the sense that the estimated effect is never significant with and without state trends, the estimates all go in the expected direction for premium taxes, guaranty fund net assessments, and auto requirements. Since these are outcomes over which the insurance commissioner potentially has influence, we would not be surprised if these estimated effects reflect a genuine phenomenon. So if corporate contributions from the insurance industry do buy policy favors, our results suggest that this is largely arising in states with elected insurance commissioners. But the results are not clear enough to draw overly strong conclusions about the extent to which elected commissioners exacerbate the effects of contributions.

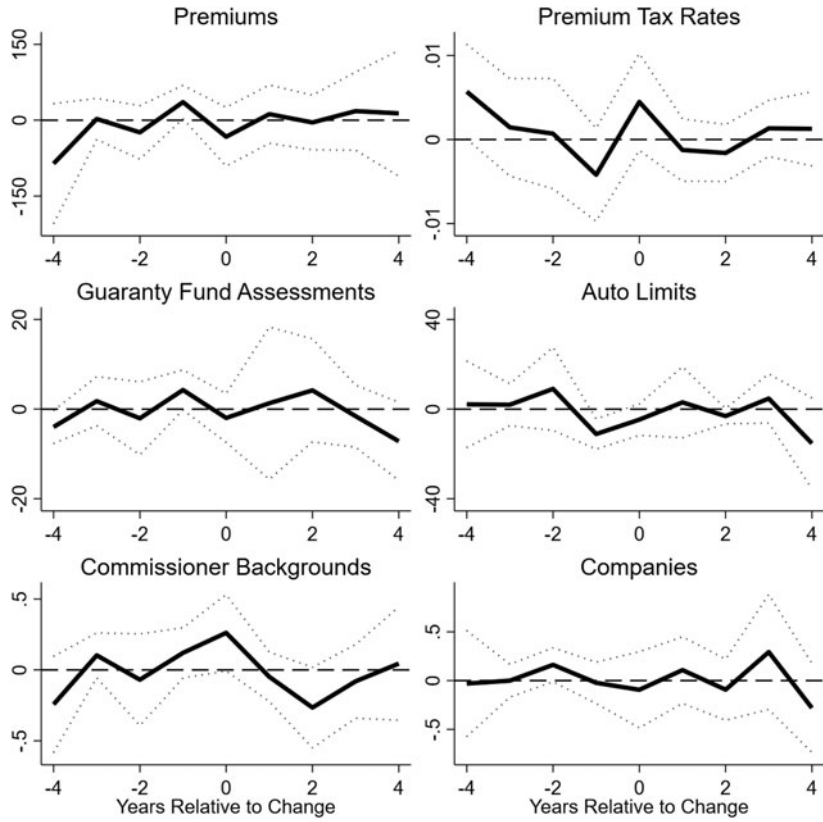
Our main analyses test for an effect of campaign finance regulations as soon as they are put into place. However, the effects of campaign finance regulations could theoretically arise in anticipation of reform—especially if policymakers predict that the reform is coming and realize that their incentives will change. Or the effects could take a few years to be realized, either because the reforms take a few years to affect political dynamics or because policy changes take a few years to affect insurance companies. To test for these possibilities, we also implement differences-in-differences regressions that also include leading and lagged values of the campaign finance index. Specifically, we add four leads and four lags of the campaign finance index to the baseline specification (Equation 1) for each outcome. Figure 3 shows the resulting estimated coefficients and confidence intervals. Overall, the results are still null, and the figure shows little evidence of anticipatory or lagged effects.

## 5. Discussion and conclusion

We test whether the opportunity to make corporate campaign contributions meaningfully affects the performance of corporations or policies that affect them. We have focused on perhaps the single industry where we would expect to see the largest effects. The insurance industry is heavily regulated at the state level, and it is one of the biggest contributors in state elections, yet we find no evidence that campaign finance reforms affect the performance of the industry in a state. We have attempted to test for the distortionary effects of corporate campaign contributions for the industry, states, and outcomes where we would most expect to see them, and we find little evidence of such distortions. Perhaps corporate campaign contributions do not influence policy as much as many observers believe and fear.

We do find some suggestive evidence of effects in states with elected insurance commissioners, although these results are not robust enough to draw overly strong conclusions. The significant extent to which insurance commissioners regulate the insurance industry, and the low level of public knowledge about insurance commissioners make these settings a ripe opportunity for corporate influence. We recommend that future researchers continue to investigate elected insurance commissioners in order to understand the extent to which their regulatory decisions are influenced by the desires of corporate interests, public interest, or other factors.

Interestingly, corporate campaign contributors appear to be quite strategic, and they behave as if they are getting something in return (e.g., Fournaies and Hall, 2014, 2016; Barber, 2016; Barber et al., 2017). Indeed, part of our motivation for focusing on insurance is the apparent savviness of campaign contributions from this industry (Fournaies and Hall, 2018). Nevertheless, we find little evidence that these contributions translate into policy benefits for the industry. When the insurance industry can no longer influence elections and potentially curry favor through



**Figure 3.** No evidence of anticipatory or lagged effects. The figure shows estimated coefficients and confidence intervals from differences-in-differences regressions that include leading and lagged values of the campaign finance index. There is little evidence of anticipatory or lagged effects.

campaign contributions, we detect no meaningful changes in the state policies and regulations that most affect the industry. One potential explanation for this paradox is that it is difficult for firms to estimate the returns to this activity—just as it is difficult for researchers. Another potential explanation is that there is an agency problem between the firm’s shareholders and its government relations office that makes political decisions. In any case, the presence of seemingly strategic contributions does not necessarily mean that these contributions are meaningfully distorting policy.

Why do not we find much evidence that campaign contributions buy favorable policies? Of course, one possibility is that there are small effects—that is, firms “give a little and get a little” (Ansolabehere *et al.*, 2003), but our tests are too imprecise to detect them. Another possibility is that elected officials are incentivized to please their median voter or they are motivated by their own personal ideologies, such that a few thousand dollars of campaign contributions from a corporate interest group are not likely to alter their policy decisions. Perhaps the kind of person who pursues an unglamorous elected office such as state legislator or state insurance commissioner is genuinely motivated by public interest or their own personal policy positions.

Perhaps lobbying is a substitute for campaign contributions, allowing insurance companies to recoup any losses from campaign finance reform through that channel. Unfortunately for researchers, lobbying is harder to observe and regulate than campaign contributions, so this possibility is difficult to assess empirically. However, this story is inconsistent with theories of

lobbying that assume that campaign contributions and lobbying are complements (e.g., Judd 2020). In any case, while these potential explanations mean that we cannot rule out undue corporate influence, they do imply that corporate campaign contributions *per se* are not the culprit, and meaningful efforts to limit any disproportionate influence of corporations would have to start somewhere else.

Another potential explanation for our null results is that the returns to corporate campaign contributions are firm-specific. Perhaps there is a fixed amount of favor that can be doled out to insurance companies, and the insurance commissioner benefits contributing firms to the detriment of those that did not contribute. Our design would not allow us to identify this form of corporate influence since campaign finance reforms affect all firms in the state at the same time. Furthermore, many insurance companies operate across multiple states, so it would be difficult to measure the performance of each firm in each state. However, the study of Fowler *et al.* (2020) would identify this form of corporate influence, and that study also finds no evidence of corporate returns to campaign contributions. We view our study as complementary to theirs in several ways. They conduct a broad study of all corporate interests in a wide range of elections, while we focus on a single corporate interest in state elections—a setting where we would theoretically expect particularly large effects. They test for firm-specific benefits while we test for industry-wide benefits. They examine stock prices, which are influenced by all kinds of non-political factors, while we are able to study a few specific policy levers that states can manipulate directly that would affect corporations' bottom lines.

Our results—in conjunction with other studies—suggest that corporate campaign contributions may not influence policy as much as observers fear. Furthermore, our results specifically suggest that if there are distortionary effects of campaign contributions, campaign finance regulations do not meaningfully mitigate them.

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## Appendix

**Table A1.** Property and casualty premiums, 1966–2017

	DV = \$ per capita					
	(1)	(2)	(3)	(4)	(5)	(6)
CF index	−64.5 (74.6)	14.0 (61.6)	−56.6 (75.8)	93.6 (62.7)	−82.3 (142.6)	−237.1 (183.4)
Elected IC			−289.7 (75.0)	−11.7 (18.5)		
CF index×elected IC			−47.3 (21.9)	−561.5 (227.9)		
CF index×baseline giving					34.5 (218.8)	453.7 (323.6)
State FE	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
State trends		X		X		X
Observations			2500			
Mean DV			1480.2			

State-clustered standard errors are in parentheses. Premiums are coded as 2015 dollars per state resident. CF index combines four different indicators of campaign finance regulations and is coded to range from 0 to 1. Elected IC indicates whether the insurance commissioner is elected versus appointed. Baseline giving is a scale ranging from 0 to 1 which indicates the extent to which the insurance industry contributes to each state in the absence of campaign finance regulations.

**Table A2.** Premium tax rate, 1966–2017

	DV = premium taxes/premiums					
	(1)	(2)	(3)	(4)	(5)	(6)
CF index	0.006 (0.004)	−0.001 (0.003)	0.005 (0.004)	−0.003 (0.003)	0.012 (0.007)	0.000 (0.008)
Elected IC			0.001 (0.003)	−0.004 (0.002)		
CF index×elected IC			0.008 (0.009)	0.012 (0.005)		
CF index×baseline giving					−0.012 (0.009)	−0.002 (0.012)
State FE	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
State trends		X		X		X
Observations			2500			
Mean DV			0.037			

State-clustered standard errors are in parentheses. The tax rate is calculated by dividing the total value of premium taxes by the total value of premiums written.

**Table A3.** Guaranty fund net assessments, 1985–2017

	DV = \$ per capita					
	(1)	(2)	(3)	(4)	(5)	(6)
CF index	-0.76 (1.51)	1.78 (2.46)	-1.64 (1.59)	0.26 (2.54)	-1.93 (3.24)	-1.53 (6.62)
Elected IC			-3.96 (1.50)	-9.97 (2.55)		
CF index×elected IC			5.52 (2.57)	6.58 (5.04)		
CF index×baseline giving					2.13 (6.40)	5.69 (13.46)
State FE	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
State trends		X		X		X
Observations				1469		
Mean DV				2.94		

State-clustered standard errors are in parentheses. Assessments are coded as 2015 dollars per state resident. Assessments data are not available for the state of New York or for the years of 2009, 2010, or 2016.

**Table A4.** Minimum auto requirements, 1970–2017

	DV = \$/1000					
	(1)	(2)	(3)	(4)	(5)	(6)
CF index	-8.1 (7.9)	1.6 (8.2)	-14.9 (7.4)	-1.8 (8.2)	-19.9 (16.7)	15.7 (16.5)
Elected IC			-33.3 (9.9)	-15.4 (16.4)		
CF index×elected IC			53.0 (26.0)	21.6 (17.3)		
CF index×baseline giving					23.5 (3.7)	-26.8 (26.5)
State FE	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
State trends		X		X		X
Observations				2352		
Mean DV				99.3		

State-clustered standard errors are in parentheses. Minimum coverage is the sum of requirements for both bodily injury and property damage. The outcome is coded as thousands of 2015 dollars. Because of data errors and the unusualness of the state’s auto liability laws, Hawaii is excluded from this analysis.

**Table A5.** Commissioner with a background in insurance industry, 1963–2017

	DV = binary indicator					
	(1)	(2)	(3)	(4)	(5)	(6)
CF index	-0.047 (0.131)	0.017 (0.140)	-0.040 (0.140)	0.011 (0.154)	-0.201 (0.252)	0.047 (0.342)
Elected IC			-0.314 (0.266)	-0.518 (0.185)		
CF index×elected IC			-0.018 (0.169)	-0.056 (0.187)		
CF index×baseline giving					0.296 (0.338)	-0.052 (0.436)
State FE	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
State trends		X		X		X
Observations				2548		
Mean DV				0.347		

State-clustered standard errors are in parentheses. The dependent variable is an indicator for whether the insurance commissioner had a career background in the insurance industry before becoming commissioner.



**Table A6.** Number of companies, 1995–2017

	DV = binary indicator					
	(1)	(2)	(3)	(4)	(5)	(6)
CF index	0.081 (0.206)	0.066 (0.132)	0.025 (0.230)	0.000 (0.136)	−0.135 (0.624)	−0.094 (0.381)
Elected IC			−0.463 (0.361)	−0.710 (0.403)		
CF index×elected IC			0.484 (0.574)	1.104 (0.637)		
CF index×baseline giving					0.407 (0.883)	0.321 (0.630)
State FE	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
State trends		X		X		X
Observations				928		
Mean DV				1.26		

State-clustered standard errors are in parentheses. The dependent variable is the number of property and casualty insurance companies operating in that state-year per 100,000 residents.