Online Appendices for "'Liberal Elite' CEOs and Corporate Social Activism"

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APPENDIX A. CORPORATE ACTIVISM DATA COLLECTION

The data collection effort encompassed three different types of social issues, all of which relate to the politics of identity. While searching for instances of corporate political activity, I recorded any time that a corporation within the sample supported or opposed any policy within the domains of LGBT rights, racial/ethnic minority rights, and immigration. This appendix elaborates upon the data collection methodology and data sources, describes the distribution of the outcome variable, and discusses how public opinion varies by issue in the dataset.

A.1 Forms of Activity and Data Sources

Supreme Court Briefs. Business associations and individual businesses pay close attention to the docket of the U.S. Supreme Court. When a case is of interest to the business community, they will frequently file an *amicus curie* (fiend of the court) brief in order to lobby the court in favor of the respondent, petitioner, or neither party. It is unclear whether *amicus* briefs influence court decision-making (Collins 2004; Box-Steffensmeier, Christenson, and Hitt 2013), but briefs are still an unambiguous, on-the-record indication of the corporation's stance on a given policy issue.

Any time that a corporation in the sample supported the respondent or petitioner in a social issue case before the court, I made note. Businesses filed briefs, and the name of their corporation was listed as an *amici*, in the following SCOTUS cases:

1. Fisher v. UT Austin—higher education affirmative action [race]
2. Hollingsworth v. Perry—California same-sex marriage [LGBT]
3. U.S. v. Windsor—Defense of Marriage Act [LGBT]
4. Obergefell v. Hodges—same-sex marriage [LGBT]
5. Fisher v. UT Austin ("Fisher II")—higher education affirmative action [race]
6. Gloucester County School Board v. G.G.—transgender student bathroom use [LGBT]
7. Trump v. IRAP & Trump v. Hawaii—Muslim travel ban [immigration]
8. Masterpiece Cakeshop v. Colorado—discrimination against same-sex couples [LGBT]

Supreme Court briefs were accessed through SCOTUSblog and the American Bar Association website during February 2019, except for LGBT rights briefs, which were accessed during January 2018.

Lobbying Disclosures. Accessed in March of 2018, corporate lobbying data is obtained through Center for Responsive Politics OpenSecrets.org bulk data of Lobbying Disclosure Act (LDA) disclosures of federal legislative and executive lobbying. The LDA requires that all lobbyists register and file quarterly disclosures describing the bills on which they are lobbying. Using every lobbying disclosure between 2008 and 2017, except for those filed by business associations and non-profit organizations, I read through every disclosure in the issue areas of Civil Rights & Civil Liberties; Family, Abortion & Adoption; Labor,

Antitrust & Workplace; and Immigration. In the latter two issue areas, there were too many lobbying disclosures to read individually, so I sampled roughly one-eighth of the disclosures to read through. From this data, I was able to compile a list of issues and bills on which corporations lobbied Congress and executive branch agencies. Although many different lobbyists may file for a given company every quarter, I only count lobbying by a company once per issue per quarter.

Oftentimes the ideological direction of the lobbying is unknown. For example, a company might simply say that they are lobbying regarding the Deferred Action for Childhood Arrivals program. In order to determine the likely ideological direction of lobbying when it is not stated in the disclosure, I examined the rest of the company's activism on that issue. For example, if a company sponsored UnidosUS—a Hispanic immigrant rights organization—I assume that when they lobby Congress on DACA, they are lobbying in favor of it. Therefore, I assume ideological continuity in a company's corporate activism. This is a simple assumption that is validated by the fact that all corporate activism on immigration, race, and LGBT rights was in the liberal direction. Lobbying stance (liberal or conservative) was inferred for 82 out of 99 lobbying disclosures used in the construction of the outcome variable.

For immigration, I only searched for lobbying on issues with an identity-based component. I included lobbying for the Deferred Action for Childhood Arrivals and related Deferred Action for Parents of Americans programs, the Trump Muslim travel ban, and more generally, any policy designed to increase apprehension of undocumented immigrants. I did not include any lobbying disclosures on issues related to E-verify (employer verification of legal worker status) or employers being sanctioned for hiring undocumented workers.

Lobbying disclosures related to LGBT rights were typically regarding LGBT non-discrimination legislation, such as the Equality Act and the Employment Non-Discrimination Act.

I did not uncover any corporate lobbying on racial issues, such as affirmative action.

PAC Contributions. Federal Election Commission campaign contribution records were obtained through the Center for Responsive Politics OpenSecrets.org bulk data in December 2018. I first searched through the Federal Election Commission's website to locate corporate PACs for every corporation in my sample. My search included former names and other alternative names of corporations. Sixty-four percent (64%) of corporations within my sample had an active political action committee. Once I was able to obtain FEC identifiers for every corporation's federal political action committee, I merged this list of FEC ID numbers with the Open Secrets bulk data on PAC contributions.

I only included corporate PAC contributions to non-partisan issue-oriented PACs. Corporations only made contributions to two PACs meeting these standards: the Congressional Black Caucus PAC, which supports Black issues and Black legislators, and the Equality PAC, which supports LGBT issues and LGBT legislators. Both congressional caucuses are officially and *de facto* non-partisan. For the outcome variable, I summed annual contributions and recorded any time a corporation made a non-negative total contribution to the Congressional Black Caucus or Equality PACs in a given year. Corporations frequently contributed to the Congressional Hispanic Caucus PAC, but that group is a Democratic-only caucus that does not admit Republicans; Hispanic Republicans have a rival group, the Congressional Hispanic Conference.

Likely due to an error on the part of the Center for Responsive Politics, PAC contributions are missing for the year 2008. For the 2008 election cycle, I supplement Open Secrets data using bulk data directly from the Federal Election Commission's website, using the *Contributions from committees to candidates & independent expenditures* file [download link], accessed in May 2019.

Interest Group Sponsorships. Many interest groups release annual reports, in which they list all of their institutional and corporate sponsors. To obtain a list of major interest groups, I consulted Project Vote Smart's list of interest groups and the Center for Responsive Politics' OpenSecrets.org list of top interest group contributors in the categories of LGBT, race, and immigration.

I excluded sponsorships from corporate foundations (e.g., the Ford Foundation), only including a sponsorship in my database if the firm itself is listed as the sponsor. I could not find a single corporate sponsorship for a conservative interest group from any company within my sample. I used archive.org to access cached versions of websites in order to obtain a list of sponsorships of organizations and their conferences in past years. I only included interest groups if I could access a list of corporate sponsors throughout the time series.

Sponsorships to the following interest groups were included in the outcome variable:

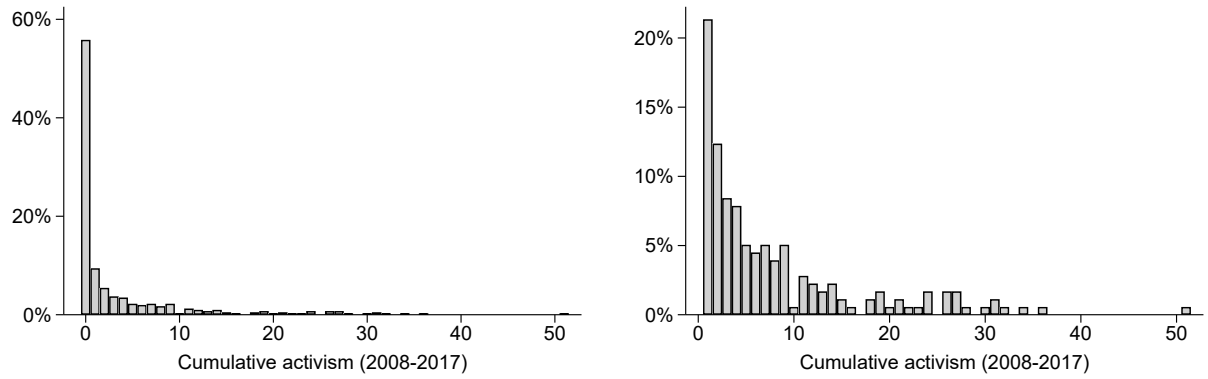
1. UnidosUS, a pro-immigration advocacy organization [immigration]
2. Lambda Legal, an LGBT legal defense organization [LGBT]
3. National LGBTQ Taskforce, an LGBT advocacy organization [LGBT]
4. Human Rights Campaign, an LGBT advocacy organization [LGBT]

A.2 Distribution of Outcome Variable

As can be seen in Figure A.1a, by far, the modal cumulative activity is zero. Figure A.1b excludes companies whose cumulative activity was zero. The figure highlights the wide range of activity among firms. Many corporations engaged in between 1 and 10 events of corporate activism. Although, there is a large tail, with the most-active company (Microsoft) engaging in 51 activism events throughout the time series.

Figure A.1: The distribution of cumulative activism has a large tail

(a) All firms **(b) Only non-zero activism**



The percentage of companies within a given bin is presented on the y-axis. Note that different y-axis scales are used for each figure.

Table A.1 presents the distribution of issues by form of activism. The most frequent issue-form combinations were interest group sponsorships related to immigration and LGBT issues. On the other hand, there were zero entries in the database for lobbying on racial issues, PAC contributions on immigration issues, and interest group sponsorships on racial issues.

Table A.1: The distribution of issues by form of activism

	Immigration	**LGBT**	**Race**	**Total**
Brief	15	148	63	226
Lobbying	52	47	0	99
PAC	0	12	295	307
Sponsor	409	393	0	804
Total	476	600	358	1,434

Entries in the activism database by form of activity and issue area.

A.3 Public Opinion Varies by Issue

The issues under examination in this study vary in their public support, with some being more controversial than others. Since these are salient moral issues, almost every American is willing to give an opinion when asked by a pollster. The most unpopular position supported by businesses within my sample was regarding affirmative action in higher education. In 2016, 65% of Americans disapproved of race being considered in college admissions.[1]

As far as LGBT rights, such policies saw a drastic increase in support throughout the time series. Some employers publicly supported same-sex marriage between 2008 and 2010 when a majority of Americans still disapproved of marriage equality. In 2015, immediately before *Obergefell* legalized same-sex marriage nationwide, support was at 60% and it rose to 64% by 2017. However, enacting civil rights laws designed to protect LGBT people from discrimination is much more controversial; only 51% supported these policies in 2017. Similarly, only about half of Americans supported allowing transgender people to use the bathroom that corresponds with their gender identity (in 2016 and 2017). Some LGBT rights are more popular than others—but all major fights for LGBT rights saw businesses supporting the liberal side.

Immigration is an issue where the American public holds contradictory opinions, but businesses still advocated for immigration expansion and supported undocumented immigrants (by supporting DACA, for example). Seventy percent (70%) of Americans worried a great deal or a fair amount about illegal immigration in 2008 while 59% did so in 2017; and the overwhelming majority of Americans said that controlling U.S. boarders to "halt the flow of illegal immigrants" and "developing a plan to deal with the large number of illegal immigrants who are already living in the U.S." was extremely or very important (polled in

[1] All public opinion data discussed in this section come from Gallup's (2019) website unless otherwise noted.

2006, 2010, 2011, and 2014). However, Americans overwhelmingly oppose deportation of all illegal immigrants and overwhelmingly support providing a pathway to citizenship for them (in 2016).

Strikingly, businesses did not take a stand on gun control or abortion—two salient and controversial social issues. In recent years, gun control has become somewhat more popular, although abortion remains quite controversial. Many different policies could be considered gun control, but generally, 49% of Americans supported stricter gun laws in 2008 while support grew to 60% in 2017. Abortion has received less support, with only about 40% of American agreeing that abortion should be legal under any or legal under most circumstances (in 2008 and 2017). Yet controversy cannot be the only explanation for why corporations were not active on these issues, especially when they were willing to take stands on other controversial social issues.

APPENDIX B. GENDER PAY INEQUITY CONSERVATIVE ACTIVISM

As discussed in the paper, only three issues where corporations engaged in political activity met the criteria for moral policies set forth by Smith (2002). The three issues were LGBT rights, immigration, and racial justice—and on each issue corporations exclusively took the liberal stance. Corporations also engaged in *conservative* political activity on gender pay inequity policies. Since gender pay inequity is about discrimination against a minority group, it might arguably be considered a moral policy. However, the specific gender pay issues under debate during the time series were regarding the narrow technical details about who has standing to file lawsuits against a corporation. Gender pay inequity is therefore dissimilar from the other issues in the database because it does not tap core principles but instead relies upon issue-specific policy details.

Even so, this appendix presents the results of an alternative specification of Model 5 that incorporates this gender-related activism into the outcome variable to ensure the robustness of my findings to using a more relaxed definition of moral policies. Before presenting the results of this robustness check, I will briefly describe all of the gender-related activism corporations engaged in during the time series.

Firstly, the Lily Ledbetter Fair Pay Act of 2009 and related legislation sought to amend the Civil Rights Act to make it easier to sue employers in the instance of pay discrimination. Although the law makes it easier to sue based upon any type of illegal discrimination, it was specifically written in response to the *Ledbetter v. Goodyear Tire & Rubber Co.* case pertaining to gender pay inequity. Six corporations within the sample lobbied Congress against the Lily Ledbetter Fairy Pay Act.[2]

Secondly, two years later in 2011, corporations also engaged in conservative political activity by filing a brief in the *Wal-Mart v. Dukes* case, where a group of women alleging pay discrimination sued Walmart. Sixteen corporations signed onto a brief urging the court to side with Walmart and restrict the ability to form class action lawsuits.

Thirdly, there was also one instance of liberal corporate activism on gender issues, when Prudential Financial sponsored the American Association for University Women's 2009 annual conference. Prudential Financial never engaged in any other activism on gender (either liberal or conservative).

To model corporate activism in multiple ideological directions, I generate a new variable for net liberal corporate activism by subtracting a corporation's annual number of conservative activism events from liberal activism events. Net liberal activism ranges from -2 to 8, where -2 indicates that the corporation engaged in two more conservative activism events than liberal ones and 8 indicates that the corporation engaged in eight more liberal activism events than conservative ones.

Results of the robustness check are presented in Table B.1. In a dynamic panel model similar to Model 5 from the paper, the outcome variable is net liberal activism and the additional covariates are included in the analysis. In this model, the coefficient on CEO liberalism is similar to—and perhaps even slightly larger than—the coefficient from CEO liberalism in Model 5.

[2] For four companies, stance was inferred. These four corporations signed onto a Supreme Court brief urging the court to side with Walmart in the *Wal-Mart v. Dukes* case, so I assumed their congressional lobbying on gender pay inequity was also in the conservative direction.

Table B.1: Results robust to including gender issues in outcome variable

	(B1)
Activism $(t-1)$	0.231**
	(0.043)
CEO liberalism (CF score × -1)	0.128*
	(0.066)
Average industry-level activism	0.184**
	(0.059)
Lobbying expenditure (log)	0.003
	(0.002)
Market share	1.245*
	(0.696)
Profit (log)	0.041
	(0.034)
Constant	−0.876
	(0.732)
Firm FEs	Yes
Year FEs	Yes
Observations	2,958
Clusters (firms)	361
Adjusted R^2	0.686

Dataset is at the firm-year level and outcome variable is annual net liberal activism (the count of conservative activism subtracted from the count of liberal activism). Robust standard errors clustered by firm are presented in parentheses below coefficients. *Note:* *$p < 0.05$ (one-tailed), **$p < 0.05$ (two-tailed)

APPENDIX C. ALTERNATIVE MODELING STRATEGIES

This appendix describes multiple alternative specifications of Model 5 from the paper. I begin with two analyses that use dichotomous outcome variables, then turn to survival analysis. This first set of analyses suggest that CEO ideology might not have a causal effect on *whether* a corporation engages in activism (as is the case when using a dichotomous outcome variable) but instead can only predict *how intensely* corporations engage in activism (as is the case when using an outcome variable for the count of activism events the corporation engaged in). In the next set of analyses—which should be thought of as exploratory in nature—I demonstrate that company-level factors predict the decision to engage in activism while within-company (causally-identified) factors predict how much a company engages in activism. In the final robustness checks, I use three alternative outcome variables, ideal points generated from item response theory.

C.1 Dichotomous Outcome Variables

The outcome variable used in the paper was the count of annual activism events a corporation engaged in, with the variable capturing the intensity of corporate activism. The first few alternative specifications presented in Table C.1 use a dichotomous outcome variable, where the outcome variable takes the value of one (1) if the corporation engaged in activism in a given year and zero (0) otherwise. Model C1 is a dynamic panel model that causally identifies the effect of CEO liberalism on the decision to engage in any activism in a given year. However, in this model, there is no statistically significant association between CEO liberalism and corporate activism. Thus, CEO liberalism may not be able to predict *if* a corporation will engage in activism (the dichotomous outcome variable), only *how intensely* they engage in activism (the count of activism).

Although the presence of any activism might not be able to be predicted by CEO liberalism when firm fixed effects are used, there is still a correlation between CEO liberalism and the presence of activism. Model C2 in Table C.1 is a mixed effects (random effects) logistic regression model.[3] In this model, there is a strong association between CEO liberalism and the presence of activism. The marginal effect of CEO liberalism is 0.039, smaller than the coefficient on CEO liberalism in Model 5. Unsurprisingly, the intraclass correlation coefficient (ICC) is statistically significant. An ICC of 0.708 means that 71% of the overall variation in the outcome variable can be attributed to differences *between* (rather than within) companies. Therefore, between-company factors seem to have the most explanatory power for the decision to engage in any activism at all in a given year.

[3] The mixed effects logistic regression model was estimated via mean–variance adaptive Gauss–Hermite quadrature using 17 integration points and convergence was assessed by determining that coefficients were stable between 12 and 17 integration points.

Table C.1: Dichotomous outcome variables: Results vary by model design

	(C1) OLS	**(C2) Mixed Logit**
Activism ($t-1$)	0.164**	
	(0.037)	
CEO liberalism (CF score × -1)	0.026	0.618**
	(0.026)	(0.244)
Average industry-level activism	0.033	0.903**
	(0.030)	(0.344)
Lobbying expenditure (log)	0.003	0.138**
	(0.002)	(0.039)
Market share	0.548**	0.816
	(0.278)	(1.138)
Profit (log)	0.055**	1.902**
	(0.022)	(0.245)
Constant	−1.130**	−46.768**
	(0.478)	(5.266)
Intraclass correlation coefficient (ICC)		0.708**
		(0.033)
Firm FEs	Yes	Random
Year FEs	Yes	Yes
Observations	2,958	3,294
Clusters (firms)	361	363
Adjusted R^2	0.628	
Wald χ^2		168.683**

Dataset is at the firm-year level and outcome is a dichotomous variable for whether the firm engages in activism in a given year. Robust standard errors clustered by firm are presented in parentheses below coefficients. *Note:* *$p < 0.05$ (one-tailed), **$p < 0.05$ (two-tailed)

The next robustness checks are also correlational in nature (and not causally identified). Table C.2 presents the results of three different Cox event history models. One important feature of the Cox model is that it adjusts for right-censoring, meaning that it accounts for the fact that some companies never engage with social issues between 2008 and 2017 but might do so in the future.

Three Cox models are presented in Table C.2. In the terminology of survival analysis, "failure" is defined as engaging in a liberal activism event. In the first model (C3), CEO liberalism is the only covariate used. In the second model (C4), the additional covariates are added. Results of proportional hazards tests are presented in the last row of the regression table. In Model C3, a test of the proportional hazards assumption indicates that the assumption is valid. However, in Model C4, a test of the proportional hazards assumption results in a modest and marginally-significant χ^2 statistic ($\chi^2 = 9.27$; p-value $= 0.099$), so it is plausible that hazard rates are not constant between companies across time. Upon further examination with individual proportional hazards test for each variable, it appears to be the log lobbying expenditure variable that violates the proportional hazards assumption. Because of this, Model C5 excludes the log lobbying expenditure variable from the analysis. And indeed, the results are similar between C4 and C5.

In each model, the hazard ratios and standard errors for the CEO liberalism variable are similar. The hazard ratio for CEO liberalism is statistically significant and can be interpreted as follows: The likelihood of a company engaging in its first liberal activism event increases by about 40% as the liberalism of a CEO increases by one standard deviation. CEO liberalism therefore has a modest, but meaningful, effect on the likelihood that a corporation engages with social issues.

Table C.2: Cox survival models: Companies with more liberal CEOs engage in their first liberal activism event sooner

	(C3)	**(C4)**	**(C5)**
CEO liberalism (CF score × -1)	1.368**	1.486**	1.479**
	(0.147)	(0.164)	(0.161)
Average industry-level activism		1.234*	1.185
		(0.148)	(0.139)
Lobbying expenditure (log)		1.076**	
		(0.022)	
Market share		0.781	0.525
		(0.390)	(0.257)
Profit (log)		1.909**	2.239**
		(0.179)	(0.193)
Observations	2,375	2,337	2,337
Units (firms)	360	358	358
Failures	157	156	156
LR χ^2	8.150**	172.375**	156.952**
PH test χ^2	0.29	9.27*	3.07

Standard errors are presented in parentheses below hazard ratios. Models estimated using Efron ties. Proportional hazards (PH) test assesses for a non-zero slope of Schoenfeld residuals regressed on time. *Note:* *$p < 0.05$ (one-tailed), **$p < 0.05$ (two-tailed)

C.2 Two-stage Models

The preceding models suggest that company-level (between-company) factors predict whether the corporation will engage in activism at all even though within-company factors predict how intensely corporations will engage in activism. To directly test this notion, I use two different types of two-stage models: a zero-inflated negative binomial model and a Heckman selection model. In both instances I use company averages of the variables in the first step of the equation and de-meaned within-company variables in the second step of the equation.

The zero-inflated negative binomial model determines whether corporations engage in any activism in a given year for the inflation equation and then how many activism events the corporation engages in for the outcome equation. The Heckman selection model determines whether corporations engaged in *any activism at all during the time series* and then how much activism the corporation engages in in a given year for the outcome equation. Both models seem like a plausible representation of the data generating process. In the zero-inflated negative binomial model, corporations are assumed to make a decision each year about whether or not to engage in activism that stems from company characteristics. In the Heckman selection model, companies are assumed to make a decision about whether or not to ever "select into" activism that stems from company characteristics.

Note that these models are likely improperly specified. I would need to use random intercepts to get an accurate estimate of the company-level variables. Since random intercept zero-inflated negative binomial and Heckman selection models do not exist (and would probably be too computationally-intensive and not converge even if they did exist), I must rely upon these non-multilevel models to test the notion that the data generating process behind corporate activism is a two-step process. It is best to think of these analyses more as thought experiments than as strong tests of this notion.

Table C.3 presents two zero-inflated negative binomial models. In both Models C6 and C7, the inflation equation includes company-level averages of all additional covariates and also adds in the characteristics included in the multilevel models in Table F.1 in addition to the firm's log number of employees. De-meaned within-effects (i.e., causally-identified variables that net out firm fixed effects) for the CEO liberalism treatment variable and the additional covariates are included in the count outcome equation. The only difference between Models C6 and C7 is that Model C7 includes CEO liberalism as a company-average variable in the inflation equation but Model C8 does not.

The results of both models presented in Table C.3 lend credence to the notion that company-level factors predict the decision to engage while within-company factors predict how much the corporation engages. In the inflation equation, negative coefficients indicate that a corporation is *more* likely to engage in activism in a given year for higher values on these variables. In both Models C6 and C7, lobbying expenditures, profit, and female industry-level employees all predict whether the corporation engages in activism in a given year. Interestingly, the variables that are not statistically significant in the count outcome equation are the same ones that are statistically significant in the inflation equation: average industry-level activism and market share predict the count of activism but not the inflation equation. The main coefficient of interest, CEO liberalism is statistically significant in each equation where it is included. At the bottom of Table C.3 the marginal effect of CEO liberal-

ism is presented. A one standard deviation increase in average CEO liberalism increases the likelihood of engaging in corporate activism by 0.10 and a one standard deviation increase in within-firm CEO liberalism increases the number of activism events by 0.11. These marginal effects of CEO liberalism are roughly comparable to Model 5.

Table C.3: Zero-inflated negative binomial models: Firm-level factors predict whether the firm annually engages in activism and within-firm factors predict intensity of activism

	(C6)		(C7)	
	Inflate (firm-level)	**Count (de-meaned)**	**Inflate (firm-level)**	**Count (de-meaned)**
Activism ($t-1$)		0.105**		0.103**
		(0.051)		(0.051)
CEO liberalism (CF score × -1)		0.229**	−0.744**	0.225**
		(0.111)	(0.231)	(0.111)
Average industry-level activism	−0.904	0.142**	−0.655	0.144**
	(0.729)	(0.061)	(0.892)	(0.062)
Lobbying expenditure (log)	−0.146**	−0.010	−0.137**	−0.004
	(0.046)	(0.021)	(0.050)	(0.021)
Market share	−0.086	3.609**	0.201	3.651**
	(0.810)	(1.125)	(0.826)	(1.114)
Profit (log)	−1.114**	−0.001	−1.124**	−0.017
	(0.275)	(0.144)	(0.286)	(0.145)
Employees (log)	−0.203		−0.253	
	(0.212)		(0.234)	
Consumer-oriented	−1.090*		−1.002	
	(0.621)		(0.729)	
Female employees	−3.014**		−2.442**	
	(0.910)		(0.943)	
Minority employees	0.075		−1.024	
	(3.844)		(4.092)	
Foreign-born employees	3.715		4.839	
	(3.456)		(3.442)	
Constant	30.476**	0.021	30.731**	0.043
	(4.882)	(0.154)	(4.931)	(0.151)
Dispersion parameter: $ln(\alpha)$		−2.193**		−2.402**
		(0.829)		(0.979)
Marginal effect of CEO liberalism		0.096**	0.109**	0.094**
		(0.046)	(0.035)	(0.046)
Year FEs	Yes	Yes	Yes	Yes
Total observations	2,940		2,940	
Observations with zeros	2,240		2,240	
Clusters (firms)	359		359	
Wald χ^2	58.677**		57.880**	

Dataset is at the firm-year level and outcome variable is the count of annual activism. Inflation equation variables are firm-level averages ("between effects") while outcome count equation variables are cluster mean centered ("within effects"). Note that a negative coefficient in the inflation equation indicates that a company is *more* likely to engage in activism in that year. Robust standard errors clustered by firm are presented in parentheses below coefficients. *Note:* *$p < 0.05$ (one-tailed), **$p < 0.05$ (two-tailed)

The Heckman selection models, C8 and C9, presented in Table C.4 are specified with the same variables as Models C6 and C7. Model C8 does not include CEO liberalism as a company-level selection variable but Model C9 does. The only difference in control variable statistical significance is that average industry-level activism predicts selection in Model C8 (but it did not predict inflation in C6). Otherwise, these results are largely consistent with those of the zero-inflated negative binomial models, although the marginal effects of CEO liberalism are much larger for the outcome equation. A one standard deviation increase in average CEO liberalism increases the likelihood of engaging in corporate activism by 0.10 but a one standard deviation increase in within-firm CEO liberalism now increases the number of activism events by about 0.25 in these Heckman selection models.

As previously mentioned, the zero-inflated negative binomial and Heckman selection models should be mostly thought of as a though experiment, since the firm-level "between effects" variables are improperly specified without firm random effects. Even if firm random effects were included, between effects are not causally identified. Nonetheless, these results are consistent with a two-step data generating process behind corporate activism, where company-level factors (including CEO liberalism) predict whether a corporation decides to engage in any activism and somewhat different within-company factors (also including CEO liberalism) predict how intensely a corporation will engage in activism.

Table C.4: Heckman selection models: Firm-level factors predict whether the firm ever engages in activism and within-firm factors predict intensity of activism

	(C8)		(C9)	
	Selection (firm-level)	**Outcome (de-meaned)**	**Selection (firm-level)**	**Outcome (de-meaned)**
Activism ($t-1$)		0.138**		0.143**
		(0.059)		(0.058)
CEO liberalism (CF score × -1)		0.261**	0.398**	0.253**
		(0.102)	(0.106)	(0.103)
Average industry-level activism	0.436**	0.199**	0.342	0.186**
	(0.221)	(0.083)	(0.233)	(0.080)
Lobbying expenditure (log)	0.073**	0.011	0.062**	0.009
	(0.016)	(0.009)	(0.017)	(0.009)
Market share	0.729	1.739*	0.395	1.730*
	(0.502)	(1.037)	(0.465)	(1.013)
Profit (log)	0.418**	0.100	0.466**	0.095
	(0.112)	(0.092)	(0.111)	(0.090)
Employees (log)	0.150*		0.175**	
	(0.082)		(0.083)	
Consumer-oriented	0.084		0.053	
	(0.207)		(0.220)	
Female employees	1.477**		1.081**	
	(0.419)		(0.436)	
Minority employees	−2.769		−2.307	
	(1.799)		(1.815)	
Foreign-born employees	2.079		1.791	
	(1.616)		(1.716)	
Constant	−12.045**	1.291**	−12.870**	1.254**
	(1.986)	(0.123)	(1.953)	(0.117)
Selection parameter: ρ	−0.716**		−0.736**	
	(0.048)		(0.045)	
Marginal effect of CEO liberalism		0.261**	0.100**	0.253**
		(0.102)	(0.026)	(0.103)
Year FEs	N/A	Yes	N/A	Yes
Total observations	3,613		3313	
Selected observations	1,383		1,383	
Clusters (firms)	390		360	
Wald χ^2	131.959**		136.854**	

Dataset is at the firm-year level and outcome variable is the count of annual activism. Observations are considered to be selected if the company engaged in any activism throughout the time series. Selection equation variables are firm-level averages ("between effects") while outcome equation variables are cluster mean centered ("within effects"). *Note:* *$p < 0.05$ (one-tailed), **$p < 0.05$ (two-tailed)

C.3 IRT Outcome Variables

The final set of robustness checks uses outcome variables derived from item response theory. IRT-derived ideal points have the benefit of weighting each type of activism differently, unlike the outcome variable used in the main analyses. I estimated company-year ideal points using four different models: a two-parameter graded response model, a one-parameter logistic model, a two-parameter logistic model, and a dynamic two-parameter logistic model. The first three models were estimated year-by-year and the last was a time series model estimated all at once.

Table C.5 presents descriptive statistics for each set of ideal points. The first column in the table (FEs R^2) displays the R^2 from a model regressing a given outcome variable onto firm and year fixed effects. In other words, the column can answer the question: to what extent can variation in the outcome variable be explained solely by firm and year fixed effects? For every outcome except for the two-parameter logistic model dynamic ideal points, there is a decent amount of variation left over even after adding firm and year fixed effects. However, since the dynamic ideal points have very little time series variation, almost all variation in the ideal points is attributable to firm and year fixed effects alone. Because of this, I do not use the dynamic ideal points as an outcome variable in the analyses presented in the remainder of this appendix section. (Unsurprisingly, if the dynamic ideal points are used as an outcome variable, neither the coefficients on CEO liberalism nor any of the other variables are statistically significant—as there is no variation left over after adding firm and year fixed effects.)

Table C.5: Descriptive statistics for ideal points

Outcome variable	FEs R^2	Corr (1)	Corr (2)	Corr (3)	Corr (4)
(1) Count of activism (main outcome variable)	0.671				
(2) Two-parameter graded response model ideal points	0.725	0.927			
(3) One-parameter logistic model ideal points	0.689	0.947	0.978		
(4) Two-parameter logistic model ideal points[a]	0.660	0.911	0.963	0.972	
(5) Two-parameter logistic model dynamic ideal points[b]	0.958	0.791	0.858	0.852	0.838

FEs R^2 reports the R^2 from a regression of the outcome variable onto firm and year fixed effects. Remaining columns reports the correlations between the various outcome variables. Notes: [a]Dynamic (time series) two-parameter logistic IRT ideal points were generated using the `MCMCdynamicIRT1d` command within `MCMCpack` (Martin, Quinn, and Park 2011). [b]Year-by-year two-parameter logistic IRT ideal points were generated using the `ideal` command within `pscl` (Jackman 2020).

Each of the remaining IRT outcome variables have their upsides and downsides. Given the downsides, it's unclear whether any of these outcome variables are vastly superior to the count of activism outcome variable used in the paper. Also note that each of these three other outcome variables correlates quite highly with the count of activism outcome variable (see Table C.5). For these two reasons, I use the count of activism outcome variable in the paper and present these IRT-derived outcome variables only as robustness checks.

The graded response model was technically designed for ordinal data. In the IRT analyses, I included the following variables: the count of LGBT rights briefs, the count of LGBT rights lobbying disclosures, the count of LGBT financial contributions, the count of immigration briefs, the count of immigration lobbying disclosures, the count of immigration financial contributions, the count of racial justice briefs, and the count of racial justice finan-

cial contributions. Each cut point receives its own difficulty and discrimination parameter. For example, going from 0 to 1 LGBT rights briefs has its own difficulty and discrimination parameters, while going from 1 to 2 LGBT rights briefs has its own set of difficulty and discrimination parameters. This makes sense: the difference between 0 and 1 should be more consequential than the difference between 1 and 2 when trying to sort corporations by how liberal they are. The downside of this model is that all LGBT rights briefs, for example, are treated as equal.

The one-parameter logistic model and two-parameter logistic model both allow me to estimate parameters for each individual instance of activism in the dataset. In the one-parameter model, items vary in their difficulty, but the discrimination parameter is fixed for all items. In the two-parameter model, items vary in both their difficulty and discrimination. In a company-year dataset with individual activism events as their own variables, there are many different activism events in each year and many zeros in the dataset (meaning that corporations did not engage in those activism events). This likely poses a problem for data analysis. A two-parameter model fails to converge using Stata's `irt 2pl` command. Using the `ideal` command in R that estimates ideal points using Bayesian analysis, there is a decent amount of variation in the ideal points between different estimations, indicating a lack of convergence. Because of this, I use both one-parameter and two-parameter logistic IRT models in this section. The one-parameter model has the downside of not allowing the discrimination parameter to vary between items and the two-parameter model should be interpreted with caution because of the potential lack of convergence.

Table C.6 presents the results of the three different year-by-year IRT models and also presents Model 5 from the paper as a point of comparison. C10 uses the two-parameter GRM ideal points, C11 uses the one-parameter logistic ideal points, and C12 uses the two-parameter logistic ideal points. Model 5, of course, uses the count of activism outcome variable. Since the outcome variables have different scales, it is difficult to compare Models C10 through C12 with Model 5. To make comparison easier, I present standardized (beta) coefficients beside standard OLS coefficients.

In Model C10, a one standard deviation increase in CEO ideology leads to a 0.04 standard deviation increase in activism; in Model C11, a one standard deviation increase in CEO ideology leads to a 0.03 standard deviation increase in activism; and in Model C12, a one standard deviation increase in CEO ideology leads to a 0.04 standard deviation increase in activism. Results from Model 5 in the paper are similar: a one standard deviation increase in CEO ideology leads to a 0.05 standard deviation increase in corporate activism. In each model except for C11, the coefficient on CEO liberalism is statistically significant. In Model C11 the coefficient on CEO liberalism is nearly statistically significant, with a p-value of 0.102. And as Gelman and Stern (2006) contend: "The difference between significant and not significant is not itself statistically significant." Regardless of the specification of the outcome variable, there is a mostly robust association between CEO liberalism and corporate activism.

Table C.6: IRT-derived outcome variables compared with the main model

	(C10) 2P GRM IRT		(C11) 1P Logistic IRT		(C12) 2P Logistic IRT		(5) Main Model	
	Coef	**Std Coef**	**Coef**	**Std Coef**	**Coef**	**Std Coef**	**Coef**	**Std Coef**
Activism $(t-1)$	0.266**	0.112	0.204**	0.107	0.207**	0.127	0.194**	0.064
	(0.039)		(0.038)		(0.037)		(0.043)	
CEO liberalism (CF score × -1)	0.062*	0.036	0.061	0.033	0.124*	0.040	0.123**	0.047
	(0.037)		(0.037)		(0.072)		(0.061)	
Average industry-level activism	0.054	0.033	0.062	0.033	0.041	0.020	0.158**	0.049
	(0.033)		(0.041)		(0.062)		(0.061)	
Lobbying expenditure (log)	0.003	0.005	0.003*	0.005	0.005	0.005	0.004	0.004
	(0.002)		(0.002)		(0.003)		(0.002)	
Market share	0.790**	0.061	0.870**	0.064	1.153*	0.055	1.278*	0.070
	(0.375)		(0.433)		(0.671)		(0.706)	
Profit (log)	0.059**	0.013	0.067**	0.018	0.124**	0.024	0.047	0.001
	(0.028)		(0.028)		(0.050)		(0.034)	
Constant	−1.436**		−1.575**		−2.802**		−1.000	
	(0.603)		(0.605)		(1.063)		(0.735)	
Firm FEs	Yes		Yes		Yes		Yes	
Year FEs	Yes		Yes		Yes		Yes	
Observations	2,958		2,958		2,958		2,958	
Clusters (firms)	361		361		361		361	
Adjusted R^2	0.756		0.719		0.703		0.701	

Dataset is at the firm-year level. In Models C10 through C12, the outcome variables are IRT-derived ideal points, where Model C10 uses a two-parameter graded response model, Model C11 uses a one-parameter logistic model, and Model C12 uses a two-parameter logistic model. Model 5 reproduces the main model from the paper, where the count of annual activism is the outcome variable. Robust standard errors clustered by firm are presented in parentheses below coefficients. Standardized (beta) coefficients are from a regression of de-meaned covariates and are presented beside standard OLS regression coefficients. *Note:* $^*p < 0.05$ (one-tailed), $^{**}p < 0.05$ (two-tailed)

APPENDIX D. ADJUSTING FOR CEO CHARACTERISTICS

The primary analyses did not include any CEO-level variables. It's possible that CEO ideology is confounding some other characteristic of the CEO that leads them to engage their firm in activism. This appendix presents the results of a model—similar to Model 5—that adds in CEO-level demographic characteristics. The following variables are included in this robustness check: (1) whether the CEO is from a marginalized community, (2) CEO age, and (3) whether the CEO has a graduate degree.

The ***marginalized community*** dummy variable takes the value of one if the CEO is non-white, Hispanic, female, and/or LGBT. Few CEOs are from marginalized communities, so I generated a composite variable. Only 8% of CEOs are either non-white or Hispanic, female, or LGBT. To determine the CEO's race, I searched the internet for lists of Black, Middle Eastern or Asian, and Hispanic corporate executives. I also searched for pictures of the CEO and used surnames to give me clues about their race, and would then verify my assumption about the CEO's race by reading online articles about the CEO. I was able to affirmatively identity the race of every CEO. CEO gender was obtained through the Compustat Execucomp database (Standard & Poor's/Compustat 2018). I determined whether the executive was LGBT by searching for lists of LGBT corporate executives. (If I did not find any information on the executive's sexual orientation or gender identity, I assumed that they were cisgender and heterosexual.)

CEO age was obtained through the Compustat Execucomp database. Few CEOs are young, as 89% are Baby Boomers or older.

To determine the ***CEO's education***, I primarily relied upon Bloomberg executive profiles (e.g., this profile of Jeff Bezos) but also referenced Wikipedia and LinkedIn as alternative sources. When trying to determine the education of a CEO, it is difficult to differentiate between attending a school without graduating with a degree and graduating with a degree from that school. Because of this, CEO education is simply a dummy variable for whether or not the CEO has at least some graduate school education. The education variable is missing for the few CEOs where I could not find any education information. I could identity education for 732 of the 755 CEOs. Among CEOs without missing education information, 69% have postgraduate degrees.

None of the CEO demographic variables have a strong correlation with each other or with CEO liberalism (no correlation in a correlation matrix is above 0.2). The strongest correlation is between the marginalized community variable and CEO liberalism (0.18). Model D1 is a dynamic panel model of activism regressed on all of the additional covariates plus the CEO characteristics (but not CEO ideology). None of the CEO demographic characteristics have a statistically significant association with corporate activism. Model D2 adds CEO liberalism into the model. Even after controlling for CEO demographic characteristics, CEO ideology still has a statistically significant effect on corporate activism and the effect is comparable to Model 5. In conclusion, CEO demographic characteristics have no correlation with corporate activism, but CEO liberalism does.

Table D.1: Adjusting for CEO characteristics

	(D1)	(D2)
Activism $(t-1)$	0.184**	0.193**
	(0.042)	(0.043)
CEO from marginalized community	−0.013	−0.049
	(0.085)	(0.105)
CEO age	−0.001	−0.002
	(0.003)	(0.003)
CEO has graduate degree	0.034	0.002
	(0.047)	(0.067)
CEO liberalism (CF score × -1)		0.122*
		(0.066)
Average industry-level activism	0.143**	0.157**
	(0.051)	(0.061)
Lobbying expenditure (log)	0.005**	0.004
	(0.002)	(0.003)
Market share	1.152*	1.311*
	(0.619)	(0.712)
Profit (log)	0.036	0.049
	(0.025)	(0.035)
Constant	−0.804	−0.941
	(0.566)	(0.777)
Firm FEs	Yes	Yes
Year FEs	Yes	Yes
Observations	3,496	2,914
Clusters (firms)	399	360
Adjusted R^2	0.693	0.700

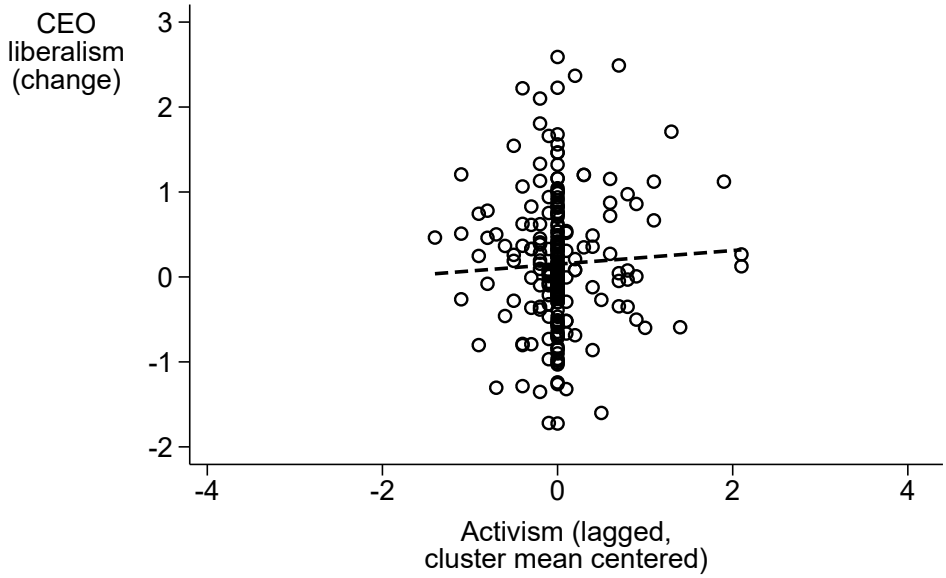
Dataset is at the firm-year level and outcome variable is the count of annual activism. Robust standard errors clustered by firm are presented in parentheses below coefficients. *Note:* *$p < 0.05$ (one-tailed), **$p < 0.05$ (two-tailed)

APPENDIX E. EVALUATING FOR REVERSE CAUSATION

In a panel design, one might worry about reverse causation, where the outcome variable actually has a causal effect on the treatment variable (and not vice versa). In this case, reverse causation would mean that corporations engaging in activism would somehow cause them to select more-liberal CEOs. Perhaps corporate activism could create the internal dynamics that would lead to corporate boards selecting a liberal CEO. Although this scenario does not seem all that plausible, this appendix attempts to rule out reverse causation to the extent possible given the dataset.

Beginning with a simple graphical representation, Figure E.1 underscores that corporations that are more liberal on social issues do not select more-liberal CEOs in the next year. In this way, there is no selection bias or reverse causation. The figure subsets the dataset to only include companies that have selected a new CEO, and the CEO in the present year is different from the CEO in the previous year. If companies are selecting CEOs based upon their ideology—in a way that correlates with the social liberalism of the company—then activism should be able to predict whether companies will select more-liberal CEOs. The first difference of CEO liberalism is presented on the y-axis while activism (lagged one year and cluster mean centered) is presented on the x-axis. As Figure E.1 makes clear, there is no relationship between corporate activism in the previous year and the ideology of the CEO selected to lead the company in the current year.

Figure E.1: Corporations that are more active on social issues do not select more-liberal CEOs in the next year



Sample limited to years in which companies select a new CEO and the CEO in the present year is different from the CEO in the previous year.

One way to demonstrate that reverse causation is not being conflated in the results is through a Granger causality test. However, missing CEO ideology data, the fact that CEO

ideology is constant for a given CEO throughout the time series, and the fact that many companies are never active on social issues presents a barrier to conducting a panel Granger causality test. One option is a user-written command in Stata, `xtgcause` that performs a Granger causality test for panel data.[4] To perform this test, panels with incomplete data must be dropped, omitting 78 firms. Even then, many companies do not see much change in their corporate activism (i.e., it is always zero). Some companies do not transition CEOs during the time series so there is no change in CEO ideology. For these reasons, the `xtgcause` command fails to provide results. Nonetheless, Figure E.1 suggests that reverse causation is not a concern: companies are not selecting more-liberal CEOs to lead their firm for reasons related to corporate activism.

Instead of using a Granger causality test, I use placebo tests to demonstrate that causality can only possibly go in one direction. In the first placebo test, presented in Table E.1, the model is specified similar to Model 5 in the paper, but the CEO liberalism variable is specified with a one-period lead. In other words, the model determines whether CEO liberalism in the next year can predict activism in the present year. The statistically insignificant value of the coefficient on $t + 1$ CEO liberalism suggests that this is not the case: CEO liberalism in the next year cannot predict activism in the present year. While CEO liberalism at time $t+1$ cannot predict activism at time t, CEO liberalism at time t can predict activism at time t—which is what we would expect if CEO liberalism has a causal effect on activism but not vice versa.

[4] The `xtgcause` command was written by Lopez and Weber (2017) and implements the panel Granger causality test proposed by Dumitrescu and Hurlin (2012).

Table E.1: Future CEO liberalism cannot predict activism

	(E1) **Activism**
Activism $(t-1)$	0.161**
	(0.045)
CEO liberalism $(t+1)$	0.083
	(0.073)
Average industry-level activism	0.182**
	(0.065)
Lobbying expenditure (log)	0.003
	(0.003)
Market share	1.146**
	(0.508)
Profit (log)	0.018
	(0.028)
Constant	−0.358
	(0.597)
Firm FEs	Yes
Year FEs	Yes
Observations	2,619
Clusters (firms)	360
Adjusted R^2	0.718

Dataset is at the firm-year level and outcome variable is the count of annual activism. Robust standard errors clustered by firm are presented in parentheses below coefficients. *Note:* *$p < 0.05$ (one-tailed), **$p < 0.05$ (two-tailed)

The remaining two placebo tests more directly determine whether reverse causation exists. For there to be a causal effect of CEO liberalism on corporate activism, CEOs must be selected for reasons unrelated to their ideology—or at least selected for reasons unrelated to factors that predict corporate activism. If corporate activism causes companies to select more-liberal CEOs, then the ideology of next year's CEO should be able to be predicted by corporate activism in the current year. I specify two models (E2 and E3), where CEO liberalism at time $t + 1$ is the outcome variable. In both models the treatment variable is corporate activism. Model E2 includes no additional covariates while Model E3 includes the standard set of additional covariates that were included in Model 5 from the paper. Neither activism nor any of the other additional covariates have a statistically significant effect on CEO ideology in the next year. Put differently, none of these factors predict whether corporations will select a liberal CEO in the next year after netting out firm and year fixed effects.

Manipulating the time series ordering of the data with lagged and leading values is one way to increase certainty in claims of causality by demonstrating that reverse-causation is not a concern. As has been shown in this appendix, activism has an effect on CEO liberalism but there is no evidence that the reverse is true.

Table E.2: CEO liberalism cannot be predicted by activism

	(E2) **CEO Liberalism** $t+1$	**(E3)** **CEO Liberalism** $t+1$
Activism ($t = 0$)	0.023	0.025
	(0.022)	(0.023)
Average industry-level activism		0.001
		(0.022)
Lobbying expenditure (log)		0.001
		(0.003)
Market share		−0.039
		(0.299)
Profit (log)		−0.011
		(0.031)
Constant	−0.399**	−0.177
	(0.020)	(0.671)
Firm FEs	Yes	Yes
Year FEs	Yes	Yes
Observations	2,991	2,953
Clusters (firms)	362	361
Adjusted R^2	0.866	0.864

Dataset is at the firm-year level and outcome variable is the count of annual activism. Robust standard errors clustered by firm are presented in parentheses below coefficients. *Note:* *$p < 0.05$ (one-tailed), **$p < 0.05$ (two-tailed)

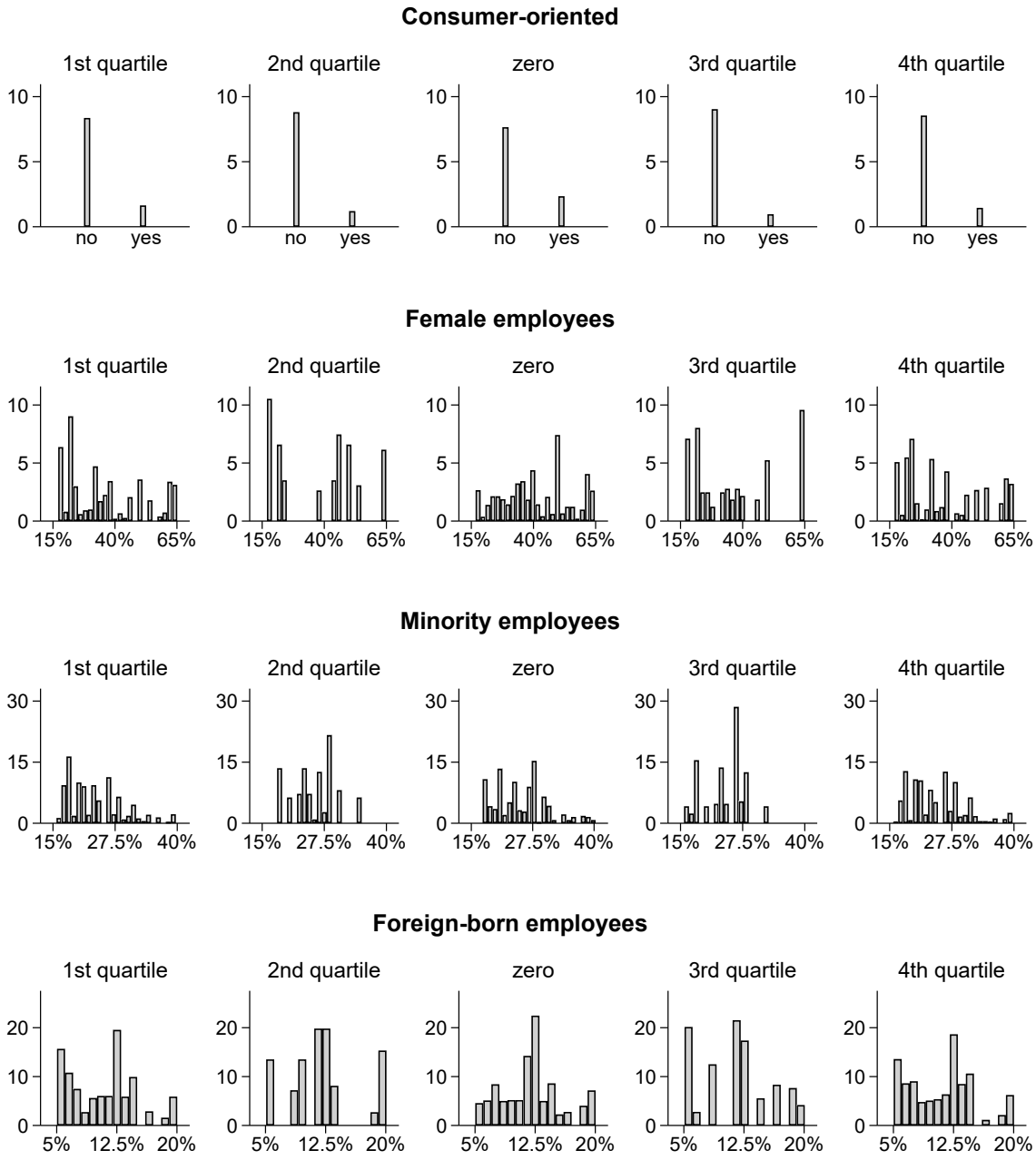
APPENDIX F. RANDOM INTERCEPT MODELS

Table F.1: Firm characteristics strengthen the CEO-activism relationship

	(F1)	(F2)	(F3)	(F4)
Level 2 variable	*Industry*	*Gender*	*Race*	*Nativity*
Firm characteristic	0.149	0.627**	1.373**	0.625
	(0.104)	(0.215)	(0.563)	(0.547)
Cross-level interaction				
Firm characteristic × CEO liberalism	0.236*	0.403	1.004	0.668
	(0.128)	(0.348)	(0.685)	(0.739)
Level 1 variables (de-meaned)				
Activism $(t-1)$	0.191**	0.195**	0.193**	0.194**
	(0.041)	(0.041)	(0.041)	(0.041)
CEO liberalism (CF score × -1)	0.052	−0.030	−0.143	0.031
	(0.064)	(0.131)	(0.176)	(0.107)
Average industry-level activism	0.161**	0.158**	0.157**	0.157**
	(0.057)	(0.056)	(0.056)	(0.056)
Lobbying expenditure (log)	0.004	0.003	0.003	0.003
	(0.002)	(0.002)	(0.002)	(0.002)
Market share	1.394**	1.320**	1.325**	1.299*
	(0.664)	(0.663)	(0.663)	(0.664)
Profit (log)	0.044	0.043	0.042	0.042
	(0.031)	(0.031)	(0.031)	(0.031)
Constant	0.304**	0.090	−0.024	0.247**
	(0.043)	(0.086)	(0.141)	(0.080)
Intraclass correlation coefficient (ICC)	0.685**	0.682**	0.682**	0.686**
	(0.029)	(0.029)	(0.029)	(0.029)
Year FEs	Yes	Yes	Yes	Yes
Observations	2,958	2,940	2,940	2,940
Clusters (firms)	361	359	359	359
Wald χ^2	128.175**	123.528**	124.386**	123.238**

Dataset is at the firm-year level and outcome variable is the count of annual activism. Models estimated via maximum likelihood. Robust standard errors clustered by firm are presented in parentheses below coefficients. *Note:* *$p < 0.05$ (one-tailed), **$p < 0.05$ (two-tailed)

Figure F.1: Histograms of moderator variable for different quartiles of de-meaned CEO liberalism demonstrate common support to estimate marginal effects



Histograms show the distribution of the moderator variables for different quartiles of the de-meaned CEO ideology variable. Since 30% of companies do not change CEOs during the time series, 40% of observations take the value of zero for the de-meaned CEO ideology variable. Because of this, the distribution of the moderator variable for the common scenario where de-meaned CEO ideology is zero is presented separately (in the middle graph, labeled "zero"). Regardless of the quartile of CEO ideology, there are sufficient observations throughout the moderator variable, indicating common support to calculate marginal effects.

REFERENCES

Box-Steffensmeier, Janet M., Dino P. Christenson, and Matthew P. Hitt. 2013. "Quality Over Quantity: Amici Influence and Judicial Decision Making." *American Political Science Review* 107 (03): 446–460. doi:10.1017/S000305541300021X.

Collins, Paul M. 2004. "Friends of the Court: Examining the Influence of Amicus Curiae Participation in U.S. Supreme Court Litigation." *Law & Society Review* 38 (4): 807–832.

Dumitrescu, Elena-Ivona, and Christophe Hurlin. 2012. "Testing for Granger non-causality in heterogeneous panels." *Economic Modelling* 29 (4): 1450–1460. doi:10.1016/j.econmod.2012.02.014.

Gallup. 2019. "News and Research." Accessed September 4, 2019. https://news.gallup.com/home.aspx.

Gelman, Andrew, and Hal Stern. 2006. "The Difference Between "Significant" and "Not Significant" is not Itself Statistically Significant." *The American Statistician* 60 (4): 328–331. doi:10.1198/000313006X152649.

Jackman, Simon. 2020. pscl: Classes and Methods for R Developed in the Political Science Computational Laboratory. Sydney, New South Wales, Australia: United States Studies Centre, University of Sydney. https://github.com/atahk/pscl/.

Lopez, Luciano, and Sylvain Weber. 2017. "Testing for Granger Causality in Panel Data." *The Stata Journal* 17 (4): 972–984. doi:10.1177/1536867X1801700412.

Martin, Andrew D., Kevin M. Quinn, and Jong Hee Park. 2011. "MCMCpack: Markov Chain Monte Carlo in R." *Journal of Statistical Software* 42 (9): 22.

Smith, Kevin B. 2002. "Typologies, Taxonomies, and the Benefits of Policy Classification." *Policy Studies Journal* 30 (3): 379–395. doi:10.1111/j.1541-0072.2002.tb02153.x.

Standard & Poor's/Compustat. 2018. Compustat ExecuComp [Annual Data]. (2007-2017). Retrieved from Wharton Research Data Service. Accessed November 7.