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Are red or blue companies more likely to go green? Politics and corporate social responsibility ☆

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ABSTRACT

Using the firm-level corporate social responsibility (CSR) ratings of Kinder, Lydenberg, Domini, we find that firms score higher on CSR when they have Democratic rather than Republican founders, CEOs, and directors, and when they are headquartered in Democratic rather than Republican-leaning states. Democratic-leaning firms spend $20 million more on CSR than Republican-leaning firms ($80 million more within the sample of S&P 500 firms), or roughly 10% of net income. We find no evidence that firms recover these expenditures through increased sales. Indeed, increases in firm CSR ratings are associated with negative future stock returns and declines in firm ROA, suggesting that any benefits to stakeholders from social responsibility come at the direct expense of firm value.

1. Introduction

Corporate Social Responsibility (CSR) is becoming an increasingly important part of doing business around the world. Companies are allocating significant portions of their expense budgets to CSR — $28 billion on sustainability[1] and $15 billion on corporate philanthropy[2] spent by large U.S. firms in 2010. Nearly 80% of Global Fortune 250 companies publish detailed CSR reports, up from 50% in 2005,[3] and business school graduates increasingly see "serving the greater good" as an important responsibility of a business manager.[4] CSR is also increasingly important to investors, with $3.07 trillion of professionally managed U.S. assets tied to CSR through socially responsible investing (SRI).[5] Over 965

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[1] See survey by Verdantix on sustainability. http://www.verdantix.com/index.cfm/papers/Press.Details/press_id/42/verdantix-forecasts-us-sustainable-business-spending-will-double-to-60bn-by-2014/.

[2] See Corporate Giving survey on philanthropy. http://www.philanthropyjournal.org/news/top-stories/corporate-giving-grows-median-flat.

[3] See 2008 KPMG International Survey of Corporate Responsibility Reporting. http://www.kpmg.com/global/en/issuesandinsights/articlespublications/pages/sustainability-corporate-responsibility-reporting-2008.aspx.

[4] See "A promise to be ethical in an era of immorality," *New York Times*, May 29 (Wayne, 2009). In addition, Montgomery and Ramus (2007) survey 759 MBA graduates and find that most would be willing to sacrifice financial compensation to work for a socially responsible employer.

[5] See 2010 Report on Socially Responsible Investing Trends in the United States. http://www.socialinvest.org/resources/research/ (Social Investment Forum, 2011).

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institutional investors from around the world, managing over $20 trillion in assets, are signatories to the United Nations-backed Principles for Responsible Investing (UNPRI) initiative.

With the amount of money and attention that companies are giving to CSR, it is important to understand the rationale for CSR. First, spending on CSR may be financially profitable through its branding/reputation effects vis-à-vis customers, employees, investors, etc. (Baron, 2001). However, empirical studies disagree on whether the benefits of CSR outweigh the financial costs (see Margolis, Elfenbein, and Walsh, 2007, for a review). Alternatively, Benabou and Tirole (2010) suggest that CSR may be a form of delegated pro-social behavior, which can provide direct value to firm stakeholders even if it is financially costly. We are the first to test this "direct-value" theory[6] by investigating the relation between CSR and stakeholder preferences for social responsibility, as measured by their political affiliation.

We test the hypothesis that Democratic-leaning firms (i.e., firms with a higher proportion of Democratic stakeholders) are associated with more socially responsible policies than Republican-leaning firms. Our results can be illustrated by a comparison of Starbucks and Wendy's, two large and well-known food and drink retailers. Starbucks started as a coffee beans store in 1971 and began to grow as a popular coffeehouse chain in the late 1980s after entrepreneur Howard Schultz bought it. Schultz, who is the current CEO and Chairman of Starbucks, is a well-known Democrat who donated $130,500 to Democratic federal candidates and only $1,000 to Republicans over his lifetime. In addition, Starbucks was founded and is currently headquartered in Seattle, Washington, a bastion of progressivism and the Democratic Party.

Wendy's founder is Dave Thomas, a Republican supporter who donated $47,000 to Republican candidates and $2,000 to Democrats. Furthermore, Wendy's was founded and is currently headquartered in Dublin, Ohio (a Republican-leaning area). Based on these internal and external political differences, our hypothesis suggests that Starbucks should be more socially responsible than Wendy's. Indeed, we find that Starbucks is one of the top CSR performers in our entire data set while Wendy's is a significant CSR underperformer.

In our sample, we find a significant difference in CSR between typical Democratic and Republican firms. A one-standard deviation shock (to the political "left") to the firm's political environment is associated with a 0.1 standard deviation improvement in CSR. This result is robust to controls for firm-level heterogeneity, CEO-level heterogeneity, and a number of tests to rule out alternative explanations. There are several ways to understand the economic significance of our results. First, we find a positive and significant association between CSR and Selling, General, and Administrative (SG&A) expenses, allowing us to convert the estimated effect of political leanings on CSR into direct monetary costs (through higher SG&A) for the firm. Based on this conversion, we estimate that Democratic-leaning firms spend, on average, an extra $18 million per year on CSR relative to Republican-leaning firms (an extra $80 million per year for the subset of firms in the S&P 500), representing approximately 10% of a typical firm's net income.

Second, because CSR performance is also associated with industry, we can use estimated industry effects as a benchmark for the economic significance of the estimated effect of politics. For example, the petroleum and natural gas industry (Fama-French 30) is near the bottom in *environmental* CSR performance while computer software (Fama-French 36) is one of the best in this category. Using those two industries as a measuring stick, we find that the average difference between Democratic-leaning and Republican-leaning firms in terms of environmental corporate social responsibility is about 20% of the difference between typical firms in petroleum and computer software.

Third, we take a broader view of economic significance by examining the implications of changes in CSR policies for the value of the firm, stock holdings by institutional investors, and future operating performance as measured by return on assets (ROA). We find that an expansion of CSR policies is associated with future stock underperformance and a long-run deterioration in ROA. We argue that the first of these effects is a direct market reaction to CSR with a lag resulting from delays in investors' learning about CSR policy changes. The adverse financial effects of CSR on the firm help explain why firms whose stakeholders get "direct value" from CSR are more willing to implement it. After all, if CSR paid for itself or was financially profitable, one would expect all firms, regardless of stakeholder preferences toward social responsibility, to vigorously implement it.

Political affiliation is a natural measure of preferences for social responsibility. The Democratic Party platform places more emphasis on CSR-related issues such as environmental protection, anti-discrimination laws and affirmative action, employee protection, and helping the poor and disadvantaged. A 2007 National Consumers League survey found that 96% of Democrats believe Congress should ensure that companies address social issues, compared to 65% of Republicans.[7] In addition, Hong and Kostovetsky (2012) show a significant difference between Democratic and Republican investment managers in their portfolio holdings of socially responsible companies. Recent papers have also found that political views affect corporate variables such as leverage and investment (Hutton, Jiang, and Kumar, 2011) as well as the decision of individual investors on whether to participate in the stock market (Kaustia and Torstila, 2011).

We measure corporate social responsibility using data from Kinder, Lydenberg, and Domini (KLD). KLD is a leading data provider of social research for institutional investors.[8] In 2006, TIAA-CREF, one of the biggest U.S. retirement funds, sold a large stake in Coca-Cola stock after KLD removed Coca-Cola from its list of socially responsible companies. KLD rates

[6] This is also termed the "delegated philanthropy" theory: "the firm as a channel for the expression of citizen values." (Benabou and Tirole, 2010)

[7] Fleishman-Hillard Inc. and the National Consumers League survey, http://www.marketingcharts.com/?attachment_id=400.

[8] In 2009, KLD was acquired by RiskMetrics, and is now a subsidiary of MSCI, a leading provider of indices and institutional products and services.

U.S. corporations in nearly 60 categories along six social/environmental dimensions: community activities, diversity, employee relations, environmental record, human rights, and product quality. The richness of the KLD data set allows us to dig deeper into the type of CSR activities that are connected to politics. Our study complements recent work by Hong, Kubik, and Scheinkman (2011) who show how financial constraints affect firm KLD ratings, and Gillan, Hartzell, Koch, and Starks (2010) who investigate the relation between KLD ratings, corporate performance, and institutional ownership.

We collect political contributions of firm stakeholders from the Federal Election Commission (FEC) Web site, which provides data on contributions to federal candidates and parties starting from 1979. We measure a firm's *internal* political environment using the partisan tilt of prior campaign contributions of the firm's CEO, independent directors, and founders. Previous research highlights the importance for firm policies and performance of CEO characteristics (e.g., Bertrand and Schoar, 2003; Malmendier and Tate, 2005), outside director characteristics (e.g., Weisbach, 1988; Yermack, 2004; Goldman, Rocholl, and So, 2009; Krüger, 2010), and founder effects (e.g., Fahlenbrach, 2009; Adams, Almeida, and Ferreira, 2009). We find a strong association between a firm's internal political environment and CSR policies. For example, a firm headed by a Democratic CEO (all past campaign contributions to Democrats) is associated with a 0.15 standard deviation improvement in CSR relative to a firm led by a Republican CEO, after controlling for firm characteristics, CEO characteristics, industry, and the state in which the firm is headquartered.

A firm's *external* political environment, i.e., the political views of the firm's employees, suppliers, shareholders, customers, and regulators, is more difficult to measure. However, there is likely to be significant geographic clustering in the political views of outside stakeholders (see Porter, 1998, 2000) which we exploit for identification.[9] Since stakeholders are more likely to live in the state where the firm is headquartered, we use the home state's voting patterns as a measure of the firm's external political environment. We find that a Democratic external political environment is associated with more socially responsible corporate behavior. For instance, a ten percentage point increase in the state vote received by the Democratic candidate in the prior presidential election is associated with a 0.11 standard deviation improvement in CSR, after controlling for firm characteristics, industry, and the internal political environment. Our work builds on Rubin (2008) who looks at the effect of home-state political voting patterns on whether a firm is a member of the Broad Market Social Index. It also complements the literature on the importance of geographic location in firm financing (Gao, Ng, and Wang, 2011), dividends (John, Knyazeva, and Knyazeva, 2011), and corporate governance (John and Kadyrzhanova, 2010).

[9] Geographic clustering is strongest for employees and suppliers when firm facilities are close to the firm headquarters, and has been found in shareholders by Coval and Moskowitz (1999). It is more likely to be the case for customers of smaller firms that do most of their business locally.

There are several alternative explanations to the "direct-value" hypothesis for the results. First, the partisan tilt of stakeholders' campaign contributions may be strategic, reflecting the party that they believe is better for firm prospects rather than their own individual political preferences. For example, stakeholders in a firm that manufactures solar panels or windmills might contribute to Democrats because Democratic politicians are more likely to institute policies (such as tax incentives for green technology) that would benefit the firm. However, there is limited evidence of strategic contributions by corporate managers. As Hutton, Jiang, and Kumar (2010) point out, most managers contribute much less than the legal limit, even though their total annual campaign contributions are a tiny portion of their salaries. And unlike firm political action committees (PACs) which hedge by contributing to both parties, individual managers make all or most of their contributions to one party. We test the "strategic motives" hypothesis by using returns after elections as a measure of which party is financially better for the firm. We find that even after controlling for post-election returns, campaign contributions of stakeholders are correlated with firm KLD scores.

Another possible explanation is selection bias. Socially responsible firms may attract more Democrats as CEOs or board members, and may choose to headquarter their operations in Democratic states (and vice versa for Republicans). We use instrumental variables (IV) analysis to try to identify the direction of causality. Our instrument is the political voting pattern in the state where the firm's founder went to college. This instrument should be largely exogenous with respect to future firm characteristics (such as CSR) but is correlated with the founder's own political affiliation as well as the political leanings of the state where the firm is headquartered. We find that political environment remains a significant driver of KLD scores. We also test whether a Democrat CEO is more likely to be hired (externally) by socially responsible firms, and find little evidence for this type of selection.

We also explore a number of other possible factors that might explain CSR policies including ownership, sensitivity to government policies, and firm visibility and marketing. CSR is positively associated with ownership by public pension funds and SRI funds (but negatively with total institutional ownership). There is no clear relation between CSR and sensitivity to government policies. There is also a positive association between CSR and various measures of visibility. Still, because political environment is largely orthogonal to these factors, controlling for them has little effect on our main results.

Our paper makes several contributions. First, it expands on earlier research on corporate social responsibility and socially responsible investing, providing novel empirical support for the "direct value" theory that CSR can contribute to stakeholders' well-being even if it does not increase firm profitability. Second, it builds on the growing literature that explores how political views affect financial decision-making. Third, it illustrates how a firm's corporate culture (one facet of which is the attitude toward social responsibility) is shaped by its founder(s), management, board, and external environment. Finally, it provides new evidence for the long-standing debate on whether "being good" is also financially profitable.

The paper proceeds as follows. Section 2 describes the data and methodology. Section 3 outlines the main results on KLD scores and the internal and external firm political environment. Section 4 explores alternative explanations. Section 5 looks at the implications of CSR for the firm. Section 6 discusses robustness checks. Section 7 concludes.

2. Data

2.1. Corporate social responsibility

Our sample consists of a panel of the largest 3,000 publicly traded U.S. companies (Russell 3000) from 2003 to 2009. Corporate social responsibility scores are obtained from the Kinder, Lydenberg, and Domini (KLD) database. While KLD scores for S&P 500 companies are available since 1991, KLD's coverage only expanded to the Russell 3000 in 2003. KLD rates companies along six dimensions of corporate social responsibility: community, diversity, employee relations, environment, human rights, and product.[10] In each issue area, KLD provides ratings (either a zero or one) for a number of "strengths" (positive CSR policies) and "concerns" (negative CSR policies). For instance, in the employee relations area, KLD assigns a one for the "Health and Safety Strength" if a firm has strong health and safety programs and zero otherwise. In the environment area, KLD assigns a one for the "Regulatory Problems Concern" if a company has paid fines or civil penalties for violations of air, water, or other environmental regulations, and zero otherwise.

We use the ratings for 56 different categories (30 strengths and 26 concerns) to calculate the KLD score of a company. KLD ratings are available for 61 categories for our sample period. Two of these categories, the community-related "Volunteer Programs Strength" (added in 2005) and the environment-related "Management Systems Strength" (added in 2006), are not available for the entire sample period and are dropped. Three additional diversity-related categories ("CEO", "Board of Directors", and "Non-Representation") are mechanically correlated with the identity of the management and board and are also dropped.[11]

For each firm-year observation, we sum across categories to calculate KLD scores. Each strength adds one point to the firm's score while each concern subtracts a point from the firm's score. We first tabulate KLD scores for each issue area. For example, the *KLD Environment score* is equal to the number of environmental strengths minus the number of environmental concerns. Then, we add up the KLD scores across the six issue areas to get the aggregate *KLD Score*, which equals the total number of strengths minus the total number of concerns. We also add up the total number of strengths to calculate a *KLD Strengths score* and add up the total number of concerns (and multiply it by negative one) to calculate a *KLD Concerns score*. It is important to emphasize that for each of these scores, higher numbers correspond to better levels of corporate social responsibility. Finally, all scores are standardized to have a mean of zero and a standard deviation of one to simplify the interpretation of regression coefficients. All data definitions are presented in the Data Appendix.

2.2. CEOs, directors, and founders

BoardEx is our main source for data on firm CEOs, directors, and founders. In addition to providing names, BoardEx provides detailed information on each individual, including age, gender, nationality, education, employment history, tenure, role at the firm, and independence status. We merge BoardEx with KLD (using firm names) and are able to find BoardEx data on 19,378 firm-year observations (93.4% of the 20,744 firm-year observations in KLD). Panel A of Table 1 presents summary statistics on CEO and board characteristics. The average CEO has been at the helm of the firm for 7.6 years. The typical CEO is approximately 55 years old and 2.5% of CEOs are women. The typical board has 8.9 directors of which 6.5 are independent directors. These statistics are similar to prior studies on CEOs and boards.

2.3. Political affiliations

We obtain information on the political contributions of CEOs, board members, and founders from the Federal Election Commission (FEC) Web site (www.fec.gov), which provides data on contributions to federal candidates and parties starting from 1979. For each campaign contribution, the FEC database reports the donor's name, home address, occupation, and the amount of the contribution. We develop an algorithm that uses BoardEx variables (names and employment histories) to find the campaign contributions of the CEOs, directors, and founders of the firms in our sample. There is at least one campaign contribution for about 70% of corporate stakeholders.

We use campaign contributions to define the political affiliation of each corporate stakeholder. For example, *CEO D%*, the political affiliation of the CEO for a particular firm-year, is defined as the CEO's total campaign contributions to Democrats (prior to that year) divided by her total contributions to both parties (prior to that year). We only use past campaign donations to avoid any look-ahead bias. If no campaign contributions are found for the CEO, *CEO D%* is set to 0.5. However, our results still hold if we drop observations with non-donor CEOs from our analysis.

We also use campaign contributions data to determine political affiliations of independent directors and non-CEO founders (founders who are not the current CEO).[12] *Independent directors D%* is the same ratio (as *CEO D%*) averaged across all independent directors. The same process is followed for the non-CEO founder(s) to calculate *Non-CEO founders D%*. Panel B of Table 1 presents summary

[10] KLD also rates firms on corporate governance, but this is different from corporate social responsibility so it is not included in our KLD score.

[11] Including these categories significantly strengthens the estimated effects of politics on CSR because minority CEOs and board members are much more likely to be Democrats and they automatically improve the CSR rating in these categories.

[12] Our results are robust to including all directors and all founders.

Table 1
Summary statistics.

Following table presents summary statistics for the main variables (see Appendix for definitions) used in this study. We calculate cross-sectional summary stats and then take time-series averages of each statistic across the seven years of our study (from 2003 to 2009). *N* is the average number of observations (per year). Panel A shows statistics on CEO and board characteristics while Panel B presents measures of the firm's internal political environment. Panel C shows measures of the external political environment (in the state where the firm is headquartered). Panel D presents firm controls and Panel E concludes with a list of other variables used in the paper, all of which are winsorized at 1% and 99%.

	N	Mean	Median	S.D.	10%	90%
Panel A: CEO and board variables						
CEO age	2763	54.9	55.0	7.9	45.0	64.4
CEO female (dummy)	2768	2.5%	0.0%	15.7%	0.0%	0.0%
CEO experience	2768	7.6	5.7	7.0	1.0	17.0
CEO non-US (dummy)	2768	1.6%	0.0%	12.6%	0.0%	0.0%
Board size (number of directors)	2767	8.9	8.7	2.7	6.0	12.0
Number of independent directors	2767	6.5	6.0	2.5	3.7	9.9
Panel B: Internal political environment						
CEO D%	2768	0.41	0.50	0.32	0.00	0.94
Independent directors D%	2744	0.44	0.44	0.15	0.24	0.64
Non-CEO founders D%	2768	0.49	0.50	0.17	0.45	0.50
Rep director (dummy)	2875	10.4%	0.0%	30.6%	0.0%	100.0%
Dem director (dummy)	2875	7.3%	0.0%	26.0%	0.0%	0.0%
Political director (dummy)	2875	15.8%	0.0%	36.4%	0.0%	100.0%
Panel C: External political environment						
President vote D%	2908	0.52	0.54	0.08	0.40	0.62
Congress delegation D%	2908	0.58	0.70	0.29	0.18	0.87
State government D%	2908	0.50	0.50	0.33	0.00	1.00
Political environment (standardized)	2705	0.00	−0.03	1.00	−1.27	1.31
Panel D: Firm characteristics						
Assets ($MIL)	2922	9749	1097	65,172	142	12,432
Log assets ($MIL)	2922	7.09	6.99	1.72	4.95	9.42
Kaplan-Zingales index	2837	0.82	0.87	1.42	−0.57	2.39
ROA	2919	0.01	0.03	0.14	−0.10	0.12
Cash (over assets)	2921	0.18	0.08	0.21	0.01	0.51
Dividends (over assets)	2907	0.01	0.00	0.02	0.00	0.03
Debt (over assets)	2922	0.23	0.19	0.22	0.00	0.53
Book-to-market	2769	0.56	0.48	0.39	0.18	1.05
Panel E: Other variables						
Institutional ownership	2873	67.2%	72.3%	25.0%	28.8%	96.7%
Public pension fund ownership	2871	1.69%	1.66%	1.19%	0.12%	3.19%
SRI mutual fund ownership	2874	0.13%	0.01%	0.40%	0.00%	0.26%
CEO ownership	2873	2.85%	0.34%	7.22%	0.00%	7.34%
Sales to government (over total sales)	2957	1.73%	0.00%	8.71%	0.00%	0.00%
Lobbying expenditures (over assets) × 1000	2875	4.97%	0.00%	17.01%	0.00%	11.03%
PAC expenditures (over assets) × 1000	2849	0.17%	0.00%	0.66%	0.00%	0.37%
Number of analyst estimates	2963	6.7	5.0	6.2	0.1	15.8
Advertising spending (over assets)	2963	0.99%	0.00%	2.71%	0.00%	2.92%
SP500 member (dummy)	2963	16.7%	0.00%	37.3%	0.0%	100.0%

statistics on political affiliation variables of corporate stakeholders. The average CEO in our sample has given 41% of contributions to Democrats and 59% to Republicans. The corresponding ratios are 44% for independent directors and 49% for non-CEO founder(s). While the sample averages are close to one-half, most contribution ratios are actually close to zero or to one since most corporate stakeholders donate almost exclusively to Democrats or Republicans.

As an additional measure of board political orientation, we check if a firm has a politically connected director, a board director who was either formerly elected to high office (in Congress or as a state governor) or who served in an administration (as Ambassador, Cabinet Department Secretary or Assistant Secretary, or White House official) of a particular party.[13] Panel B of Table 1 shows that 10.4% of the firms in our sample have a Republican politically connected director while 7.3% have a Democratic politically connected director (and 15.8% have at least one political director of any party).

2.4. External political environment

We use political geography to measure a firm's external political environment, i.e., the political tilt of the firm's

[13] If a director served in both Republican and Democratic administrations, we exclude them as they are probably civil servants, not political appointees.

employees, suppliers, shareholders, customers, and regulators. The state where the firm is currently headquartered is found in Compustat. We then find data on past statewide results in presidential elections, the partisan makeup of the state's Congressional delegation, and the parties of the governor and state legislature from Dave Leip's Atlas of U.S. Presidential Elections and other online sources.[14] For a firm-year observation, *President vote D%* is defined as the proportion of the vote received by the Democratic candidate for president in the last election in the state where the firm is headquartered. *Congress delegation D%* is defined as 0.5 × proportion of Senators who are Democrats + 0.5 × proportion of Congressmen who are Democrats in the state where the firm is headquartered. Finally, *State government D%* is defined as 0.5 × indicator equal to one if governor is a Democrat + 0.25 × indicator equal to one if the state legislature upper chamber is controlled by Democrats + 0.25 × indicator equal to one if state legislature lower chamber is controlled by Democrats. Panel C of Table 1 shows summary statistics for external environment variables. The average firm is headquartered in a state that cast 52% of the vote for Democrats in the last presidential election. This is slightly more Democratic than the rest of the country because so many corporations are headquartered in New York (a state that tilts significantly to the Democrats).[15]

Finally, we apply principal component analysis to four dimensions of a firm's political affiliation (*CEO D%*, *Independent directors D%*, *Non-CEO founders D%*, and *President vote D%*) and use the first principal component to create a comprehensive measure of the political environment of a firm called *Political environment*. This principal component explains 40% of the variation in the four political affiliation variables. We normalize this variable to have a mean of zero and standard deviation of one.

2.5. Control variables

We include a number of firm-level controls in all tests including firm size, return on assets (ROA), cash, dividends, debt, and book-to-market. We obtain firm accounting values from Compustat Fundamentals Annual database and stock data from the Center for Research in Security Prices (CRSP). For each firm-year, we have the $Assets_{t-1}$ *(log)* (Compustat item "AT"), ROA_{t-1} (item "IB" over "AT"), and $Book\text{-}to\text{-}market_{t-1}$ (item "CEQ" over the market value of equity measured as absolute value of price, "PRC," times shares outstanding, "SHROUT," from CRSP). $Cash_{t-1}$ is cash balances (item "CHE") over book assets, $Dividends_{t-1}$ are cash dividends (items "DVC" + "DVP") over book assets, and $Debt_{t-1}$ is total debt (items "DLTT" + "DLC") over book assets.

We also build the Kaplan and Zingales (1997) index as follows:

$KZScore_{i;t} = -1.002CF_{i;t}/A_{i;t-1} - 39.368 \quad DIV_{i;t}/A_{i;t-1} - 1.315C_{i;t}/A_{i;t-1} + 3.139BLEV_{i;t} + 0.283Q_{i;t}$, where $CF_{i;t}/A_{i;t-1}$ is cash flow (items "DP" + "IB") over lagged assets (item "AT"); $DIV_{i;t}/A_{i;t-1}$ is cash dividends (items "DVC" + "DVP") over lagged assets; $C_{i;t}/A_{i;t-1}$ is cash balances (item "CHE") over lagged assets; book leverage, denoted by $BLEV_{i;t}$ is total debt divided by the sum of total debt and book equity (("DLTT" + "DLC")/("DLTT" + "DLC" + "SEQ")) measured at fiscal year-end, and Tobin's *Q* is the market value of equity (price, "PRC," times shares outstanding, "SHROUT," from CRSP) plus assets minus the book value of equity ("CEQ" + "TXBD") all over assets. Data on Selling, General, and Administrative Expenses (SG&A) used for economic significance tests are also from Compustat. Summary statistics for all firm-level controls are reported in Panel D of Table 1 and are similar to those found in prior studies.

We also use a number of other variables to test alternative explanations for CSR. We obtain data on quarterly institutional and mutual fund holdings from the Thomson Financial database. The names of socially responsible (SRI) mutual funds are identified from biennial reports of the Social Investment Forum (www.ussif.org) while public pension funds are identified using keywords in names of institutions. CEO holdings are collected from the Thomson Financial Insiders database.

Data on political sensitivity are obtained from several different sources: sales to government are obtained from Compustat, total spending on federal lobbyists is obtained from the OpenSecrets lobbying database (www.opensecrets.org), and spending by firm political action committees (PACs) is from the FEC Web site. Finally, the number of analysts is obtained from the Institutional Brokers' Estimate System (IBES), while advertising spending and S&P 500 membership are from Compustat. Expanded definitions of each control variable can be found in the Appendix and summary statistics are shown in Panel E of Table 1.

3. Results

3.1. KLD Scores and the political environment

In Table 2, we examine the relation between our main independent variable, a firm's *Political environment,* and firm CSR policies as measured by KLD scores. In our panel of firms, we use a pooled OLS regression to estimate the following equation:

$$KLDScore_{i,t} = \alpha + \beta\, Political\ Environment_{i,t} + \delta X_{i,t} + Industry\ Dummies_{i,t} + Year\ Dummies_{t} + \varepsilon_{i,t}. \quad (1)$$

In column 1 of Panel A, we see that the estimated coefficient β on *Political environment* from a univariate regression (without controls or industry fixed effects) is 0.165 (*t*-statistic of 10.27) which means that a one-standard deviation shock (to the political left) in the political environment is associated with an increase of 0.165 standard deviations in the *KLD Score*.

In subsequent columns of Panel A, we add a number of control variables to examine whether industry effects, firm-level variables, or CEO-level variables might explain this univariate result. We find that size and industry are important determinants of CSR. Larger firms might have

[14] Most of the data were retrieved from www.uselectionatlas.org along with sites such as http://en.wikipedia.org/wiki/United_States_state_legislatures'_partisan_trend.

[15] Our results are robust to dropping all firms headquartered in the state of New York.

more visibility (reputation concerns) and might also better absorb the costs associated with CSR than smaller firms. Similarly, some industries are more deleterious for the environment (e.g., chemicals) or for workers' health (e.g., mining) than other industries. In column 2 of Panel A, we control for the size of the firm with *Log assets* and for industry effects by adding three-digit SIC dummy variables. The coefficient on our variable of interest is reduced by about 40%, but it is still a statistically and economically significant determinant of CSR.

Table 2
KLD scores and the political environment.

Following table shows estimated coefficients from OLS regressions of *KLD Score* on a firm's *Political environment*. *Political environment* is defined as the principal component of four internal and external measures: political affiliations of the CEO, independent directors, non-CEO founders, and the partisan leanings of the state where the firm is headquartered (see Appendix for full definitions). Regressions in Panel A include the entire sample and the total *KLD Score*. Column 1 is a univariate regression while column 2 adds size and industry dummies as controls. Column 3 includes the Kaplan-Zingales index, and column 4 includes a number of firm controls. Column 5 adds CEO controls, and column 6 controls for industry by using Fama-French 49 (instead of three-digit SIC) industries. Panel B shows the relation between *Political environment* and *KLD Score* for the six issue areas. Panel C shows the results for subsamples sorted by marketcap quintiles (using NYSE breakpoints). Panel D separately shows the relations between *Political environment* and the *KLD Strengths score* and *KLD Concerns score* (for both, higher scores indicate more socially responsible behavior). In Panels B, C, and D, all specifications include firm controls, CEO controls, and three-digit SIC industry dummies (as in column 5 of Panel A). The sample runs from 2003 through 2009. All specifications include year dummies. Standard errors are clustered at the firm level and *t*-statistics are shown in brackets. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Regressions of firm KLD Score on Political environment and firm/CEO controls

Predictor variables	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
Political environment	0.165***	0.093***	0.096***	0.100***	0.099***	0.115***
	[10.27]	[6.00]	[6.15]	[6.28]	[6.18]	[6.90]
Log assets		0.070***	0.077***	0.078***	0.079***	0.055***
		[4.42]	[4.64]	[4.44]	[4.48]	[3.08]
K-Z index			−0.041***			
			[4.39]			
ROA				0.374***	0.378***	0.415***
				[5.03]	[5.06]	[5.32]
Cash				−0.018	−0.022	0.057
				[0.23]	[0.27]	[0.68]
Dividends				1.111**	1.087*	0.997
				[1.97]	[1.92]	[1.62]
Debt				−0.329***	−0.333***	−0.156
				[3.75]	[3.80]	[1.63]
Book-to-market				−0.119***	−0.123***	−0.153***
				[4.31]	[4.42]	[5.22]
CEO age					−0.001	−0.002
					[0.37]	[1.25]
CEO female					0.193**	0.188*
					[2.00]	[1.95]
CEO experience					−0.000	0.001
					[0.07]	[0.39]
CEO non-US					−0.032	0.016
					[0.27]	[0.13]
Observations	18,934	18,749	18,396	17,864	17,835	17,835
Year dummies	YES	YES	YES	YES	YES	YES
Industry dummies	NO	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	FF49

Panel B: Results for each KLD issue area

KLD issue area: Predictor variables	OLS Com. (1)	OLS Div. (2)	OLS Emp. (3)	OLS Env. (4)	OLS Hum. (5)	OLS Pro. (6)
Political environment	0.064***	0.086***	0.016	0.061***	−0.002	0.036**
	[4.07]	[5.72]	[1.04]	[4.42]	[0.11]	[2.52]
CEO age	−0.001	0.000	0.002	−0.001	−0.004**	−0.001
	[0.33]	[0.14]	[0.93]	[0.84]	[2.47]	[0.75]
CEO female	0.090	0.232**	0.065	0.049	−0.003	0.035
	[1.01]	[2.28]	[0.76]	[0.52]	[0.05]	[0.41]
CEO experience	−0.001	−0.004**	−0.000	0.002	0.003	0.003*
	[0.29]	[2.05]	[0.18]	[1.11]	[1.49]	[1.75]
CEO non-US	0.006	0.077	−0.071	0.167*	−0.267**	−0.166
	[0.07]	[0.73]	[0.69]	[1.65]	[2.03]	[1.31]
Observations	17,835	17,835	17,835	17,835	17,835	17,835
Year dummies	YES	YES	YES	YES	YES	YES
Firm controls	YES	YES	YES	YES	YES	YES
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

Table 2 (*continued*)

Panel C: Results by size quintiles

Predictor variables	OLS Size Q1 (1)	OLS Size Q2 (2)	OLS Size Q3 (3)	OLS Size Q4 (4)	OLS Size Q5 (5)
Political environment	0.053***	0.068***	0.187***	0.101***	0.067
	[3.62]	[3.64]	[5.72]	[2.68]	[0.83]
Observations	6984	3726	2684	2336	2105
Year dummies	YES	YES	YES	YES	YES
Firm controls	YES	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES	YES
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

Panel D: KLD Strengths vs. KLD Concerns

Predictor variables	KLD Strengths (1)	KLD Concerns (2)
Political environment	0.068***	0.036***
	[4.83]	[2.99]
Observations	17,835	17,835
Year dummies	YES	YES
Firm controls	YES	YES
CEO controls	YES	YES
Industry dummies	3dgt SIC	3dgt SIC

Hong, Kubik, and Scheinkman (2011) find that financial constraints are negatively correlated with CSR, suggesting that CSR is a luxury that firms eliminate when they need money. In column 3 of Panel A, we add a control for the Kaplan-Zingales (KZ) index. We confirm a negative coefficient on the KZ index, but the KZ index has no effect on the positive and significant coefficient on our variable of interest, *Political environment*. In column 4, we examine the effect on CSR of additional firm variables, some of which are components used to calculate the KZ index. More profitable firms (high ROA), dividend paying firms, and firms with less debt are all associated with a higher *KLD Score*, consistent with the financial constraints hypothesis. Book-to-market, sometimes used to measure financial distress, is also negatively related to KLD. Interestingly, cash balances do not appear to explain KLD scores.

In column 5 of Panel A, we add CEO characteristics including CEO age, tenure, gender, and nationality as control variables. The only significant CEO characteristic is gender. Female CEOs are associated with more socially responsible firms. This result is in line with the findings of Adams and Funk (2012) that female directors care more about values such as "universalism."[16] In this specification (which will be our standard specification throughout the rest of the paper), a one-standard deviation increase in the *Political environment* variable is associated with approximately a 0.1 standard deviation increase in *KLD Score*. Finally, in column 6, we check whether our results are robust to a different choice of industry classifications. We replace our three-digit SIC industry dummies with Fama-French 49-industry dummies, and find that our results do not significantly change. Overall, Panel A of Table 2 suggests a positive association between a Democratic political environment and corporate social responsibility.

In Panel B of Table 2, we explore the association between *Political environment* and KLD scores for each of the six issue areas: Community, Diversity, Employee relations, Environment, Human rights, and Product. As in Panel A, each regression includes firm controls, CEO controls, and industry fixed effects. We find that *Political environment* is positively related (in a statistically significant way) with the KLD scores for the Community, Diversity, Environment, and Product issue areas. The *Political environment* is also positively associated with the *KLD Employee relations score*, however, the coefficient is much smaller and not statistically significant. One possible reason why the effect might be so small is that the *KLD Employee relations score* is partially based on whether the workforce is unionized. Because the Democratic party is a strong ally of unions, management at unionized firms may contribute more to Republicans to weaken the political clout of their unions. Finally, there is no association between *Political environment* and the *KLD Human rights score*. It is important to mention that most of the categories in the Human rights issue area (e.g., Indigenous people relations) are only applicable to the small number of firms in our sample that operate overseas or have overseas suppliers. This most likely explains why having a non-US CEO is correlated with this score.

While we don't have any specific hypotheses about how other CEO characteristics should affect issue-area KLD scores, we do uncover some interesting associations. For example, the positive relation between having a female CEO and CSR is entirely a function of the diversity issue area. Women may be more likely to become CEOs at firms that encourage diversity or they encourage diversity after

[16] Adams and Funk (2012) define "universalism" as "understanding, appreciation, tolerance, and protection for the welfare of all people and for nature."

they become CEOs.[17] More experienced CEOs are also associated with less diversity, perhaps because they have a long-tenured management team, still around from an era when there was less diversity in corporate America. Younger CEOs are also associated with higher human rights scores, perhaps because these are more likely to be recent start-up companies which are unlikely to have a global reach.

In Panel C of Table 2, we split our sample into size quintiles (by market capitalization based on NYSE-breakpoints) and examine the relation between *Political environment* and *KLD Score* for each quintile. The coefficients are positive and statistically significant for all but the fifth quintile (largest firms). The coefficient on *Political environment* actually peaks in the third quintile (midcap stocks), suggesting a tradeoff between two opposite effects. One theory behind this finding is that the benefits of CSR for most large, highly visible firms (from improved image or other reasons) significantly exceed any costs (mostly fixed costs) so the political environment plays a small role. For small firms, the costs of CSR usually far exceed any benefits, so it makes little sense for them, irrespective of the political environment. It is exactly for midcap firms, where the financial benefits and costs are close to each other, that stakeholder personal preferences for CSR "break the tie" and affect CSR policies.

In Panel D of Table 2, we estimate the coefficient on *Political environment* separately for the *KLD Strengths score* and the *KLD Concerns score*. Strengths and concerns reflect different facets of CSR: strengths reflect proactive policies to be more socially responsible while concerns reflect actual CSR outcomes (such as an oil spill or a mining accident). We find that *Political environment* is associated both with more strengths (higher *KLD Strengths score*) and fewer concerns (higher *KLD Concerns score*). The coefficient on *Political environment* is about twice as large for strengths as for concerns. This result is intuitive since it is easier for the firm to affect policies (strengths) than to affect outcomes (concerns).

3.2. Economic significance

Table 2 shows a strong statistical association between KLD scores and *Political environment*, but it is hard to use it to evaluate economic significance without converting the unit-less KLD ratings into economic units. One way to perform this conversion is to think about how much it would cost a firm to improve its KLD ratings. Many KLD categories (especially KLD "strengths") are programs that the firm can institute by spending money, extra spending which would show up in higher levels of Selling, General, and Administrative expenses (SG&A). Examples of such programs include charitable giving, work/life benefits such as childcare, pollution prevention, employee health and safety programs, and quality control (see Appendix for the entire list of KLD categories). Therefore, we would expect firms with higher KLD scores to also spend more money on SG&A, all else equal.

In Panel A of Table 3, we regress SG&A spending on KLD scores (in the same year), while controlling for industry, firm characteristics, and CEO characteristics, as in Table 2. In columns 1 and 2, the dependent variable is the natural log of SG&A spending. As expected, the coefficient on *KLD Score* is positive and statistically significant (t-stat of 6.33). Since *KLD Score* is standardized, the coefficient of 0.064 implies that a one-standard deviation increase in *KLD Score* is associated with an extra 6.4% in SG&A expenses. In column 2, we separately estimate the effect of the *KLD Strengths score* and *KLD Concerns score* on SG&A, and find that the positive association found in column 1 is entirely driven by the *KLD Strengths score*, consistent with the idea that strengths are firm programs and policies while concerns are actual outcomes. We do find some evidence that a better *KLD Concerns* score (fewer concerns) is associated with *lower* SG&A expenses, but this effect is not significant in all specifications and is only about 20% of the magnitude of the positive coefficient on *KLD Strengths*.

In the rest of Panel A, we perform some additional tests to rule out various alternative explanations. One concern is that CSR is a form of marketing and might be correlated with advertising spending (which also falls under SG&A). In columns 3 and 4, we remove advertising spending from SG&A spending, and find that the result is almost unchanged. Another concern is that CSR might boost sales, which might lead to an increase in expenses to meet those sales. In columns 5 and 6, we rescale SG&A spending by dividing it by revenues, and again find our results are almost unchanged. A one-standard deviation increase in *KLD Score* is associated with an extra 1.2% of revenues being spent on SG&A. In Panel B of Table 3, we split our sample into size quintiles (by market capitalization based on NYSE-breakpoints). We find a positive correlation between KLD scores and SG&A exists across all five quintiles although it is strongest (and statistically significant) for the three top quintiles. Overall, Panels A and B are consistent with the view that firms need to spend money (through SG&A) to achieve better CSR performance (as measured by KLD).

Next, we convert *KLD Score* into SG&A dollars. Panel C shows summary statistics for SG&A, revenues, and net income for all Russell 3000 firms (columns 1 through 3) and just S&P 500 firms (columns 4 through 6). A one-standard deviation increase in KLD is associated with a 6.4% increase in SG&A (see Panel A), which comes out to an extra $44 million (6.4% × $689 million) for the mean firm, and an extra $201 million (6.4% × $3.14 billion) for the mean S&P 500 firm. A four standard-deviation shock to the political left is associated with a 0.4 standard-deviation increase in *KLD Score*[18] or $18 million (0.4 × $44 million) for the mean firm and $80 million (0.4 × $201 million) for the mean S&P 500 firm. While these figures may seem small relative to total revenue, they are a considerable fraction of net income (just under 10%) and therefore represent an important effect for shareholder value.

[17] This association is not mechanical since we exclude from all KLD scores the KLD diversity category which looks at whether the CEO is female or a minority.

[18] This number is obtained by multiplying 0.1, the coefficient in column 5 of Table 2, Panel A, by four.

Table 3
Economic significance – KLD rating and SG&A expenses.

Following table shows estimated coefficients from OLS regressions of Selling, General, and Administrative expenses (SG&A) on *KLD Score*. Regressions in Panel A include the entire sample while those in Panel B show results for subsamples sorted by marketcap quintiles (using NYSE breakpoints). In columns 1 and 2 of Panel A, the dependent variable is the natural log of SG&A expenses (see Appendix for full definitions). In columns 3 and 4, the dependent variable is natural log of SG&A expenses after deducting advertising expenses. In columns 5 and 6 of Panel A and in Panel B, the dependent variable is SG&A expenses scaled by revenues. Panel C shows summary statistics (mean, median, and standard deviation) for SG&A expenses, revenues, and net income. Columns 1 through 3 of Panel C are summary statistics for the entire sample while columns 4 through 6 are for S&P500 stocks only. All regressions include firm controls, CEO controls, three-digit SIC industry dummies, and year dummies (as in column 5 of Table 2, Panel A). The sample runs from 2003 through 2009. Standard errors are clustered at the firm level and *t*-statistics are shown in brackets. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Relation between KLD ratings and SG&A expenses

Dep.var:	Log SG&A expenses		Log (SG&A-advertising)		SG&A/revenues	
Predictor vars	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
KLD Score	0.064***		0.065***		0.012***	
	[6.33]		[6.29]		[5.54]	
KLD Strengths		0.129***		0.128***		0.018***
		[9.81]		[9.49]		[6.65]
KLD Concerns		−0.031**		−0.027*		0.004
		[2.20]		[1.84]		[1.32]
Observations	14,699	14,699	14,688	14,688	14,638	14,638
Firm controls	YES	YES	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES	YES	YES
Year dum.	YES	YES	YES	YES	YES	YES
Industry dum.	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

Panel B: Relation between KLD Score and SG&A expenses, by size quintile

Dep. var= SG&A/revenues	OLS All	OLS Size Q1	OLS Size Q2	OLS Size Q3	OLS Size Q4	OLS Size Q5
Predictor var.	(1)	(2)	(3)	(4)	(5)	(6)
KLD Score	0.012***	0.007	0.006	0.011**	0.017***	0.009***
	[5.54]	[1.14]	[1.19]	[2.02]	[5.10]	[2.76]
Observations	14,638	5955	3079	2133	1806	1665
Firm controls	YES	YES	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES	YES	YES
Year dum.	YES	YES	YES	YES	YES	YES
Industry dum.	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

Panel C: Summary statistics

	All firms			S&P500 firms only		
	Mean (1)	Median (2)	SD (3)	Mean (4)	Median (5)	SD (6)
SG&A expenses ($ millions)	689	136	2525	3140	1389	5577
Revenues ($ millions)	3710	661	14,058	16,492	7445	30,889
Net Income ($ millions)	193	31	1633	1032	480	3574

It is important to declare several caveats around our calculations of economic significance. First, this result does not mean CSR is financially "bad" for the firm or its shareholders due to the increase in expenses (we will test this theory directly in Section 5). A second issue is that some CSR costs might actually show up in higher Capital Expenses (CAPEX) or Cost of Goods Sold (COGS). For instance, upgrading to more environmentally friendly equipment would increase a firm's CAPEX, while buying more expensive, higher-quality parts would increase a firm's COGS. Therefore, we believe that our estimated economic effects are actually understating the full costs of CSR. Finally, while we try to avoid omitted variable bias in Table 3 by controlling for observable firm and manager characteristics, we can't completely rule out that there are some unobservable characteristics which are associated with both CSR and SG&A expenses.

In addition to using SG&A expenses to quantify the financial costs of CSR, we also do an additional back-of-the-envelope calculation to connect our results to a well-understood point of reference. Since CSR performance is associated with industry, we use estimated industry effects as a benchmark for the economic significance of the estimated effect of politics. The petroleum and natural gas industry

(Fama-French 30) is near the bottom in *environmental* CSR performance while computer software (Fama-French 36) is one of the best in this category. Using those two industries as a yardstick, we find that the average difference between Democratic-leaning and Republican-leaning firms (four-standard deviation difference in *Political environment*) in environmental CSR is about 20% of the difference between typical firms in petroleum and computer software. Thinking about how many negative environmental events are associated with oil and gas (e.g., Exxon Valdez and the British Petroleum oil spill) relative to computer software, even 20% is highly significant.

3.3. KLD scores and the firm's political culture

In Table 4, we focus on the relation between CSR and the firm's internal political environment. By the internal political environment, we mean the political affiliation of the firm's CEO, independent directors, and (non-CEO) founders. In Panel A, we regress *KLD Score* on each of the internal political measures and then all three of them simultaneously in column 4. Each specification includes our standard set of controls and also state dummy variables (for the state where the firm is headquartered) which allow us to disentangle effects of the external political environment from the political culture.

Column 1 of Panel A examines the association between *CEO D%*, the proportion of the CEO's campaign donations to Democrats, and *KLD Score*. The coefficient on *CEO D%* is 0.154 (*t*-statistic of 3.66) which means that a firm run by a "Democratic CEO" (all contributions to Democrats) has a *KLD Score* which is 0.154 standard deviations higher than a firm led by a "Republican CEO" (all contributions to Republicans). In column 2, we investigate the role of the political orientation of the independent directors. The coefficient on *Independent directors D%* is 0.338 (*t*-statistic

Table 4
KLD scores and a firm's political culture.

Following table shows estimated coefficients from OLS regressions of *KLD Scores* on measures of a firm's internal political environment. Internal political environment variables include the political affiliations of the CEO, independent directors, and non-CEO founders (see Appendix for definitions). The aggregate *KLD Score* is the dependent variable in Panel A while *KLD Scores* for the six issue areas are the dependent variables in Panel B. Column 1 of Panel A looks at the CEO's affiliation, column 2 includes the political affiliation of the independent directors, and column 3 focuses on non-CEO founders. Column 4 includes all three measures of political culture and all three measures are also included in Panel B specifications. All specifications include firm controls, CEO controls, three-digit SIC industry dummies, and year dummies (as in column 5 of Table 2, Panel A). All specifications in this table also include home-state dummies to control for the effect of the external political environment. The sample runs from 2003 through 2009. Standard errors are clustered at the firm level and *t*-statistics are shown in brackets. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Regressions of firm KLD score on firm's political culture

Predictor variables	OLS (1)	OLS (2)	OLS (3)	OLS (4)
CEO D%	0.154***			0.120***
	[3.66]			[2.82]
Indep. directors D%		0.338***		0.283***
		[3.69]		[3.01]
Non-CEO founders D%			0.125	0.086
			[1.35]	[0.91]
Observations	17,935	17,835	17,935	17,835
Firm controls	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES
Home-state dummies	YES	YES	YES	YES
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

Panel B: Results for each KLD issue area

KLD issue area: Predictor variables	OLS Com. (1)	OLS Div. (2)	OLS Emp. (3)	OLS Env. (4)	OLS Hum. (5)	OLS Pro. (6)
CEO D%	0.047	0.097**	−0.021	0.137***	0.015	0.065
	[0.98]	[2.35]	[0.48]	[3.82]	[0.42]	[1.62]
Indep. directors D%	0.148	0.278***	0.166*	0.143*	−0.045	−0.038
	[1.53]	[3.11]	[1.78]	[1.82]	[0.59]	[0.45]
Non-CEO founders D%	−0.003	−0.009	0.037	−0.001	0.012	0.213**
	[0.04]	[0.10]	[0.39]	[0.01]	[0.19]	[2.46]
Observations	17,835	17,835	17,835	17,835	17,835	17,835
Firm controls	YES	YES	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES
Home-state dummies	YES	YES	YES	YES	YES	YES
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

of 3.69), so a firm where 75% of the independent directors are Democrats has a *KLD Score* which is approximately 0.17 standard deviations higher than a firm where 25% of the directors are Democrats. Clearly, there is a positive association between the affiliation of the management and board and the firm's CSR policies.

We also test whether the political affiliations of the firm's founders, who might have helped to shape the firm's corporate culture, are related to CSR policies. We only include founders who are not the current CEO to separate the effect of CEOs from the effect of founders. The coefficient on *Non-CEO founders D%* is 0.125 (with *t*-stat of 1.35). Unlike with CEOs and board directors, we have the political affiliation of relatively few firm founders which limits the power of our test. Still, if all the firm founders are Democrats, the KLD score is about 0.125 standard deviations higher than if all the founders are Republicans. Our three political culture variables are somewhat correlated so we include all of them for the specification in column 4. The coefficients on *CEO D%* and *Independent directors D%* remain positive and statistically significant while the coefficient on *Non-CEO founders D%* remains positive but not significant.

In Panel B of Table 4, we examine the connection between a firm's political culture and each of the six KLD issue areas (as we did in Panel B of Table 2). *CEO D%* is significantly related to the KLD scores for the Diversity and Environment issue areas, while the political affiliation of the independent directors is significantly related to the Diversity, Employee relations, and Environment issue areas. Finally, the founder's political affiliation is significantly related with the Product issue area. We do not have a model for the channels that explain issue-area ratings so we will refrain from overanalyzing why the coefficients on some issue-area scores are positive and statistically significant (while others are not), especially since issue-area KLD scores are noisier than the aggregate *KLD Score*.

3.4. KLD scores and the firm's external political environment

In Table 5, we analyze whether there is a connection between a firm's external political environment (defined as the political leanings of the state where the firm is headquartered) and CSR policies. Firms headquartered in Democratic states may be more socially responsible for several reasons: perhaps because in-state shareholders, customers, and employees prefer CSR, and pressure the firm to behave in a socially responsible manner, and/or because the laws and regulations of the state make CSR more financially attractive. We use several measures of the external political environment including the percentage of voters in the state who voted for the Democratic candidate in the prior presidential election (*President vote D%*), the proportion of the Congressional delegation that is Democratic (*Congress delegation D%*), and the proportion of the state government controlled by Democrats (*State government D%*). All specifications also include firm and CEO controls, industry fixed effects, as well as the per-capita income of the state. It is important to control for per-capita income because Democratic states are generally wealthier than Republican states, and wealth might also affect preferences for social responsibility.

Column 1 of Panel A shows the relation between *President vote D%* and *KLD Score*. The coefficient on the variable of interest is 1.079 (with a *t*-statistic of 3.19). This means that, on average, a firm headquartered in a state that gave 60% of the vote to Democrats (e.g., California in 2008) has 0.11 standard deviations higher *KLD Score* than a firm in a state that gave 50% of the vote to Democrats (e.g., Florida in 2008) and 0.22 standard deviations higher *KLD Score* than a firm in a state that gave 40% of the vote to Democrats (e.g., Louisiana in 2008). Interestingly, state per-capita income is not a statistically significant determinant of CSR after controlling for the state's political leanings.

Columns 2 and 3 repeat the same analysis using the partisan makeup of the state delegation in Congress and the state government as measures of the state's political affiliation. *Congress delegation D%* is highly correlated ($\rho > 0.8$) with *President vote D%* so it does not surprise us to see that it is also positively related with CSR. The more surprising finding, in column 3, is that the makeup of the state government (which party controls the governorship and the state legislature) does not affect CSR (the coefficient on *State government D%* is actually negative but insignificant). The state government enacts the state laws and regulations, so this result may indicate that it is the preferences toward CSR of stakeholders living in the state rather than the laws and regulations of the state that explain why firms in Democratic states have higher KLD scores. Alternatively, even Republican governors and lawmakers in Democratic-leaning states may enact CSR-friendly laws and regulations on behalf of their constituents.

In columns 4 through 6 of Panel A, we include measures of the internal political environment from Section 3.2. We also include multiple measures of external environment in the same regression. Because of multicollinearity, we regress *Congress delegation D%* on *President vote D%* and use the residual from this regression which is the variable *Congress del. D%, resid.* Column 6 shows the results of a regression that includes all of our internal and external measures. The coefficient on *Congress del. D%, resid* is positive but no longer significant (after controlling for *President vote D%)*. The coefficients on internal measures are similar to those found in Table 4 (where we included state dummy variables to absorb the variation in external political environment).

In Panel B of Table 5, we examine the connection between a firm's external political environment and each of the six KLD issue areas. As with the internal measures, *President vote D%* is strongly correlated with firm diversity. The effects are also significant for Community and Product issue areas while the coefficient for the *KLD Environment score* is positive but not significant. It is not clear how state laws and regulations in Democratic states would increase the financial value to the firm of engaging in community programs and corporate philanthropy (Community issue area) or having a diverse management (Diversity issue area) so these results may indicate that it is stakeholder preferences for CSR that explain why firms in Democratic states are more socially responsible.

Table 5
KLD scores and a firm's external political environment.

Following table shows estimated coefficients from OLS regressions of *KLD Score* on measures of a firm's external political environment. External political environment variables (based on the state where the firm is headquartered) include voting patterns in prior presidential elections, partisan makeup of the Congressional delegation, and partisan makeup of the state government (see Appendix for definitions). The aggregate *KLD Score* is the dependent variable in Panel A while *KLD Score* for the six issue areas are the dependent variables in Panel B. Column 1 of Panel A looks at the presidential vote for the Democrat in the last election, column 2 includes the proportion of Democrats in the Congressional delegation, and column 3 focuses on whether Democrats control the state government (governorship and state legislature). Columns 4 through 6 include multiple measures of external political environment and also include our measures of the firm's political culture (from Table 4). All specifications include firm controls, CEO controls, three-digit SIC industry dummies, and year dummies (as in column 5 of Table 2, Panel A). The sample runs from 2003 through 2009. Standard errors are clustered at the firm level and *t*-statistics are shown in brackets. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Regressions of firm KLD score on external political environment

Predictor variables	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
President vote D%	1.079***			1.016***		0.963***
	[3.19]			[2.99]		[2.84]
Congress delegation D%		0.240***			0.226***	
		[3.18]			[2.97]	
Congress del. D%, resid						0.128
						[1.49]
State government D%			−0.010	−0.063	−0.066	−0.075*
			[0.22]	[1.39]	[1.44]	[1.64]
State per-capita income	−0.002	0.003	0.014***	−0.003	0.002	−0.004
	[0.31]	[0.61]	[3.70]	[0.51]	[0.33]	[0.61]
CEO D%				0.111**	0.110***	0.108**
				[2.62]	[2.59]	[2.53]
Indep. directors D%				0.273***	0.268***	0.267***
				[2.92]	[2.86]	[2.85]
Non-CEO founders D%				0.086	0.083	0.082
				[0.91]	[0.89]	[0.88]
Observations	17935	17935	17935	17835	17835	17835
Firm controls	YES	YES	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

Panel B: Results for each KLD issue area

KLD issue area: Predictor variables	OLS Com. (1)	OLS Div. (2)	OLS Emp. (3)	OLS Env. (4)	OLS Hum. (5)	OLS Pro. (6)
President vote D%	0.761**	1.032***	−0.051	0.465	0.036	0.816***
	[2.23]	[3.34]	[0.16]	[1.36]	[0.11]	[2.75]
Congress del. D%, resid	0.112	0.260***	0.061	0.066	0.013	−0.146*
	[1.37]	[3.36]	[0.73]	[0.88]	[0.17]	[1.94]
State government D%	−0.052	−0.067	0.006	−0.062	0.007	−0.028
	[0.99]	[1.51]	[0.14]	[1.38]	[0.17]	[0.59]
State per-capita income	0.003	−0.005	0.001	0.002	−0.002	−0.005
	[0.50]	[0.92]	[0.16]	[0.28]	[0.36]	[0.95]
Observations	17,935	17,935	17,935	17,935	17,935	17,935
Firm controls	YES	YES	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

As with the internal political environment, the *Human rights score* does not seem to be sensitive to political environment.

4. Endogeneity and alternative explanations

Before we conclude that our results in Section 3 indicate a causal relation between a Democratic political environment and higher levels of CSR, we explore a number of alternative explanations. One possible reason for our findings is that political contributions are reflecting the party that corporate stakeholders believe is better for firm prospects, rather than reflecting their personal political beliefs. If more socially responsible companies perform better when Democrats are in power, then we would have a reverse causality problem: companies with higher KLD scores would contribute more money to Democrats, creating the positive correlation between Democratic contributions and CSR which we found in Section 3. For example, a Democratic-controlled government might be more likely to use affirmative action for allocating government contracts or more likely to reward environmentally friendly companies with tax breaks.

Table 6
KLD scores and excess stock returns after Republican election victories.

Table 6 shows the estimated coefficients from OLS regressions of *KLD Score* on measures of a firm's political environment. The comprehensive political environment is our independent variable of interest in columns 1 and 2. Internal political environment measures are used in columns 3 and 4, while internal and external measures are included in columns 5 and 6 (see Appendix for definitions). All regressions also control for the stock return on each of the days after Republicans scored stronger-than-expected election victories for president (2000 and 2004) and Congress (2002). Excess return is measured relative to firms in the same size, value, and momentum group and *Excess return – average* is the arithmetic average of excess returns over the three post-election days. All specifications include firm controls, CEO controls, three-digit SIC industry dummies, and year dummies (as in column 5 of Table 2, Panel A). The sample runs from 2003 through 2009. Standard errors are clustered at the firm level and *t*-statistics are shown in brackets.*, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Predictor variables	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
Political Environment	0.104***	0.120***				
	[5.72]	[5.53]				
CEO D%			0.146***	0.174***	0.132***	0.159***
			[3.05]	[3.06]	[2.79]	[2.82]
Indep. directors D%			0.267**	0.264**	0.265**	0.259**
			[2.50]	[2.05]	[2.48]	[2.01]
Non-CEO founders D%			0.095	0.140	0.092	0.140
			[0.91]	[1.07]	[0.88]	[1.08]
President vote D%					0.775***	0.900***
					[3.26]	[3.16]
Excess return – average	−2.679***		−2.849***		−2.649***	
	[4.18]		[4.41]		[4.13]	
Excess return – 11/8/00		−0.993*		−0.970*		−0.980*
		[1.84]		[1.81]		[1.81]
Excess return – 11/6/02		−1.035***		−1.101***		−1.011**
		[2.59]		[2.75]		[2.52]
Excess return – 11/3/04		−1.726**		−1.705**		−1.680**
		[2.37]		[2.33]		[2.33]
Observations	15,521	12,588	15,521	12,588	15,521	12,588
Firm controls	YES	YES	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES
Home-state dummies	NO	NO	YES	YES	NO	NO
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

In Table 6, we test this explanation by using stock returns after (unexpected) election results (2000, 2002, 2004 elections) as a measure of the value to a company from a Republican or Democratic victory. The Republican candidate won the presidency in 2000[19] and 2004 and the Republicans beat expectations in 2002, taking full control of Congress. Firms whose stocks outperformed on these days are likely to be firms whose prospects improve with Republicans in power (and vice versa). We calculate the excess (characteristic-adjusted) daily return relative to firms with similar size, value, and momentum characteristics on the day after each election. We also take the average of these returns, *Excess return – average*, to reduce noise.

Table 6 shows that firms with lower KLD scores did perform better after Republican election victories: the coefficients on post-election excess returns are negative and statistically significant. However, adding post-election excess returns does not affect the coefficients on our measures of the political environment such as *CEO D%* or *President vote D%*. Surprisingly, this is because political environment is largely uncorrelated ($\rho = -0.01$) with the post-election excess returns. This result suggests that our political environment variables are not simply picking up the party that is better for firm prospects, but are actually measuring the political affiliation of firm insiders.

Another potential explanation for our results is endogenous selection. Democrats might be more likely to find employment at more socially responsible firms (perhaps because they receive more personal utility from social responsibility or for other reasons).[20] In addition, more socially responsible firms might locate their headquarters in Democratic states, and vice versa for less socially responsible firms. In Panel A of Table 7, we use two-stage least squares (2SLS) regression, and instrument our measures of political environment. Our instrument is the political affiliation of the state (*President vote D%*) in which the founder(s) went to college. This instrument is likely to be correlated with the *Political environment* through two channels. First, founders who go to college in Democratic states are more likely to be from Democratic states so they are more likely to be Democrats themselves (which would affect the firm's political culture). Second, founders who go to college in Democratic states are more likely to start their company in the state where they went to college, thus creating an external Democratic political

[19] The final conclusion of the 2000 election occurred in December when the Supreme Court ruled in favor of George W. Bush in Bush v. Gore. However, Bush was ahead in Florida (by several hundred votes) on election night and never fell behind in the Florida vote count.

[20] We first looked at this hypothesis in Section 3.3 by examining firm founders. Founders' contributions to Democrats are positively related to firm KLD scores although the result is not statistically significant.

Table 7
Regressions of KLD scores on political variables – IV and OLS with firm fixed effects.

Following table shows estimated coefficients from instrumental variable regressions (2SLS) in Panel A and OLS regressions with firm fixed effects in Panel B of *KLD Score* on political variables. In Panel A, our instrument in each column is the political affiliation (as measured by *President vote D%*) of the state in which the founder or founders went to college (see Appendix for definitions). Panel B excludes *Non-CEO founders D%* since their affiliation does not change over time. All specifications include firm controls, CEO controls, three-digit SIC industry dummies, and year dummies (as in column 5 of Table 2, Panel A). The sample runs from 2003 through 2009. Standard errors are clustered at the firm level and *t*-statistics are shown in brackets.*, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Instrumental variable regressions of KLD Score on political variables

Predictor variables	IV 2SLS (1)	IV 2SLS (2)	IV 2SLS (3)	IV 2SLS (4)	IV 2SLS (5)
Political environment (PrinComp)	0.326*** [2.70]				
CEO D%		4.094 [1.45]			
Indep. directors D%			5.566* [1.76]		
Non-CEO founders D%				2.053** [2.05]	
President vote D%					4.404*** [2.67]
First-stage *F*-statistic	59.4	3.8	9.0	16.5	51.7
Observations	17,835	17935	17,835	17,935	17,935
Firm controls	YES	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES
Home-state dummies	NO	YES	YES	YES	NO
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

Panel B: OLS regressions of KLD Score on political variables with firm fixed effects

Predictor variables	OLS FE (1)	OLS FE (2)	OLS FE (3)	OLS FE (4)
Political environment	0.032 [1.36]			
CEO D%		0.021 [0.48]		
Indep. directors D%			0.195* [1.83]	
President vote D%				0.641 [1.26]
Observations	17,835	18,187	18,084	17,935
Firm controls	YES	YES	YES	YES
CEO controls	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

environment for their firm. Indeed, we find that *F*-statistics from first-stage regressions exceed 10 for *Non-CEO founders D%* and *President vote D%*, which suggests that we do not have a weak instrument problem. The exogeneity assumption is also reasonable since it is unlikely that founders go to college with the expectation of founding a more socially responsible firm (or founding any firm at all).[21]

We instrument for each of our political environment variables, and find that the comprehensive *Political environment*, as well as the individual measures of the internal and external environment, positively affect the *KLD Score*. All are statistically significant except for *CEO D%*. Because we only have one instrument, our system is underdetermined, so we can not uncover the precise channel through which founders' college location affects KLD scores. However, these results do suggest that founders have an important role in shaping the political environment and CSR.

Another test for causality is to add firm fixed effects to see whether time-series variation in political environment actually changes CSR policies. In Panel B of Table 7, we present our analysis of the effect of *Political environment* on *KLD Score* using regressions with firm fixed effects. The coefficients on our variables of interest are all positive but only the independent directors' political affiliation is statistically significant (at the 10% level). Unfortunately, there is very strong persistence in KLD scores over time and we only have seven years of data (limiting the power of our test) so while the estimated relation is positive, we are unable to reject the null hypothesis.

In Table 8, we investigate whether socially responsible firms are more likely to (externally) hire managers

[21] A better instrument would be to use the political leanings of the state where the founders are born, but this information is not provided by BoardEx.

that are Democrats. Basically, we want to know if Democrats self-select into socially responsible firms, so we regress prior donations of a new externally hired CEO ($CEO\ D\%_{t-1}$) on the $KLD\ Score_{t-1}$ of the company where t is the year that the new CEO joins the firm. We find a coefficient of 0.009 (t-statistic of 0.56) on the prior year's *KLD Score* so a one-standard deviation increase in prior KLD corresponds with a 0.03 standard deviation increase in *CEO D%* (prior to hiring) of a newly hired CEO. We find some evidence that the partisan affiliation (using prior donations) of the new CEO is affected by the affiliation of the prior CEO, but the coefficient on *Prior CEO's D%* is also not statistically significant. Overall, we find little evidence of selection of Democrats into socially responsible firms.

Next, in Table 9, we explore a number of additional factors including ownership by institutions and the CEO, political sensitivity, and visibility/reputation effects that might explain CSR policies and be correlated with the political environment. We find that controlling for these factors has little effect on the positive and significant coefficient on *Political environment*.

In column 1 of Table 9, we regress *KLD Score* on the total institutional holdings of firm stock, holdings by public pension funds, holdings by SRI mutual funds, and CEO holdings. Consistent with Gillan, Hartzell, Koch, and Starks (2010), we find that higher total institutional holdings are associated with a lower KLD score. SRI funds and public pension funds are widely recognized as activist institutions that select socially responsible firms for their portfolios and also push firms toward instituting more socially responsible policies. Consistent with this anecdotal evidence, we find that higher holdings by these institutions are associated with a higher KLD score. Finally, CEO holdings can be a proxy for alignment of CEO and shareholder incentives. Interestingly, we do not find any association between CEO holdings and KLD scores. This suggests that CSR is not a form of perk caused by bad manager incentives. In column 2 of Table 9, we add an interaction term between CEO holdings and *CEO D%* to the specification in column 1. The interaction term is slightly negative but not statistically significant suggesting that the correlation between the CEO's political affiliation and CSR policies is not due to managers satisfying their personal political or social preferences at the expense of shareholder value.

We also test whether four measures of political sensitivity: sales to government, lobbying, PAC spending, and political directors, are correlated with CSR policies. Column 3 of Table 9 shows that sales to the government (as a share of total sales) and PAC spending (scaled by firm assets) are negatively correlated with the *KLD Score*. On the other hand, having a political director on the Board of Directors is associated with a higher *KLD Score* while the coefficient on lobbying is also positive but not statistically significant. Overall, we conclude that there is no clear association between political sensitivity and CSR. In a deeper look at issue-area KLD scores (not shown here, but available upon request), we find that the negative correlation between political sensitivity and CSR is mostly driven by the Product issue area. This makes intuitive sense since the government is more likely to regulate and oversee firms with potentially problematic products (e.g., tobacco or alcohol producers on the industry level).

In column 4 of Table 9, we replace the *Political director* dummy variable with dummy variables for having a political director from each party. We find that the positive coefficient on *Political director* from Column 3 is largely driven by having a Democratic political director on the board. This result is consistent with our hypothesis that a Democratic party affiliation of stakeholders is associated with improvements in CSR. An advantage of this analysis is that we do not need to rely on campaign contributions to figure out political affiliation of political directors. Instead, we know the actual party affiliation (of former politicians) or use the party of the administration in which the director served (for former Cabinet or White House officials).

We also explore whether marketing and reputation might explain CSR policies. We regress *KLD Score* on the number of sell-side analysts covering the firm, spending on advertising, and S&P 500 membership. In column 5 of Table 9, we can see that there are positive coefficients on all three measures although the coefficient on advertising is not significant. Again, we take a closer look at the issue-area scores, and find that the only negative association is between advertising and the Product issue-area KLD score. Unlike coverage by analysts and S&P 500 membership, advertising is a choice variable so firms might be using advertising to repair their image from the revelation of any product problems. In column 6 of Table 9, we include all the control variables, and confirm that the effect of *Political environment* is not picking up effects related to ownership, political sensitivity, or visibility.

Table 8
Are Democrats more likely to become CEOs of socially responsible companies?

Following table presents estimated coefficients from OLS regressions of the CEO's political affiliation on KLD scores, for a sample of observations where a CEO was externally hired in the prior year. The dependent variable is $CEO\ D\%_{t-1}$ which is the proportion of CEO donations to Democrats prior to the year when the CEO joined the firm. The main independent variable of interest is $KLD\ Score_{t-1}$ which is the *KLD Score* of the firm in the year prior to the hiring of the CEO. In column 2, we also control for the prior CEO's political affiliation. All specifications include firm controls, CEO controls, three-digit SIC industry dummies, and year dummies (as in column 5 of Table 2, Panel A). See Appendix for definitions. The sample runs from 2003 through 2009. Standard errors are clustered at the firm level and t-statistics are shown in brackets.*, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Predictor variables	OLS (1)	OLS (2)
$KLD\ Score_{t-1}$	0.010	0.009
	[0.58]	[0.56]
Prior CEO's D%		0.018
		[0.33]
Observations	564	564
Firm controls	YES	YES
CEO controls	YES	YES
Year dummies	YES	YES
Industry dummies	3dgt SIC	3dgt SIC

Table 9
Regressions of KLD score on measures of ownership, political sensitivity, and visibility.

Table 9 presents estimated coefficients from OLS regressions of *KLD Score* on a firm's political environment and measures of stock ownership, political sensitivity, and visibility. In column 1, we control for institutional ownership, public pension fund ownership, SRI mutual fund ownership, and CEO ownership. Column 2 also includes *CEO D%* and an interaction term between *CEO D%* and CEO ownership. In column 3, we control for sales-to-government, lobbying expenditures, political expenditures by the firm's political action committee (PAC), and a political director dummy. Column 4 also includes dummies for Democratic and Republican political directors. In column 5, we control for number of analyst estimates, advertising spending, and S&P500 membership. Column 6 includes all controls from the prior five columns. All specifications include firm controls, CEO controls, three-digit SIC industry dummies, and year dummies (as in column 5 of Table 2, Panel A). All independent variables are lagged and data definitions are available in the Appendix. The sample runs from 2003 through 2009. Standard errors are clustered at the firm level and *t*-statistics are shown in brackets.*, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Predictor variables	OLS (1)	OLS (2)	OLS (3)	OLS (4)	OLS (5)	OLS (6)
Political environment	0.101***		0.097***	0.094***	0.099***	0.099***
(PrinComp)	[6.30]		[6.10]	[5.92]	[6.28]	[6.27]
Institutional own., %	−0.123*	−0.131*				−0.121
	[1.65]	[1.80]				[1.61]
Public pension fund own., %	2.236**	2.005*				1.156
	[2.13]	[1.94]				[1.08]
SRI mutual fund own., %	11.249***	10.698***				11.492***
	[3.97]	[3.95]				[4.15]
CEO ownership, %	−0.127	0.029				−0.107
	[0.77]	[0.12]				[0.66]
CEO D%		0.165***				
		[3.56]				
CEO own., % × CEO D%		−0.295				
		[0.71]				
Sales to govt			−0.447**	−0.444**		−0.449**
(as % of all sales)			[2.43]	[2.38]		[2.45]
Lobbying expenditures			0.082	0.090		0.075
(scaled by assets)			[1.27]	[1.38]		[1.17]
PAC expenditures			−3.546	−3.494		−3.982*
(scaled by assets)			[1.62]	[1.59]		[1.82]
Political director, dummy			0.094**			0.075
			[2.01]			[1.61]
Dem director, dummy				0.141*		
				[1.91]		
Rep director, dummy				0.015		
				[0.29]		
No. of analyst estimates					0.019***	0.019***
					[5.35]	[5.17]
Advertising spending					0.473	0.406
(scaled by assets)					[0.73]	[0.63]
S&P500 member, dummy					0.204***	0.189***
					[3.18]	[2.86]
Observations	17,835	17,835	17,835	17,835	17,835	17,835
Year dummies	YES	YES	YES	YES	YES	YES
Firm controls	YES	YES	YES	YES	YES	YES
Home-state dummies	NO	YES	NO	NO	NO	NO
Industry dummies	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC	3dgt SIC

5. CSR policies and implications for the firm

After getting a better understanding of how firms choose their CSR policies, we next explore how these choices affect future firm values. We test whether CSR policy changes lead to changes in stock price and operating performance. In order to increase the number of time-series observations and improve the power of our statistical tests, we reduce our cross-section to firms in the S&P 500, which allows us to increase our time-series to the period from 1991 to 2009.[22] Our methodology for this section is to calculate changes in KLD scores for each firm, and then regress our performance measures on *lagged* changes in KLD scores so we can infer the direction of causality from CSR to performance.

Our methodology is based on the hypothesis that investors do not find out about most CSR policies when they happen, but only when they receive the information from CSR ratings agencies such as KLD. A new volunteer program, recycling program, retirement benefits program, or minority contracting program are all unlikely to receive the press coverage and attention that an earnings announcement or a merger announcement receive, and in many cases, may not be made public at all. In fact, the very existence of the CSR ratings agencies indicates that there is a cost to researching firm CSR policies and that interested investors are willing to pay a third-party to

[22] Recall that CSR data from KLD are available for S&P 500 firms going back to 1991. Unfortunately, we are unable to use this extended sample for the other sections of the paper because our political data set which requires BoardEx starts in 1999 for some firms and in 2002 for others.

perform this research on their behalf. KLD ratings are a "black box," calculated by annual evaluations of "media reports, monitoring of corporate advertising, surveys, and on-site evaluations." (Kotchen and Moon, 2011). We do not know the dates when new KLD ratings are released to clients, but the sheer quantity of required data analysis suggests that it is long after the firm policy changes occurred. This is not just an issue with CSR ratings agencies, as credit ratings agencies have long been accused of being too slow in their reaction to changes in issuer credit risk.

If investors are reacting to changes in KLD ratings rather than changes in actual CSR policies, then regressing stock returns on lagged changes in CSR policies picks up investor reaction to news of the changes, which is exactly what we are interested in learning about. The use of *lagged* changes in KLD scores also minimizes the probability that we pick up firm responses to the market instead of the market's responses to the firm. Finally, the use of *changes* in KLD scores makes our findings more likely to be a causal response rather than due to differences in cost of capital, which would be affected by *levels* of KLD scores. We also regress returns on past levels of KLD scores to confirm that we are not simply picking up a different cost of capital after a change in the KLD score.

Panel A of Table 10 shows the results of OLS panel and Fama-MacBeth regressions of monthly stock returns on current and lagged changes in KLD scores and firm controls. The coefficient on prior year's change in the *KLD Strengths score* is approximately −10 basis points (or −1.2% per annum), so the stock price of a firm that introduces one additional CSR strength underperforms by 2.4% in the subsequent year relative to a firm that eliminates one CSR strength. Interestingly, there is no similar effect for changes in the *KLD Concerns score*. These results are complementary to findings reported earlier, that the effect of political environment on CSR is predominant for KLD strengths, and that SG&A expenses are also positively correlated with KLD strengths and largely unrelated to KLD concerns. Since our focus is on firm CSR policies rather than exogenous CSR events, we are much more interested in the consequences of changes in the KLD strengths score. Interestingly, we find no effect on returns from *concurrent* changes in KLD strengths. This result is again consistent with the notion that information about CSR changes reaches the market in the following year, and inconsistent with the alternative theory that prices should rise in response to CSR changes due to lower discount rates applied by investors.

There are several important takeaways from Panel A of Table 10. First, the sample consists of only S&P 500 firms, which have the most liquid stocks, are less volatile, and are less likely to be mispriced. A return effect of 1.2% (per unit of KLD strength) is therefore also economically significant, equaling, on average, about $200 million in market capitalization (1.2% times average market capitalization of $17 billion for this sample). Second, it is important to note that earlier lags of changes in *KLD Strengths* are not predictive of stock returns, a result which is consistent with a causal story but inconsistent with a cost of capital story. Third, these future "abnormal" returns can not be arbitraged away because, while the change in CSR policies happens in the prior year, investors only find out about it contemporaneously to the change in stock price.

In Panel B of Table 10, we directly test the hypothesis that firms that perform more CSR have a lower cost of equity capital due to investor preferences for holding their stock. We regress stock returns on the prior year's *levels* of KLD strengths scores, concerns scores, and overall ratings. We find no evidence of an effect on stock returns from levels of KLD scores. The coefficient on the overall rating is negative but less than one basis point per month (and insignificant), while the coefficient on the level of KLD strengths is actually positive and insignificant. These results provide us with additional confidence that the results in Panel A are not coming from a change in the cost of capital due to changes in KLD strengths.

Next, we examine the relation between changes in CSR and future operating performance. The results of this test are the most difficult to interpret because firm management can anticipate future operating performance and can make changes in CSR as a substitute for (or antidote to) future declining profits. In Table 11, we regress future three-year changes in ROA and future three-year revenue growth on lagged changes in KLD scores. In columns 1 and 2, we again see a negative relation between lagged changes in KLD strengths and change in ROA. Unlike what we saw in Table 10, earlier lags (two years and three years earlier) of changes in KLD strengths are also significant. Changes in KLD concerns are still largely uncorrelated with future firm performance. Although we are cautious in interpreting these results, they are certainly consistent with the idea that increases in firm CSR are negatively related to future changes in operating performance.

One frequent explanation for CSR is positive reputational value that would help the firm sell its products and thus increase revenues. In columns 3 and 4 of Table 11, we test this theory by regressing future three-year growth in revenues on lagged changes in KLD scores. We are unable to reject the null hypothesis that CSR changes have no effect on future revenue growth, so we do not find any evidence for a positive (or negative) reputation effect of CSR on firm sales.

6. Robustness checks

We perform a number of checks to investigate the robustness of our results. Tables which include all robustness checks are available upon request. First, we calculate the political tilt of PAC donations and of employees[23] and include them when constructing the *Political environment* variable. Both the coefficient and *t*-statistic on *Political environment* become larger after including PAC and employee political affiliations. However, only about 10% of firms have PACs and for those firms, PAC donations are more clustered around 50% (to each party) than those of individuals, suggesting strategic behavior (donations to both parties in case either party wins). For employees,

[23] Employee donations are identified using the occupation field in the FEC campaign contributions database.

Table 10
Regressions of monthly returns on KLD strengths and concerns.

Table 10 shows estimated coefficients from regressions of monthly stock returns on KLD strengths and KLD concerns and firm-level controls. In Panel A, the main explanatory variables are current and past changes in KLD strengths and concerns, while in Panel B, the main explanatory variables are lagged levels of KLD strengths, concerns, and scores. The sample consists of all S&P500 firms from 1991 through 2009. In Panel A, columns 1 and 2 show the results of an OLS regression, with the second column also including industry controls (using three-digit SIC codes). Column 3 shows estimated coefficients from a Fama-MacBeth regression. In Panel B, columns 1 and 3 show results of OLS regressions while columns 2 and 4 and show results of Fama-MacBeth regressions. All specifications also include controls for firm size (natural log of market capitalization), book-to-market, and prior year stock returns. OLS regressions include year dummies and have standard errors clustered by year. *t*-Statistics are shown in brackets.*, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Regressions of monthly returns on changes in KLD strengths/concerns

Dep.var:	Returns (monthly)	Returns (monthly)	Returns (monthly)
Regression:	OLS	OLS	Fama-MacBeth
Predictor variables	(1)	(2)	(3)
KLD Strengths Δ, concurrent	0.008%	0.007%	0.020%
	[0.19]	[0.16]	[0.24]
KLD Strengths Δ, lag1 (prior yr)	−0.107%***	−0.103%***	−0.089%**
	[2.72]	[2.62]	[2.33]
KLD Strengths Δ, lag2	0.006%	0.011%	0.025%
	[0.15]	[0.28]	[0.60]
KLD Strengths Δ, lag3	−0.093%	−0.084%	−0.073%*
	[1.60]	[1.48]	[1.66]
KLD Concerns Δ, concurrent	0.041%	0.035%	0.068%
	[0.96]	[0.85]	[0.96]
KLD Concerns Δ, lag1 (prior yr)	0.044%	0.037%	0.051%
	[0.99]	[0.81]	[1.00]
KLD Concerns Δ, lag2	−0.042%	−0.050%	−0.030%
	[0.92]	[1.10]	[0.66]
KLD Concerns Δ, lag3	−0.011%	−0.019%	−0.063%
	[0.18]	[0.34]	[1.17]
Log marketcap, prior yr	−0.055%	−0.133%*	−0.076%
	[0.68]	[1.77]	[0.97]
Book-to-market, prior yr	0.108%	0.097%	0.219%*
	[1.03]	[0.83]	[1.80]
12-month returns, prior yr	−5.403%	−8.052%	1.430%
	[0.66]	[0.99]	[0.26]
Observations	73,740	73,740	180
Industry controls	NO	3dgt SIC	NO
Time dummies	YES	YES	NO

Panel B: Regressions of monthly returns on levels of KLD strengths/concerns

Dep.var:	Returns (monthly)	Returns (monthly)	Returns (monthly)	Returns (monthly)
Regression:	OLS	Fama-MacBeth	OLS	Fama-MacBeth
Predictor variables	(1)	(2)	(3)	(4)
KLD Strengths (level), prior yr	0.007%	0.014%		
	[0.39]	[0.79]		
KLD Concerns (level), prior yr	−0.028%	−0.016%		
	[0.82]	[0.57]		
KLD Score (level), prior yr			−0.008%	−0.002%
			[0.45]	[0.16]
Log marketcap, prior yr	−0.140%	−0.115%	−0.114%	−0.084%
	[1.63]	[1.45]	[1.62]	[1.29]
Book-to-market, prior yr	0.128%	0.236%*	0.137%	0.252%**
	[1.15]	[1.95]	[1.25]	[2.05]
12-month returns, prior yr	−2.985%	3.112%	−3.184%	3.141%
	[0.39]	[0.64]	[0.42]	[0.65]
Observations	102,894	216	102,894	216
Time dummies	YES	NO	YES	NO

the occupation field in the FEC database often includes names of subsidiaries or does not include any company name so the aggregated data are unreliable and incomplete. As a result, we do not include these two measures of political environment in the standard specification used throughout the paper.

Next, in order to confirm that our findings are not affected by the choice of industry definition, we control for various Fama-French industry classifications, Compustat SIC code, and North American Industry Classification System (NAICS) code. We find that our results are not significantly affected by how we define industry. We also replace ROA with ROIC (return on invested capital) as a cleaner measure of firm performance, and find similar results. Third, we measure stakeholder political affiliation using only campaign donations to *presidential* campaigns

Table 11
Regressions of future firm operating performance on prior changes in KLD scores.

Following table shows estimated coefficients from OLS regressions of future changes in operating performance on lagged changes in KLD strengths and KLD concerns and firm-level controls. The sample consists of all S&P500 firms from 1995 through 2009. There are three years of lagged changes in strengths and concerns in each specification. In columns 1 and 2, the dependent variable is the change in ROA over the next three years, with the second column also including industry controls (using three-digit SIC codes). In Columns 3 and 4, the dependent variable is the revenue growth over the next three years, with the fourth column also including industry controls. All specifications also include controls for firm size, book-to-market, prior year stock returns, ROA, as well as time dummies. Standard errors are clustered at the firm level and *t*-statistics are shown in brackets.*, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Dep.var:	ROA Δ next 3 years	ROA Δ next 3 years	Revenue growth % next 3 years	Revenue growth % next 3 years
Predictor variables	(1)	(2)	(3)	(4)
KLD Strengths Δ, lag1 (prior yr)	−0.310%**	−0.246%	−0.329%	−0.212%
	[1.96]	[1.58]	[0.42]	[0.26]
KLD Strengths Δ, lag2	−0.257%**	−0.207%*	−0.305%	0.021%
	[2.22]	[1.92]	[0.39]	[0.03]
KLD Strengths Δ, lag3	−0.267%**	−0.220%**	−1.196%*	−0.935%
	[2.53]	[2.08]	[1.82]	[1.40]
KLD Concerns Δ, lag1 (prior yr)	0.041%	0.055%	1.354%*	1.084%
	[0.34]	[0.47]	[1.93]	[1.49]
KLD Concerns Δ, lag2	−0.018%	0.003%	0.674%	0.502%
	[0.18]	[0.03]	[0.85]	[0.62]
KLD Concerns Δ, lag3	0.110%	0.118%	0.644%	0.326%
	[0.90]	[0.97]	[0.76]	[0.38]
Log marketcap, prior yr	0.422%***	0.718%***	2.684%***	0.180%
	[3.15]	[4.38]	[3.10]	[0.20]
Book-to-market, prior yr	−0.680%	−0.324%	−1.998%***	−0.024***
	[1.27]	[0.95]	[3.74]	[2.80]
12-month returns, prior yr	0.084	0.092*	2.787***	2.553***
	[1.56]	[1.74]	[9.20]	[8.10]
ROA, prior year	−0.592***	−0.776***	0.043	0.244*
	[14.63]	[17.89]	[0.37]	[1.89]
Observations	5171	5171	5173	5173
Industry controls	NO	YES	NO	YES
Time dummies	YES	YES	YES	YES

since these contributions might be less strategic and more ideological than contributions to politicians running for Congress. There is little effect on the coefficients on political affiliation, but statistical significance is slightly weaker (although still significant at the 1% level) since our estimates of political affiliation become less precise with fewer observations. Fourth, New York's presidential vote might not be representative of the external political environment of most firms headquartered in the state.[24] We drop firms located in the state of New York from our sample and find that the coefficients and *t*-statistics on our variables of interest actually get slightly larger.

Fifth, we drop observations from 2009 from our study since KLD was purchased by RiskMetrics in that year and their methodology might have been affected by this change in ownership, but our estimated coefficients are largely the same. Sixth, we control for the proportion of firm revenues from international sources (multinationals). We find that multi-nationals are more socially responsible but this control does not affect the coefficients on *Political environment* which are the focus of this paper. Finally, we include all board members (not just independent directors) in our construction of the board's political tilt and include all founders (not just non-CEO founders) in our construction of firm founders. Under these alternative definitions, our main findings still hold.

[24] Because it is a U.S. media and financial hub, many firms choose to be headquartered in New York City even if they do most of their business outside New York State. As a result, the proportion of firms headquartered in New York vastly exceeds its proportion of the U.S. population.

7. Conclusion

In this paper, we ask whether (and how) political values affect firm corporate social responsibility policies. We create a measure of the political environment of a firm that accounts for the political contributions of internal stakeholders (CEOs, founders, and independent directors) and the political affiliation of external stakeholders (as measured by voting patterns in the state where the firm is headquartered). We show that firms characterized by Democratic political environments are also more socially responsible. Our findings are robust to firm and CEO characteristics, and do not seem to be a result of endogeneity problems.

The relation between political environment and CSR is important because the determinants of CSR policies are still not fully understood. It is not clear that CSR is driven by a desire to improve financial performance, as previous studies have not been able to find a clear relation between financial performance and CSR policies. Our paper finds a negative correlation between CSR and future stock prices and operating performance. These results are consistent with recent evidence (see Hong, Kubik, and Scheinkman, 2011) that “goodness is costly” and “a complement to profits.”

Appendix A. Data and variable definitions

A.1. Corporate social responsibility – KLD scores (KLD)

KLD Score = *KLD Strengths score* + *KLD Concerns score*.
KLD Strengths score = Number of strengths across all six issue areas.
KLD Concerns score = $-1 \times$ (Number of concerns across all six issue areas).
KLD Community score: Number of community strengths minus number of community concerns.
In the same way, we calculate *KLD Diversity score, KLD Environment score, KLD Employee relations score, KLD Human rights score,* and *KLD Product score.*
KLD Community strengths (6): Charitable Giving, Innovative Giving, Non-US Charitable Giving, Support for Housing, Support for Education, and Other Strength.
KLD Community concerns (4): Investment Controversies, Negative Economic, Tax Disputes, and Other Concern.
KLD Diversity strengths (6): Promotion, Work/Life Benefits, Women & Minority Contracting, Employment of the Disabled, Gay & Lesbian Policies, and Other Strength.
KLD Diversity concerns (2): Controversies, and Other Concern.
KLD Environment strengths (5): Beneficial Products and Services, Pollution Prevention, Recycling, Clean Energy, and Other Strength.
KLD Environment concerns (7): Hazardous Waste, Regulatory Problems, Ozone Depleting Chemicals, Substantial Emissions, Agricultural Chemicals, Climate Change, and Other Concern.
KLD Employee relations strengths (6): Union Relations, Cash Profit Sharing, Employee Involvement, Retirement Benefits Strength, Health and Safety Strength, and Other Strength.
KLD Employee relations concerns (5): Union Relations, Health and Safety Concern, Workforce Reductions, Retirement Benefits Concern, and Other Concern.
KLD Human rights strengths (3): Indigenous Peoples Relations, Labor Rights, and Other Strength.
KLD Human rights concerns (4): Burma Concern, Labor Rights, Indigenous Peoples Relations, and Other Concern.
KLD Product strengths (4): Quality, R&D/Innovation, Benefits to Economically Disadvantaged, and Other Strength.
KLD Product concerns (4): Product Safety, Marketing/Contracting, Antitrust, and Other Concern.

A.2. CEOs and boards of directors (BoardEx)

CEO age: Age of the CEO.
CEO female: Dummy equal to one if the CEO is female, zero otherwise.
CEO experience: Number of years that the CEO has been at the helm of the firm.
CEO nonUS: Dummy equal to one if the CEO is not a US citizen, zero otherwise.
Board size: Number of directors.
Independent directors: Number of independent board members.

A.3. Political affiliations – internal political environment (FEC at www.fec.gov)

CEO D%: Political affiliation of the CEO for a particular firm-year, defined as the CEO's total campaign contributions to Democrats (prior to that year) divided by her total contributions to both parties (prior to that year). If no campaign contributions are found for the CEO, *CEO D%* is set to 0.5.
Independent directors D%: Average political affiliation of the independent members of the board of directors for a particular firm-year. We measure the same proportion as the one used for *CEO D%* for each independent director, and then the proportions are averaged across all independent directors.
Non-CEO founders D%: Average political affiliation of the firm's founder(s) that is not current CEO for a particular firm-year. We measure the same proportion as the one used for *CEO D%*. If a firm has more than one founder, the proportions are averaged across all founders. The founder status is obtained using the BoardEx database.
Prior CEO's D%: Political affiliation of the firm's CEOs that managed the firm before the current CEO for a particular firm-year. We measure the same proportion as the one used for *CEO D%*.
Political director dummy: Dummy equal to one if a firm has a Democratic and/or a Republican director, and zero otherwise.
A politically connected director is a board director who was either formerly elected to high office (in Congress or as a state governor) or who served in an administration (as Ambassador, Cabinet Department Secretary or Assistant Secretary, or White House official) of a particular party. Directors that served in both Republican and Democratic administrations are excluded, as they are probably civil servants, not political appointees. (BoardEx)
Rep director dummy: Dummy equal to one if one of the firm's directors is politically connected to the Republican party, and zero otherwise.
Dem director dummy: Dummy equal to one if one of the firm's directors is politically connected to the Democratic party, and zero otherwise.

A.4. External political environment (Dave Leip's Atlas of U.S. Presidential Elections and other online sources)

Address of headquarters for each firm is obtained from Compustat (most recent headquarters only).

President vote D%: Proportion of the vote received by the Democratic candidate for president in the last election in the state where the firm is headquartered.
Congress delegation D%: $0.5 \times$ proportion of Senators who are Democrats $+ 0.5 \times$ proportion of Congressmen

who are Democrats (all from the state where firm is headquartered).
State government D%: 0.5 × indicator equal to one if governor is a Democrat + 0.25 × indicator equal to one if the state legislature upper chamber is controlled by Democrats + 0.25 × indicator equal to one if state legislature lower chamber is controlled by Democrats.

A.4.1. Political environment – comprehensive score

Political environment: First principal component of the principal component analysis applied to *CEO D%*, *Independent directors D%*, *Non-CEO founders D%*, and *President vote D%*.

A.5. Firm control variables (Compustat and CRSP)

Assets (log): Assets (Compustat item "AT").
ROA: The ratio of income before extraordinary items ("IB") to total assets ("AT").
Book-to-market: The ratio of book value of the equity ("CEQ") over the market value of equity measured as absolute value of price, "PRC," times shares outstanding, "SHROUT," from CRSP.
Cash: The ratio of cash balances ("CHE") over assets.
Dividends: The ratio of cash dividends ("DVC" + "DVP") over assets.
Debt: The ratio of total debt ("DLTT" + "DLC") over assets.
KZ index: Kaplan and Zingales (1997) index measured as following:

$$= -1.002CF_{i;t}/A_{i;t-1} - 39.368DIV_{i;t}/A_{i;t-1} - 1.315C_{i;t}/A_{i;t-1} + 3.139BLEV_{i;t} + 0.283Q_{i;t}$$

where $CF_{i;t}/A_{i;t-1}$ is cash flow ("DP" + "IB") over lagged assets ("AT"); $DIV_{i;t}/A_{i;t-1}$ is cash dividends ("DVC" + "DVP") over lagged assets; $C_{i;t}/A_{i;t-1}$ is cash balances ("CHE") over lagged assets; book leverage, denoted by $BLEV_{i;t}$ is total debt divided by the sum of total debt and book equity (("DLTT" + "DLC"/("DLTT" + "DLC" + "SEQ")) measured at fiscal year-end, and Tobin's Q is the market value of equity (price, "PRC," times shares outstanding, "SHROUT," from CRSP) plus assets minus the book value of equity ("CEQ" + "TXBD") all over assets.

A.6. Other variables

SG&A: Selling, General, and Administrative Expenses.
State per-capita income: Income per capita (as of 2002) measured at the state level (U.S. Department of Commerce - http://www.bea.gov/newsreleases/relsarchive-spi.htm).
Excess return – 11/8/00 (Excess return – 11/6/02, Excess return – 11/3/04): Measure of the excess (characteristic-adjusted) daily return relative to firms with similar size, value, and momentum characteristics on the day after the elections in 2000, 2002, and 2004, respectively.
Excess return – Average is the arithmetic average of the excess returns on 11/8/00, 11/6/02, and 11/3/04.
Institutional ownership: Fraction of firm stock held by institutional investors (Thomson Financial data on quarterly 13f filings).
Public pension fund ownership: Fraction of firm stock held by public pension funds. Public pension funds are identified by keywords in the fund names including "employee," "pension," "teacher," "public," "institute," and "college," and then manually checked for accuracy (Thomson Financial).
SRI mutual fund ownership: Fraction of firm stock held by socially responsible mutual funds. Funds are identified using biennial reports of the Social Investment Forum (www.ussif.org).
CEO ownership: Fraction of firm stock held by the CEO (Thomson Financial Insiders database).
Sales to government: Fraction of all firm revenues from sales of goods or services to the U.S. federal, state, or local governments, averaged over the prior five years (Compustat).
Lobbying expenditures: Annual firm dollars spent on lobbying fees, scaled by firm assets (www.opensecrets.org).
PAC expenditures: Annual dollars contributed to politicians or parties by the firm's political action committee, scaled by firm assets (www.fec.gov).
Number of analyst estimates: Number of sell-side analysts covering the firm (IBES database).
Advertising spending: Annual firm dollars spent on advertising, scaled by firm assets (Compustat).
S&P 500 member dummy: Dummy variable equal to one if firm is a member of the S&P 500 and zero otherwise (Compustat).

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